पेटेंट कार्यालय
शासकीय जर्नल

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पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

INTRODUCTION

In view of the recent amendment made in the Patents Act, 1970 by the Patents (Amendment) Act, 2005 effective from 01st January 2005, the Official Journal of The Patent Office is required to be published under the Statute. This Journal is being published on weekly basis on every Friday covering the various proceedings on Patents as required according to the provision of Section 145 of the Patents Act 1970. All the enquiries on this Official Journal and other information as required by the public should be addressed to the Controller General of Patents, Designs & Trade Marks. Suggestions and comments are requested from all quarters so that the content can be enriched.

(PROF. (DR) UNNAT P. PANDIT)
CONTROLLER GENERAL OF PATENTS, DESIGNS & TRADE MARKS

12th JULY., 2024

CONTENTS

THE PATENT OFFICE
KOLKATA, 12/07/2024
Address of the Patent Offices/Jurisdictions
The following are addresses of all the Patent Offices located at different places having their Territorial Jurisdiction on a Zonal basis as shown below:-

1	Office of the Controller General of Patents, Designs & Trade Marks, Boudhik Sampada Bhavan, Near Antop Hill Post Office,S.M.Road,Antop Hill, Mumbai – 400 037 Phone: (91)(22) 24123311, Fax : (91)(22) 24123322 E-mail: cgpdtm@nic.in	4	The Patent Office, Government of India, Intellectual Property Rights Building, G.S.T. Road, Guindy, Chennai – 600 032. Phone: (91)(44) 2250 2081-84 Fax : (91)(44) 2250 2066 E-mail: chennai-patent@nic.in ❖ The States of Andhra Pradesh, Telangana, Karnataka, Kerala, Tamil Nadu and the Union Territories of Puducherry and Lakshadweep.
2	The Patent Office, Government of India, Boudhik Sampada Bhavan, Near Antop Hill Post Office,S.M.Road,Antop Hill, Mumbai – 400 037 Phone: (91)(22) 24137701 Fax: (91)(22) 24130387 E-mail: mumbai-patent@nic.in ❖ The States of Gujarat, Maharashtra, Madhya Pradesh, Goa and Chhattisgarh and the Union Territories of Daman and Diu & Dadra and Nagar Haveli	5	The Patent Office (Head Office), Government of India, Boudhik Sampada Bhavan, CP-2, Sector –V, Salt Lake City, Kolkata- 700 091 Phone: (91)(33) 2367 1943/44/45/46/87 Fax: (91)(33) 2367 1988 E-Mail: kolkata-patent@nic.in ❖ Rest of India
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Website: www.ipindia.nic.in
www.patentoffice.nic.in

All applications, notices, statements or other documents or any fees required by the Patents Act, 1970 and The Patents (Amendment) Act, 2005 or by the Patents (Amendment) Rules, 2006 will be received only at the appropriate offices of the Patent Office.

Fees: The Fees may either be paid in cash or may be sent by Bank Draft or Cheques payable to the Controller of Patents drawn on a scheduled Bank at the place where the appropriate office is situated.

पेटेंट कार्यालय
कोलकाता, दिनांक 12/07/2024
कार्यालयों के क्षेत्राधिकार के पते

विभिन्न जगहों पर स्थित पेटेंट कार्यालय के पते आंचलिक आधार पर दर्शित उनके प्रादेशिक अधिकार क्षेत्र के साथ नीचे दिए गए है:-

1	कार्यालय : महानियंत्रक, एकस्व, अभिकल्प तथा व्यापार चिहन, एंटोप हिल डाकघर के समीप, एस. एम. रोड, एंटोप हिल, मुम्बई- 400 037, भारत, फोन: (91) (22) 24123311 फ़ैक्स: (91) (22) 24123322 ई. मेल: cgpdtm@nic.in	4	पेटेंट कार्यालय, भारत सरकार इंटेलेक्चुअल प्रॉपर्टी राइट्स बिल्डिंग, इंडस्ट्रियल इस्टेट एसआईडीसीओ आरएमडी गोडाउन एरिया एडजसेन्ट टु ईगल फ्लास्क, जी. एस. टी. रोड, गायन्डी चेन्नई - 600 032. फोन: (91)(44) 2250 2081-84 फ़ैक्स: (91)(44) 2250-2066 ई. मेल: chennai-patent@nic.in ❖ आन्ध्र प्रदेश, तेलंगाना, कर्नाटक, केरल, तमिलनाडु तथा पुडुचेरी राज्य क्षेत्र एवं संघ शासित क्षेत्र, लक्षदीप
2	पेटेंट कार्यालय, भारत सरकार बौद्धिक संपदा भवन, एंटोप हिल डाकघर के समीप, एस. एम. रोड, एंटोप हिल, मुम्बई- 400 037, फोन: (91) (22) 24137701 फ़ैक्स: (91) (22) 24130387 ई. मेल: Mumbai-patent@nic.in ❖ गुजरात, महाराष्ट्र, मध्य प्रदेश, गोवा तथा छत्तीसगढ़ राज्य क्षेत्र एवं संघ शासित क्षेत्र, दमन तथा दीव, दादर और नगर हवेली.	5	पेटेंट कार्यालय, भारत सरकार कोलकाता, (प्रधान कार्यालय) बौद्धिक संपदा भवन, सीपी-2, सेक्टर- V, साल्ट लेक सिटी, कोलकाता-700 091, भारत. फोन: (91)(33) 2367 1943/44/45/46/87 फ़ैक्स:/Fax: (91)(33) 2367 1988 ई. मेल: kolkata-patent@nic.in ❖ भारत का अवशेष क्षेत्र
3	पेटेंट कार्यालय, भारत सरकार बौद्धिक संपदा भवन, प्लॉट सं. 32, सेक्टर- 14, द्वारका, नई दिल्ली- 110 075. फोन: (91)(11) 25300200, 28032253 फ़ैक्स: (91)(11) 28034301, 28034302 ई. मेल: delhi-patent@nic.in हरियाणा, हिमाचल प्रदेश, जम्मू तथा कश्मीर, पंजाब,राजस्थान, उत्तर प्रदेश, दिल्ली तथा उत्तरांचल राज्य क्षेत्रों, एवं संघ शासित क्षेत्र चंडीगढ़		

वेबसाइट: http://www.ipindia.nic.in
www.patentoffice.nic.in

पेटेंट अधिनियम, 1970 तथा पेटेंट (संशोधन) अधिनियम, 2005 अथवा पेटेंट (संशोधन) नियम, 2006 द्वारा वांछित सभी आवेदन, सूचनाए, विवरण या अन्य दस्तावेज़ या कोई शुल्क पेटेंट कार्यालय के केवल उपयुक्त कार्यालय में स्वीकृत होंगे।

शुल्क: शुल्क या तो नगद रूप में या Controller of Patents के नाम में देय बैंक ड्राफ्ट या चेक के द्वारा भेजी जा सकती है जो उसी स्थान के किसी अनुसूचित बैंक में प्रदत्त हो जहाँ उपयुक्त कार्यालय स्थित है ।

SPECIAL NOTICE

18 Months publication as required under Section 11A of the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005.

Notice is hereby given that any person at any time before the grant of Patent may give representation by way of opposition to the Controller of Patents at appropriate office on the ground and in a manner specified under section 25(1) of the Patents (Amendment) Act, 2005 read with Rule 55 of the Patents (Amendment) Rules, 2006.

Notice is also given that if any interested person requests for copies of the complete specification, drawing and abstract of any application already published, the photocopy of the same can be supplied by the Patent Office as per the jurisdiction on payment of prescribed fees of Rs.8/- per page. If any further details are required to be obtained, the same can be provided by the respective Patent Offices on request.

(PROF. (DR) UNNAT P. PANDIT)
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SPECIAL NOTICE

Under the new provision of the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005 and Rules there under, Publication of the matter relating to Patents in the Official Gazette of India Part III, Section 2 has been discontinued and instead The Official Journal of the Patent Office is being published containing all the activities of The Patent Office such as publication of all the patent applications after 18th months , grant of patents & all other information in respect of the proceedings as required under the provisions of the Patents (Amendment) Act, 2005 and Rules thereunder on weekly basis on every **Friday**.

The Journal is uploaded in the website every Friday. So Paper form and CD-ROM form of the Journal are discontinued from 01/01/2009.

SPECIAL NOTICE

Every effort is being taken to publish all the patent applications under section 11(A) of the Patents Act. However, if duplication of publication of any application is found, then earlier date of publication will be taken for the purpose of provisional protection for applicant and Patent Office will grant Patent not before six months from the date of second publication, provided that there is there is no third party representation.

Early Publication:

The following patent applications have been published under section 11A (2) of The Patents (Amendment) Act 2005 and rule 24A of The Patents (Amendment) Rules, 2006. Any person may file representation by way of opposition to the Controller of Patents at the appropriate office against the grant of the patent in the prescribed manner under section 25(1) of the Patents (Amendment) Act 2005 read with the rule 55 of The Patents (Amendment) Rules, 2006:

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202311026629 A

(19) INDIA

(22) Date of filing of Application :10/04/2023

(43) Publication Date : 12/07/2024

(54) Title of the invention : INTERACTIVE LEARING SYSTEMS AND METHODS THERFOR

(51) International classification	:G09B1/00, G09B1/04, G09B1/08, G09B1/16, G09B1/32, G09B5/06
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

ABSTRACT A system (100) discloses an interactive learning system comprising the power supply (104), atleast one electronic circuit (101), wherein the electronic circuit is configured to implement atleast one learning model of a plurality of learning models with one or more auxiliary components based on the requirement of the learning model. The system comprises atleast one input means (102) for receiving input from a user corresponding to the learning models and atleast one output means (103) comprising a display board for providing output to the user in the form of audio-visual indicator. An interactive learning method discloses, the inputs taken from the user comprises color, numbers, sound of clapping and electrical variation in the skin corresponding to the learning models and processing the input by electronic circuit (101) and then provide the output on the display board to the user in the form of audio-visual indicator based on the learning model.

No. of Pages : 51 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/07/2023
(21) Application No.202311046552 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEVICE AND METHOD FOR MEASURING OCCLUSION-FREE SURFACE PROFILES OF AN OBJECT

(51) International classification :G01B11/24, G01B11/30, G05B19/19, G06B19/18, G06T7/00, G06T1/00
(86) International Application No:NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention discloses a device and a method for measuring occlusion-free surface profiles of an object. The device (200) comprises a frame (206a, 206b, 214), a first scanner (202), a second scanner (204), an image capturing unit (208), and processing units. The frame (206a, 206b, 214) is configured to provide a foundation to the device (200). The first scanner (202) is configured to actuate along a shaft (212). The second scanner (204) moves perpendicular to a motion of the first scanner (202). The image capturing unit (208) captures images showcasing a cross sectional view of surface profiles. The processing units controls the motion of the first scanner (202) and the second scanner (204) to position the image capturing unit (208) precisely orthogonal to the surface profiles. Furthermore, the processing units process the captured images to measure the occlusion-free surface profiles accurately.

No. of Pages : 44 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/07/2023

(21) Application No.202311046661 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYNERGISTIC AGROCHEMICAL COMPOSITION

(51) International classification :A01N25/10, A01N25/14, A01N25/28, A01N25/02, A01N37/34, A01N37/20, A01N43/50
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure discloses a synergistic composition comprising Chlorantraniliprole, Emamectin benzoate and Deltamethrin The invention further relates to formulations comprising the composition of the present invention and methods of controlling insects, pests infesting plants especially crops.

No. of Pages : 29 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/08/2023
(21) Application No.202311052491 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MILK ADULTERATION TESTING AND ANALYSIS (MATA®) KIT, A FIELD OPERABLE ADULTERATION TESTING KIT FOR COW MILK

(51) International classification	:C12Q0001580000, C12Q0001000000, C12N0011140000, C11D0003386000, C05G0003900000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is directed towards developing a point-of-care (PoC) device as an 8-well polystyrene strip with immobilized urease enzyme for urea detection from cow milk. The urease enzyme was immobilized on the 8-well polystyrene strip using the glutaraldehyde crosslinking method. Glutaraldehyde crosslinking increased the enzyme stability and hence the shelf life of the device/system. One just has to add buffers and milk sample for detection of added urea in cow milk. The colour change is a visual indicator of milk quality and can be analysed using a colorimeter to quantify the extent of adulteration. The developed MATA® kit can detect 1.5 µg of urea from the cow milk. The shelf life of kit was 90 days, with 30 times reusability of a single well, and a detection efficiency of ~85-90%. The kit is easy to handle for a consumer and does not require any expertise or prior knowledge.

No. of Pages : 13 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/08/2023
(21) Application No.202311056680 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AAV-MEDIATED SUICIDE GENE THERAPY FOR THE TREATMENT OF BREAST CANCER

(51) International classification :A61K48/00, C12N15/86, C12N15/861, C12N7/00, C07K14/075, A61P35/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)**Name of Applicant :**
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(57) Abstract :
ABSTRACT The present invention provides a gene therapy strategy for an effective breast cancer treatment. Employing Adeno-associated virus (AAV) vectors, the present invention delivers an inducible Casp9 (iCasp9) suicide transgene, specifically triggering apoptosis in breast cancer cells irrespective of their cell cycle phase. The innovative approach of the present invention presents heightened cytotoxicity within heterogeneous tumor tissues, and its compatibility with combinatorial treatments amplifies its therapeutic potential. Leveraging the inherent safety of AAV vectors, this therapy minimizes the likelihood of drug resistance emergence. Demonstrated efficacy in inhibiting tumor growth and inducing apoptosis in preclinical breast cancer models underscores the promise of this AAV-mediated iCasp9 gene therapy as a transformative solution, poised to revolutionize breast cancer treatment with improved efficacy and reduced systemic toxicity.

No. of Pages : 37 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/04/2024
(21) Application No.202411030120 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEEP LEARNING BASED SYSTEM AND METHOD FOR DETECTING ABNORMALITIES ACROSSMULTIPLE BODY ORGANS

(51) International classification :G06N3/0464, G06N3/08, G16H50/30, G06T7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a deep learning based method for detecting anomalies across multiple body organs, comprising preprocessing to deduce and further resize a hounsfield value of each slice of a CT scan of a body organ; for each of the body organs, designing and training a model using a convolutional neural network technique for a plurality of iterations, wherein, a set of performance parameters are logged for each of the plurality of epochs during the model training; wherein an epoch with the best balance between the set of performance parameters is selected to represent an effective model iteration; validating the performance of the effective model iteration and setting a threshold to differ between normal and abnormal CT scans; calculating the prediction scores for a user-inputted CT scan image; and converting the prediction scores of the model into graded confidence levels of proximity to the threshold.

No. of Pages : 37 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/04/2024

(21) Application No.202411030123 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEEP LEARNING BASED SYSTEM AND METHOD FOR DETECTING BRAIN ABNORMALITIES

(51) International classification	:G06N3/0464, G06N3/08, G16H50/30, G06T7/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a deep learning based method for detecting and segmenting multiple brain anomalies, comprising annotating regions of anomalies on a plurality of original CT scan images; generating a ground truth mask for each of the plurality of annotated images; pre-processing the plurality of the original CT scan images and the plurality of ground truth masks by deducing and further resizing a hounsfield value for each of them; designing a segmentation model based on DeepLabV3/MaNet for detecting and segmenting the multiple brain anomalies, training and validating the segmentation model using a plurality of pre-processed pairs of the original CT scan image and the annotated image thereof; applying the trained segmentation model on one or more user-inputted CT scan images to retrieve a predicted mask; and comparing the predicted mask with the plurality of ground truth masks to detect the brain abnormality.

No. of Pages : 35 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2023

(21) Application No.202311045812 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PERFUSION-BASED MICROPHYSIOLOGICAL DEVICE (MPD) FOR EX-VIVO EXPLANT CULTURE FOR DISEASE MODELLING AND METHOD THEREOF

(51) International classification :C12M1/00, C12M3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A simple perfusion-based microphysiological device (MPD) designed to cultivate full thickness murine colon segments in a dynamic microenvironment is provided. The device maintains tissue viability and morphological structures for longer culture durations. The device comprises a central compartment with a dual inlet and outlet system that constantly perfuses the medium through the colon tissue to maintain homeostasis and prevent tissue collapse. The device allows for the cultivation of colon tissue explants for up to a week without histological abnormalities. The device also enables the induction of mucosal injury in the tissue to mimic conditions such as inflammatory bowel disease. The device is made from poly(dimethylsiloxane) (PDMS) and Poly (methyl methacrylate) (PMMA) and utilizes a peristaltic pump and a syringe pump for fluid control. The device provides a cost-effective and simple solution for studying gut mucosa regeneration and disease modeling. FIG. 1

No. of Pages : 41 No. of Claims : 20

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/03/2024

(21) Application No.202411019436 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CHAIRSIDE INTRA ORAL PARALLELING DEVICE AND A METHOD OF USE THEREOF

(51) International classification :A61C19/055, A61C3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a cost effective, chair side intraoral paralleling device to accurately determine relative parallelism of the axial walls of the abutment teeth and the exact angle of angulation of the abutment teeth for fixed dental prosthesis. With nonparallel abutments, there is excessive seating force that often results in fracture of either the tooth or prosthesis. The device enables the dentist to establish a single path of placement that allows for unobstructed insertion of the restoration in order to decrease stress concentrations. The device comprises of a hollow U-shaped tray with multiple sliding troughs and paralleling strips, which can be placed along the axial wall of the abutment and the angle of the paralleling strip can then be measured with the help of sliding protractor magnetically attached to the U shaped tray placed on the jaw line.

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/05/2024

(21) Application No.202411035460 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM UTILIZING BLOCK CHAIN FOR TRACKING FOOD ORIGINS

(51) International classification :G06Q0010080000, G06Q0010060000, G06K0007100000, G06Q0030000000, G06K0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention provides a system utilizing block chain for tracking food origins that includes a combination of hardware and software components to revolutionize the way we understand and interact with the food supply chain. By harnessing the power of block chain technology, this system provides consumers with comprehensive information about the origins, ingredients, and production methods of their food. From farm-fresh produce to packaged goods, every step of the journey is recorded and accessible to consumers, ensuring food safety, authenticity, and sustainability. Through secure and immutable records, block chain technology safeguards the integrity of the supply chain, mitigating risks associated with food fraud, contamination, and mislabeling. Hardware components such as RFID tags, QR code scanners, and temperature sensors are utilized to track and monitor the movement of food products throughout the supply chain, ensuring accurate and reliable traceability. Figure 1

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/04/2024
(21) Application No.202411031828 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN AUTONOMOUS SPRAYING UNMANNED VEHICLE FOR ORCHARDS AND A METHOD THEREOF

(51) International classification :A01M7/00, G08G5/04, G05D1/02, G05D1/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention discloses an autonomous spraying unmanned vehicle (100) for orchards. The unmanned vehicle (100) comprises a navigation unit (315) to navigate and detect presence of obstacles present on the orchards. Further, a canopy assessment unit for observing a plurality of canopies present on the orchards. Further, a dispensing unit (108) for dispensing a plant protection product over the plurality of canopies. Further, a processing unit (302) embedded within the unmanned vehicle (100) to control operations of the unmanned vehicle (100). Further, the processing unit (302) is configured to receiving data from the navigation unit (315) and the canopy assessment unit, generating a path for the unmanned vehicle (100) based on the data received form the navigation unit (315) (104) to avoid any collision from the detected obstacles and actuate the dispensing unit (108) to dispense an appropriate amount of the plant protection product over the plurality of canopies.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/05/2024
(21) Application No.202411035193 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WEARABLE HEADBAND DEVICE FOR NON-INVASIVE BRAIN STIMULATION

(51) International classification :A61N1/04, A61N1/36
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A wearable headband device for non-invasive brain stimulation includes a first stimulation electrode (102A), a second stimulation electrode (102B) and an electronic circuit (106) for switching a direction of flow of current between the first stimulation electrode (102A) and the second stimulation electrode (102B). The electronic circuit (106) includes a first circuit (116) including a pair of first type of switches (118) and a pair of second type of switches (120). Furthermore, a protection circuit (124) is configured to detect and control the flow of current passing through the first stimulation electrode (102A) and the second stimulation electrode (102B). Further, a microcontroller (126) is configured to control the pair of first type of switches (118) and the pair of second type of switches (120) of the first circuit (116) for the switching the direction of flow of current between the first stimulation electrode (102A) and the second stimulation electrode (102B). FIG. 1B

No. of Pages : 33 No. of Claims : 21

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/05/2024
(21) Application No.202411037702 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : STAIN FREE MODI TEA CUP

(51) International classification :A47G19/22
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
While drinking Tea in this cup the Tea does not get stained if kept on the table or bed or any other surface.

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2024

(21) Application No.202411037703 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : TEA PLUCK PLATE, HALF MOBILE COVER

(51) International classification :A45F5/00, H04M 1/00, H04M1/02, H04M1/04, H04M1/18

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
After putting the mobile in charge, you will not have to face any problem in keeping it and the screen will be protected from falling or breaking while charging. Now the mobile will keep charging while hanging in the safe board.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/05/2024

(21) Application No.202411037704 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TEA PLUCK PLATE, FULL MOBILE COVER

(51) International classification :A45F5/00, H04M 1/00, H04M1/02, H04M1/04, H04M1/18
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
After putting the mobile in charge, you will not have to face any problem in keeping it and the screen will be protected from falling or breaking while charging. Now the mobile will keep charging while hanging in the safe board.

No. of Pages : 25 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/08/2023
(21) Application No.202311057689 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PLANT-BASED TITANIUM DIOXIDE-REDUCED GRAPHENE OXIDE NANOCOMPOSITES, METHODS OF PRODUCTION, SYSTEM AND APPLICATIONS THEREOF

(51) International classification :B01J35/00, B01J21/06, B01J21/18, A61K36/58, C02F1/72, B82Y30/00, B82Y35/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure generally relates to the field of materials science and environmental engineering. Specifically, the present disclosure relates to plant-based photocatalytic nanocomposites and systems for the degradation of emerging contaminants. It also provides for methods of synthesising the photocatalytic nanocomposites using plant extracts and methods of applications thereof.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :20/03/2024

(21) Application No.202411021171 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : ENHANCEMENT IN ELECTRICAL ENERGY EMPLOYING EXPANSION TRANSFORMER FOR ENVIRONMENTAL SUSTAINABILITY

(51) International classification :H01F27/00, H02K5/16, H02K7/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The importance climate change is one of the greatest challenges that humanity is facing today. The climate change causing extreme weather conditions such as rising sea levels, melting glaciers, loss of biodiversity, frequent and more disasters etc., This happens mainly due to continued increase in Greenhouse gas emissions. Therefore, there is an urgent need to address the global climate in order to achieve sustainability. This design of electric transformer is invented for energy expansion from a constant quantity of energy.

No. of Pages : 12 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/04/2024
(21) Application No.202411034469 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PEROXIDE TESTING (PET) KIT FOR ADULTERANT DETECTION AND METHOD THEREOF

(51) International classification	:G01N0033040000, G01N0033020000, G01N0021780000, G01N0033543000, G06Q0010060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT The present invention provides a Peroxide Testing (PeT) Kit for detecting adulterant in cow milk and a reliable, highly sensitive and cost-effective method to detect adulteration in cow milk. The present invention contributes to ensuring the safety and quality of food products, such as cow milk, thereby impacting public health and consumer trust in food safety measures. Figure 1

No. of Pages : 17 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/05/2024
(21) Application No.202411037134 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : APPARATUS TO DETERMINE WORKABILITY OF CONCRETE

(51) International classification :G01N1/36, G01N11/00, G01N33/38
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure pertains to an apparatus (100) and a method (200) for assessing workability of concrete. The apparatus (100) includes a slump cone (102) configured to receive the concrete, a rotating plate (104) integrated with one or more gears (106) to facilitate horizontal movement of the slump cone (102), a base plate (108) to support the rotating plate (104), a tamping rod (110) for compacting the concrete, and a pulley equipped with a motor (114) for vertical movement. Additionally, the apparatus (100) includes a compartment enclosing the components, a lubrication mechanism, a clamping mechanism, and a measuring unit to assess concrete slump. The method (200) includes clamping the slump cone to the rotating plate, compacting the concrete, lifting the cone to measure slump. The method (200) further includes lubricating the components, preparing concrete in accordance to authorized guidelines and filling the slump cone in layers, to accurately measure workability.

No. of Pages : 17 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/05/2024

(21) Application No.202411040014 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR SECURING OBJECTS INSIDE A CONTAINER

(51) International classification :E05B39/00, E05B47/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Embodiments of the present disclosure relates to a system (102) for securing objects inside a container. The system (102) is configured to detect a change in electric supply inside the container (400) holding the one or more objects. The system (102) is further configured to activate a motor (506) inside the container (400) to push a piston (512) of a syringe containing a fluid. Further, the system (102) is configured to release the fluid from the syringe to soak the objects inside the container (400) in the fluid. The container (400) is enclosed in nylon fabric (602) provided with a copper wire (604) connected to a resistor integrated with the processor that is configured to analyse resistor readings to detect the change in electric supply through the copper wire (604) in order to activate the motor (506) for releasing the fluid inside the container (400).

No. of Pages : 29 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/07/2023
(21) Application No.202311047794 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : GSM BASED SMART ELECTRICAL LOAD CONTROLLER

(51) International classification :G08C17/02, H04Q9/00, H02J13/00, H05B47/19, G05B15/02, H04L12/28
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to a GSM based smart electric load controller designed to convert existing electric loads into smart loads controllable from any location. Utilizing GSM technology for internet connectivity and a progressive web application for remote operation, the controller provides comprehensive monitoring of electrical parameters such as voltage, current, active power, reactive power, apparent power, power factor, frequency, and precise energy consumption. It features fault indication and protection mechanisms to isolate the load in cases of overload, over-voltage, and under-voltage conditions. The device ensuring efficient and reliable control and safety of the connected loads.

No. of Pages : 32 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/04/2024
(21) Application No.202411034412 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A DIGITAL GAMEBOOK INTERACTIVE WITH PHYSICAL INPUTDEVICES

(51) International classification :A63F9/24 A63F3/00 G0
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present subject matter relates to a digital gamebook (100) interactive with one or more physical input devices (106). Further, the digital gamebook (100) comprises one or more scanning surfaces (101) and one or more display screens (102) coupled with each other, via one or more hinges (110). Moreover, the scanning surfaces (101) are designed to connect with one or more optical sensors (105) and a holder (103), facilitating the scanning of one or more physical input devices (106). Furthermore, an output of the scanning of one or more physical input devices (106) is then displayed on the display screens (102). This innovative approach offers a digital foldable gamebook that combines the convenience of digital gaming with the interactive element of physically rolling scannable dice, providing an engaging and space-saving solution for gaming enthusiasts.

No. of Pages : 41 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/05/2024
(21) Application No.202411039655 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A NANOFORMULATION FOR INHIBITION OF MYCOBACTERIAL SOS RESPONSE AND A PROCESS OF PREPARATION THEREOF

(51) International classification :A61K31/69, A61K9/51, A61P31/06, B82Y5/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The Invention provides a nanoformulation for inhibition of mycobacterial SOS response and a process for preparation thereof. The nanoformulation designed to inhibit the mycobacterial SOS response, incorporating a boronic acid-infused Mtb LexA inhibitor, with 3-nitrophenyl boronic acid (3-nPBA) serving as the designated inhibitor. The 3-nitrophenyl boronic acid (3-nPBA) inhibits Mycobacterium tuberculosis LexA from getting cleaved,, thereby preventing the activation of the SOS response pathway.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/06/2024

(21) Application No.202411044366 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : NOVEL FORMULATION FOR DIABETES MANAGEMENT THROUGH DIETARY PROTEINS

(51) International classification :A61K9/00, A61P7/12, A61K33/04, A61K31/13, A61K31/198
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACTS In the present invention we evaluated the beneficial synergistic effects of S-allyl Cysteine (SAC) and Taurine (TAU) on hyperglycemia, lipid profile and renal damage markers in type 2 diabetes mellitus (T2DM) in rats. The variation in levels of fasting blood glucose, glycosylated haemoglobin, insulin and lipid profile was significantly augmented in SAC/TAU treatment group. The diabetic group showed elevated renal injury markers in serum, which were decreased significantly by SAC/TAU treatment. Thus the results of the experiment clearly indicate the potential of the SAC/TAU combination in improving diabetic complications.

No. of Pages : 17 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/05/2024
(21) Application No.202411040581 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR ACCELERATED LIGHT TRANSPORT MATRIX ACQUISITION FOR DUAL PHOTOGRAPHY

(51) International classification :G03B21/14, G03B21/00, G06T15/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Embodiments of the present disclosure relates to a system (102) and method (300) for accelerated light transport matrix acquisition for dual photography of objects. The system (102) projects a plurality of illumination patterns on the one or more objects in a 3D scene via a projector. The system (102) is further configured to capture images of the one or more objects corresponding to each illumination pattern of the plurality of illumination patterns via a camera. The system (102) is further configured to derive an LTM from the captured images of the one or more objects. Thereafter, the system (102) synthesizes a dual image of the one or more objects based on the derived LTM. The 3D scene is illuminated by implementing Hierarchical Orthogonal Optical Codes to factorize projector resolution and the dual image of the one or more objects is generated from a viewpoint of the projector.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/05/2024
(21) Application No.202411040749 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR STORING SOLAR ENERGY AS THERMAL ENERGY

(51) International classification :F24S20/30, F28D20/00, F28D20/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A heat exchanger unit (154) and a system (100) comprising a thermal battery (150) for storing thermal energy comprising the heat exchanger unit (154). The thermal battery (150) comprises an insulated tank (152) adapted to hold a Heat Transfer Fluid (HTF), the heat exchanger unit (154) immersed in the HTF, and a heat storage material (154m). The heat exchanger unit (154) comprises a body (154B), an outer wall (154wo), an inner wall (154wi), and an annular region (154ar) formed between the outer wall (154wo) and the inner wall (154wi). The heat storage material (154m) is disposed in the annular region (154ar) and adapted to transfer heat between the HTF via an inner curved surface of the inner wall (154wi) and an outer curved surface of the outer wall (154wo). This provides maximum surface area for heat transfer between the PCM and the HTF to achieve optimal charging and discharging of the thermal battery (150).

No. of Pages : 31 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/06/2024
(21) Application No.202411044972 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TOP LOADING AMBU BAG PRESSING MACHINE AND MECHANISM

(51) International classification	:A61M0016000000, G06F0001180000, B30B0015000000, B30B0015300000, B24B0005420000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Title: “Top Loading Ambu Bag Pressing Machine and Mechanism” In hospital emergency wards, when the patient is placed on ambu bag due to respiratory failure of lungs etc., caregivers are required to press the ambu bag by hand. Our ambu bag pressing machine is made to mechanize the pressing of ambu bag in emergency wards of hospitals. Our machine comprises of a crank shaft (fig-1(27)) connected to a gear motor axle (fig-1(23)) with a connector (fig-1(22)). Pressing arm is fixed on threaded crank through its ball bearings and nuts. The pressing arm (fig-1(29)) is further connected to a holding arm (fig-1(31)) which moves on a hinge in machine casing. The whole mechanism is encased in a frame. The frame has the holding mechanism for the ambu bag, motor mounting, electronics panel fixing and 12 V power supply fixing. The ambu bag is placed in the machine from top (fig-1). The electronics circuit provides it the ability to press the ambu at about 12 to 20 times per minute adjustable through a resistance regulator switch.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/06/2024

(21) Application No.202411043335 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SHAPE MEMORY ALLOY-BASED DEVICE WITH ENHANCED ROTATIONAL MOTION

(51) International classification :F03G7/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
A shape memory alloy-based device with enhanced rotational motion (100) for converting reciprocating motion into rotational motion that includes a housing (102) with a base platform (104) and is a rotary member pivotally coupled on the base platform (104) and configured to move between a first and a second position; at least one connecting link (108) coupled to the rotary member (106) and a coil holder (110) through an attachment means (112); a thermally sensitive coil (114) positioned between the coil holder (110) and the rotary member (106), contracting and expanding with temperature changes induced by cooling (116) and heating units. The coil holder (110) is configured on guide bars (118), enabling slidable movement between the two positions which is transferred to the rotary member (106) through the connecting link (108), converting the linear motion of the coils (114) into rotational motion with increased torque and increased frequency.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/06/2024
(21) Application No.202411043404 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NITRITE TESTING (NIT) KIT FOR DETECTION OF ADULTERATION IN COW MILK AND THE PROCESS THEREOF

(51) International classification :G01N31/22, G01N33/04, G01N33/52
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT Nitrite Testing (NiT) kit for detection of adulteration in cow milk and the process thereof The present invention relates to a Nitrite Testing (NiT) Kit for detecting adulterant in cow milk using a 8-well polystyrene strip coated with Greiss reagent and a stabilizing agent. The property of chemical reagent fixation on a multi-well polystyrene strip has been used for designing the NiT kit by fixing the Griess reagent to detect nitrite in cow milk. The fixation or coating of Griess reagent on polystyrene surfaces using a stabilizing agent offers better stability to ensure a single well's use for qualitative and quantitative analyses of two milk samples and only for qualitative analysis of the third sample, thus reducing the cost per assay.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202411044082 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MACHINE LEARNING AND DEEP LEARNING EMBEDDED AN ADVANCED IMAGING ANALYTICS SYSTEM IN CANCER DETECTION AND SEGMENTATION

(51) International classification :G06N0003080000, G16H0030400000, G06T0007000000, G06N0003040000, G16H0030200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to machine learning and deep learning embedded an advanced imaging analytics system in cancer detection and segmentation. It uses cutting-edge machine learning (ML) and deep learning (DL) techniques to identify and segment cancerous tissues from medical imaging data. Integrating seamlessly with existing medical imaging equipment, AIAS offers real-time analysis and decision support to radiologists and oncologists. Key advantages include support for multiple imaging modalities (MRI, CT, PET, ultrasound), real-time processing through edge computing, automated and precise segmentation using advanced DL models, enhanced 3D visualization of segmented regions, and continuous learning via a feedback loop for ongoing model improvement. The system comprises data acquisition, preprocessing, feature extraction, detection and segmentation, post-processing, visualization, and reporting layers, along with a robust model management framework, ensuring accurate, real-time cancer detection and improved diagnostic outcomes.

No. of Pages : 10 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/06/2024

(21) Application No.202411045487 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EFFECT OF JAROSITE ON COMPRESSIVE STRENGTH OF THE MORTAR

(51) International classification	:C0428/04, C04B18/04, C04B18/14, C04B28/08
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention experimental study examines the use of Ordinary Portland Cement 43 grade in combination with jarosite as a partial cement substitute. Various cement pastes were formed, including a control paste without jarosite and paste with 5%, 10%, 15%, 20%, 25%, and 30% jarosite replacement. This study aims to evaluate the effect of jarosite on cement paste's compressive strength. The results demonstrate the potential of jarosite as an advantageous replacement material for improving mortar mechanical strength. The 15% replacement of Jarosite with cement, enhanced compressive strength by 8% and 12.6% at 7 and 28 days, respectively Although the compressive strength decreased as jarosite was added as a partial replacement for cement, it remained more significant than that of the control mix up to and including 25% replacement of Jarosite

No. of Pages : 8 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2024

(21) Application No.202411044413 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : RIPENING COMPOSITIONS AND PROCESSES FOR PREPARATION THEREOF

(51) International classification :A23B7/14, A23B7/154
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
The present invention relates to ripening compositions comprising about 15% to about 25% ethephon liquid; about 8% to 27% thickening agent; about 2% to 5% solvent; about 5% to about 18% stabilizing agent; about 40% to 60% deliquescent salt I; and about 5% to 15% deliquescent salt II by weight of composition, wherein the said compositions slow down the rate of ripening and elevate the pace of shelf-life, stability, quality, coloring, luster, and maturing phase so that the fruits maintained their freshness, sweetness and pulp for a long period of time under different stress, transportation and variant climatic changes; and processes for the preparation of ripening compositions thereof. [Figure 1]

No. of Pages : 47 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/06/2024
(21) Application No.202411046553 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MANGANESE-CINCHONIDINE BASED CATALYST FOR ASYMMETRIC HYDROGENATION, ITS PROCESS FOR PREPARATION AND APPLICATION THEREOF

(51) International classification :B01J31/02, B01J31/16
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to a manganese-cinchonidine based catalyst for asymmetric hydrogenation comprising: Mn(Br)(L)(CO)3 wherein L is a cinchona-based chiral picolinamide ligand, wherein Mn(Br)(L)(CO)3 as isolated precatalyst added itself for asymmetric hydrogenation or in situ-generated by mixing of MnBr(CO)5 and cinchona-based chiral picolinamide ligand in the reaction mixture. The present disclosure also relates to a method of synthesis of a manganese-cinchonidine based catalyst for asymmetric hydrogenation comprising: a) mixing of cinchona-based chiral picolinamide ligand (L) with MnBr(CO)5 in a solvent under condition to obtain a solid precipitate; and b) processing the solid precipitate of step a) to obtain a manganese-cinchonidine based catalyst, wherein Mn(Br)(L)(CO)3 as isolated precatalyst added itself for asymmetric hydrogenation or in situ-generated by mixing of MnBr(CO)5 and cinchona-based chiral picolinamide ligand in the reaction mixture. The present disclosure also provides a method of asymmetric hydrogenation of a carbonyl derivative by using the manganese-cinchonidine based catalyst as defined above.

No. of Pages : 62 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/06/2024
(21) Application No.202411047981 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SCADA INTEGRATED DATA AGGREGATION SYSTEM AND METHOD THEREOF

(51) International classification :H04L0069080000, H04L0012400000, H02J0013000000, H02J0003000000, G01R0021133000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The Invention provides a SCADA Integrated Data Aggregation System (100) and method (200) thereof. The present invention comprises a plurality of field devices (10) comprises a panel meter, a smart meter, a PMU (Phasor Measurement Unit) and other devices using protocol DLMS, C37.118.2 and Modbus to perform metering, monitoring and control operations, a centralized master SCADA (Supervisory Control and Data Acquisition) system (12) configured to provide real-time data acquisition and a Data Aggregator (14) configured to implement protocol conversion, for validation converting standard protocols such as C37.118, DLMS, and Modbus into an IEC 60870-5-104 standard simultaneously for seamless integration and interoperability within the system.

No. of Pages : 47 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/06/2024
(21) Application No.202411048109 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NOVEL CO-DOPED POLYANILINE FUSED IMIDAZOLE (PANI-1H-IMIDAZOLE) COPOLYMER, THEIR PROCESS OF PREPARATION AND ANTIMICROBIAL COMPOSITION COMPRISING THE SAME

(51) International classification :C08F12/28, C08F26/06, C08F271/02, C08G73/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Novel Co-doped Polyaniline Fused Imidazole (PANI-1H-Imidazole) Copolymer, their process of preparation and antimicrobial composition comprising the same The present invention discloses novel Co-doped Polyaniline Fused Imidazole Copolymer represented by Formula I. Formula I The invention also discloses the process of preparing novel Co-doped Polyaniline Fused Imidazole Copolymer represented by Formula I and antimicrobial composition comprising the same.

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/06/2024

(21) Application No.202411044992 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HERBAL GEL FORMULATION AND METHOD OF PREPARATION THEREOF

(51) International classification :A61K9/06, A61K36/85, A61K47/10, A61K47/44, A61K47/32, A61K47/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No: NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to a herbal gel formulation comprising: 0.1 to 1 % w/v of a lantana camara leaf extract; 0.1 to 5 % w/v of a thickening agent; 0.1 to 1 % w/v of a preservative; 0.1 to 5 % v/v of a buffering agent; 1 to 10 % v/v of a stabilizer; and rest being a vehicle. The present disclosure also relates to a method of preparation of a herbal gel formulation comprising: a) taking a lantana camara leaf extract; b) dispersing 0.1 to 5 % w/v of a thickening agent in a vehicle with stirring to form a gel; c) dissolving 0.1 to 1 % w/v of a preservative in a vehicle through heating at a temperature in the range of 35 to 60 °C to obtain a solution; d) adding 1 to 10 % v/v of a stabilizer in the solution of step c) followed by adding 0.1 to 5 % w/v of a lantana camara leaf extract and vehicle is added to make it q.s. to form a mixture; and e) mixing of the mixture of step d) with gel of step b) with stirring followed by adding 0.1 to 5 % v/v of a buffering agent to maintain the pH in the range of 6.8 to 7 to obtain a herbal gel formulation.

No. of Pages : 33 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :19/06/2024

(21) Application No.202411046958 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : AI-ENHANCED PORTABLE WATER QUALITY ANALYSING PEN DEVICE WITH TDS AND CONTAMINANT DETECTION

(51) International classification	:G01N33/18, G01N21/62, G01N21/01, H04W4/38, G08B21/18, G05B19/042, H04W4/38, G06N20/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

This invention describes a portable water quality analysis device that integrates spectrometry and artificial intelligence (AI) to measure Total Dissolved Solids (TDS) and detect contaminants such as heavy metals, pesticides, and volatile organic compounds (VOCs). Key features include an advanced spectrometry sensor array, automated self-calibration, and geo-tagging capabilities. The device interfaces with a smartphone application, providing real-time analysis, health recommendations, and personalized alerts. Additionally, it connects to portable filtration systems, optimizing treatment based on detected contaminants. An emergency notification system automatically alerts authorities to hazardous conditions. Designed for both individual and professional use, this device offers a comprehensive solution for accurate, real-time water quality monitoring, significantly enhancing water safety standards and environmental health monitoring. By addressing the limitations of traditional TDS meters and providing precise contaminant identification, this invention ensures reliable water management and supports proactive public health interventions.

No. of Pages : 26 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/06/2024
(21) Application No.202411048466 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A REMOTE AGRICULTURAL MONITORING SYSTEM

(51) International classification :G16H0040670000, H04W0052020000, G08B0021040000, G05B0019418000, G07F0009000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Disclosed herein is a remote agricultural monitoring system (100) comprising a plurality of sensor (102). The system (100) comprising a controller unit (104) configured to receive and process the data received from the sensors (102). The system (100) comprising a long-range (LoRa) shield (106) configured to transmit small data packages over a long distance using low-power. The system (100) comprising a communication network (108) configured to facilitate high-speed data transfer. The system (100) comprising a remote processing module (110) configured to store, process, and analyze data received from the sensors (102). The system (100) comprising a user interface (112) configured to provide acquired sensor data to a user in real-time, and provide analytics results to the user in real-time. The system (100) comprising a normalized difference vegetation index (NDVI) imaging unit (114), a mechanical soil sensing unit (116), and an airflow sensor unit (118).

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/06/2024
(21) Application No.202411045739 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : COMPUTER-IMPLEMENTED SYSTEM AND METHOD TO STREAMLINE WORKFORCE MANAGEMENT

(51) International classification	:G06Q0010060000, G06Q0010100000, G06N0005020000, G06Q0030020000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a computer-implemented system to streamline workforce management comprises a microcontroller (102) associated with a processing unit (104). The system (100) includes the processing unit (104) connected with a data storage module (106). The system (100) also includes a data storage module (106) connected with the processing unit (104) and communication network (108) which further connected with a non-transitory computer-readable medium (110), an artificial intelligence module (112), blockchain module (114), Internet of Things (IoT) integration module (116), user interface module (118), employee engagement module (120). Further microcontroller (102) includes a data storage module (106) connected with the processing unit (104) and communication network (108). Microcontroller (102) also includes an artificial intelligence module (112) connected with the data storage module (106) and communication network (108).

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024
(21) Application No.202411047584 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ANTI-INFLAMMATORY COMPOSITION CONTAINING POLYSACCHARIDE AND AN EXTRACTION PROCESS OF POLYSACCHARIDE FROM GREEN MUSSEL

(51) International classification :A61P29/00, A61K36/81, A61K36/8965, A61K31/715, A61K47/44
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT The present disclosure relates to an anti-inflammatory composition containing polysaccharide and an extraction process of polysaccharide from green mussel (Perna viridis). The anti-inflammatory composition comprises a polysaccharide, Asparagus racemosus extract, Withania somnifera powder and oleoresins. The anti-inflammatory composition of the present disclosure provides an anti-oxidant property, accelerated shelf-life stability and no side effects.

No. of Pages : 43 No. of Claims : 17

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/06/2024
(21) Application No.202411048800 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHODS AND SYSTEMS FOR PROTECTING USER-SENSITIVE INFORMATION IN LOCALIZED MOBILE METAVERSE SERVICES

(51) International classification :G06F21/62, G06F3/01, G06T19/00, H04L9/08, H04L9/32
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT Methods and systems for protecting user-sensitive information in localized mobile Metaverse services Embodiments herein disclose methods and systems for protecting the privacy of user-sensitive information during exposure of user-specific information in localized mobile metaverse services through an application enabler layer, while performing data minimization, and data anonymization with proper user consent and transparency. Embodiments herein disclose methods and systems for encrypting sensitive information/data during transit and at rest in localized mobile metaverse services. Embodiments herein disclose an access control mechanism using Role-Based Access Control (RBAC) to restrict access to user's sensitive information.

No. of Pages : 24 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024
(21) Application No.202411048862 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM FOR THE ONLINE DELIVERY OF INFRASTRUCTURE AND INTERIOR DESIGN MATERIALS

(51) International classification	:G06Q0010080000, G06Q0030060000, G16H0040200000, H04L0067100000, H04W0004140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A system for the online delivery of infrastructure and interior design materials is disclosed. The system includes a user interface for browsing various materials such as concrete, steel, and bricks. An order placement module allows users to add products to a cart and input delivery addresses. A payment processing module facilitates online payments, and a notification module prompts product delivery. The delivery dispatch module coordinates with delivery personnel, while a delivery tracking module provides real-time tracking. An inventory management module manages product delivery in real-time. A feedback and rating module collects user feedback. The user interface supports multiple languages and devices, ensuring broad accessibility.

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :24/06/2024

(21) Application No.202411048471 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : LAST-MILE CONNECTIVITY ENHANCEMENT IN URBAN TRANSPORT THROUGH INTEGRATED TRANSIT SOLUTIONS

(51) International classification :G06Q0010060000, G07B0015020000, G06Q0010040000, G06Q0050300000, G06Q0050260000

(86) International Application No :NA
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(57) Abstract :
Abstract [0016] India's urban population is experiencing rapid growth, leading to increased pressure on existing public transportation systems. In response to this challenge, the government has initiated plans for significant upgrades to the urban transit infrastructure, including the implementation of Mass Rapid Transit Systems (MRTS), Bus Rapid Transit Systems (BRTS), and Light Rail Transit Systems (LRTS) across major cities. These initiatives are expected to enhance the overall capacity and efficiency of urban transit networks. However, a critical gap remains in the integration of these upgraded systems with the "first-last mile" connectivity, which is essential for ensuring seamless transitions between residential areas, commercial destinations, and major transit hubs. First-last mile connectivity refers to the initial and final segments of a commuter's journey, typically between their home or destination and the nearest transit hub. Intermediate para-transits (IPT), such as auto-rickshaws, cycle-rickshaws, and the recently introduced e-rickshaws (battery-operated three-wheeled vehicles), play a vital role in addressing this connectivity need. Despite their importance, these IPT options are often unregulated and operate informally, leading to inefficiencies and safety concerns. The effective linkage of these final segments, particularly the last-mile connectivity from major transportation hubs to end destinations, remains one of the most significant challenges in urban mobility. Addressing this issue is crucial for creating a more efficient, accessible, and user-friendly public transportation system. Without proper last-mile connectivity, the benefits of large-scale transit infrastructure projects like MRTS, BRTS, and LRTS are undermined, as commuters face difficulties in reaching their final destinations comfortably and conveniently. Urban mobility is a cornerstone of modern city life, directly impacting the quality of life and economic productivity. The efficiency of transportation systems is pivotal in ensuring the smooth movement of people and goods, reducing traffic congestion, and minimizing environmental impacts. In cities like Delhi, the Delhi Metro-Rail (DMR) System serves as a backbone of the mass transit network, significantly contributing to an integrated urban public transport system. Despite its successes, the DMR faces persistent challenges related to inadequate last-mile connectivity, which limits its potential ridership and restricts accessibility for socio-economically disadvantaged groups. E-rickshaws have organically emerged as a popular solution for last-mile connectivity at various MRTS stations, driven by public demand for convenient and affordable transportation options. However, the informal nature of their operations, coupled with a lack of regulatory oversight, poses several challenges. These include issues related to safety, traffic management, and environmental sustainability. To establish an effective and sustainable feeder system, it is imperative to formally integrate e-rickshaws and other IPT modes into the broader transportation network at both policy and infrastructure levels. This integration would involve developing dedicated e-rickshaw stands, implementing standardized fare systems, and utilizing technology for real-time fleet management. Additionally, regulatory frameworks need to be established to ensure that these vehicles meet safety and environmental standards, promoting a more organized and efficient operation. Recognizing the importance of resolving last-mile connectivity issues is crucial for the development of transportation systems in metropolitan areas like Delhi. An integrated approach that includes formalizing IPT operations, enhancing regulatory measures, and leveraging technology can lead to transportation systems that are accessible, affordable, comfortable, and sustainable. Such a holistic approach will not only improve the efficiency of public transit systems but also enhance the overall urban mobility experience for all citizens, contributing to a more inclusive and resilient urban environment.

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(21) Application No.202411049649 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : INNOVATIVE APPLICATION OF AI TECHNIQUES IN ENHANCING THE EFFICIENCY AND EFFECTIVENESS OF ROBOTIC PATH PLANNING

(51) International classification	:G06Q0010060000, G05D0001020000, G06N0003080000, G05B0013040000, G06N0003000000
(86) International Application No Filing Date	:NA :NA
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(57) Abstract :
In this paper, we address the challenge of optimizing robot path planning using an artificial intelligence algorithm. The primary goal is to develop an optimal strategy that maximizes the overall return. When the robot encounters a new state, it must choose and execute an action from a predefined set. To enhance the algorithm's performance, a search strategy is employed during action selection. A critical component of the robot's path planning system is the implementation of directional reference vehicle scheduling. Artificial intelligence algorithms are predominantly used in this domain. In this study, we utilize an AI algorithm to optimize the vehicle scheduling problem. The path variable is defined based on the planning node, and the sequence of delivery points that meet the delivery requirements is termed the legitimate sub-path. This sequence excludes any repeated planning points. The proposed algorithm significantly boosts the efficiency of multi-robot systems by reducing the number of explorations needed and accelerating the convergence process.

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :28/06/2024

(21) Application No.202411049683 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLIGENT PROCESS IN NUMERICAL MODELLING AND ITS APPLICATIONS FOR CONCRETE STRUCTURES

(51) International classification	:G06N0020000000, G06F0030200000, G01M0005000000, G06F0111100000, G06N0005040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

Abstract: An intelligent process for numerical modelling of concrete structures is provided, incorporating advanced algorithms, machine learning techniques, and real-time data integration. This process enhances the accuracy, efficiency, and adaptability of numerical simulations, leading to better predictions of structural behaviour under various conditions. The invention is applicable to structural health monitoring, design and construction optimization, and disaster management.

No. of Pages : 10 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202411049684 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IMAGE AUTHENTICATION SYSTEM USING ARTIFICIAL INTELLIGENCE

(51) International classification :G06N0003040000, G06N0003080000, G06F0016583000, G06K0009620000, G06F0016580000
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An image Authentication using Artificial Intelligence System comprises a data collection module (101), an image processing module (102), a Feature extraction module (103), a Convolutional Neural Network model (CNN) (104), a FAISS (Facebook AI Similarity Search) (105), a mobile application (106), and a Model retraining Pipeline (107), wherein the data collection module is gathering a dataset of authenticated images, typically around 50,000 images of different monuments, places etc from different sources and The dataset serves as foundation for training the model and for our invention. In another embodiment the image processing module is responsible for handling feature vector extraction from images through a pre-trained the CNN model that guarantees consistency in similarity search results. In another embodiment the Feature extraction module ensuring that we have a simple and clear methodology in order to be able to provide a dependable answer for upholding the sanctity of old pictures. In another embodiment the FAISS (Facebook AI Similarity Search) applies indexing to optimize search performance, making it well-suited to large-scale image retrieval tasks. In another embodiment the mobile application is used for users that can either pick photos from their already existing gallery or simply take new ones with their device camera. In another embodiment to ensure continuous improvement, periodically retrain the CNN model using new data and user feedback through Model Retraining Pipeline which enhances accuracy and performance.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/06/2024
(21) Application No.202411042904 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A NOVEL QUATERNISED AMYLOPECTIN BASED BIOPOLYMER FOR ENHANCED MICROALGAL BIOMASS HARVESTING

(51) International classification :A61K31/718, C08L3/12, C08B35/00, C12N1/12, A01G33/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract The present invention discloses a quaternised amylopectin (QAMYP) based bio polymer along with its method of preparation. More specially, the present invention discloses a non-toxic, eco-friendly process utilizing etherification route to develop a quaternised amylopectin (QAMYP) based bio polymer to improve the efficiency of microalgal biomass harvesting.

No. of Pages : 24 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/06/2024
(21) Application No.202411043103 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ACOUSTIC METAMATERIAL UNIT CELL FOR NOISE ATTENUATION THROUGH FREE AIRFLOW

(51) International classification :G10K11/16, B32B5/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to an acoustic metamaterial unit cell (102) for noise attenuation through free airflow. The acoustic metamaterial unit cell (102) can include at least one ventilated hole (104), where the at least one ventilated hole (104) can include one or more equidistant side branches (106) can be configured to radiate outwardly and form one or more side branch helmholtz chambers (108), where the one or more side branch helmholtz chambers (108) can be configured to attenuate a plurality of sound waves in a low-to-mid frequency range passing through at least one ventilated hole (104).

No. of Pages : 24 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/06/2024
(21) Application No.202411050099 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DUAL ENERGY SOURCES BASED CUK DERIVED BIDIRECTIONAL DC-DC CONVERTER FOR ELECTRIC VEHICLES

(51) International classification :B60L50/60, B60L50/40, H02M3/158, H02M3/335, G05B11/42, H02M1/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT The present invention discloses a dual energy source based CuK derived bidirectional DC-DC converter (100) for E-vehicles (EVs). The converter (100) includes a dual power supply comprising a supercapacitor (SC) (102) onboard with a battery (104) at input side. The converter (100) has bi-directional capacity i.e. power is supplied from the SC (102) and the battery (104) to a motor of the EV and back from the motor to charge the SC (102) and the battery (104) during regenerative braking mode. The converter (100) has buck-boost operation in charging and discharging modes and has continuous input and output currents at all ports, following a control scheme (120). Figure 1A

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/06/2024

(21) Application No.202411050103 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PORTABLE UV-C AND OZONE STERILIZATION UNIT FOR RAPID MEDICAL INSTRUMENT AND SURFACE SANITIZATION

(51) International classification	:A61L0002100000, A61L0002200000, A61L0002240000, A61L0002180000, G16H0040200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The invention relates to a portable sterilization unit designed for the rapid and effective sterilization of medical instruments and surfaces. The unit combines the germicidal properties of UV-C light and ozone to provide a comprehensive sterilization process. Key components include a compact housing, a sterilization chamber, UV-C lamps, an ozone generator, a user-friendly control panel, and a power supply. The primary objectives of the invention are to reduce the risk of healthcare-associated infections, improve sterilization efficiency, and provide a safe, chemical-free sterilization method. The unit's portability and rapid operation make it suitable for use in various healthcare settings, including hospitals, clinics, mobile units, and emergency response situations. By offering a quick and reliable sterilization solution, the invention aims to enhance hygiene standards and support infection control practices in diverse medical environments.

No. of Pages : 10 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049145 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM FOR MITIGATING SQL INJECTION ATTACKS

(51) International classification :G06F0021550000, G06F0021560000, G06Q0020400000, G06F0021620000, G06F0021570000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT The present invention relates to a system (100) for mitigating SQL injection attacks. The system (100) includes an input validation module using context-aware parsing and semantic analysis to detect and neutralize malicious payloads, and a real-time monitoring and detection module that employs anomaly detection algorithms to identify suspicious patterns in web traffic and database interactions. A behavioral analysis engine utilizes machine learning to differentiate between legitimate and malicious queries. Blockchain integration ensures data integrity and immutability, while a zero-trust architecture enforces strict verification measures for all transactions. The system (100)'s operational workflow includes rigorous input validation, real-time anomaly detection, and immediate response mechanisms. Implemented through advanced software and robust hardware, the system (100) provides enhanced security, scalability, and compliance with industry standards. This innovative approach significantly reduces the risk of SQL injection attacks, ensuring the integrity and security of sensitive data.

No. of Pages : 14 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049151 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A METHOD FOR SELECTING SUSTAINABLE SUPPLIERS WITHIN A GREEN SUPPLY CHAIN FRAMEWORK USING THE FUZZY TOPSIS TECHNIQUE

(51) International classification	:G06Q0010060000, G06Q0010040000, G02F0001136000, G06Q0010080000, G06F0017180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a method for selecting sustainable suppliers within a green supply chain framework using the Fuzzy technique for ordering performance by similarity to ideal solution (TOPSIS) technique. The method comprises a multi-criteria decision-making (MCDM) framework for selecting electric vehicles which integrates the Analytical Hierarchy Process (AHP) and the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS). The present method assists the vehicle companies in selecting the optimal electric vehicle in environments characterized by subjectivity and ambiguity, utilizing parameterized triangular fuzzy numbers for linguistic values. The electric vehicle selection problem's structure is analyzed using the AHP, and the weights criteria are determined. The fuzzy TOPSIS approach then used to calculate resultant ranking. Today's growing awareness of environmental preservation and social responsibilities, the idea of sustainability is evolving into a fundamental guiding principle for many industrial sectors. The value of the green supply chain (GSC) can be maximized through supplier selection (SS) to keep the business sustainable and profitable.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049216 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTIVE NEURAL NETWORK SYSTEM FOR REAL-TIME IMAGE RECOGNITION AND PROCESSING

(51) International classification	:G06N0003040000, G06N0003080000, G06Q0020380000, G06T0007000000, H03F0001560000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The adaptive neural network system described in this invention offers a robust solution for real-time image recognition and processing. Its ability to dynamically adjust to varying input complexities makes it suitable for a wide range of applications, enhancing both efficiency and accuracy

No. of Pages : 8 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049254 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD AND SYSTEM FOR IDENTIFYING MULTI-LEVEL THROUGH POCKET FEATURES FROM BOUNDARY REPRESENTATION (B-REP) MODELS

(51) International classification	:G06F0030000000, G06T0017100000, H04N0005232000, G06F0119180000, G06F0030170000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT This disclosure relates to method (300) and system (100) for identifying through pocket features having a non-unique entrance face from B-Rep models. The method (300) includes receiving (302) a user input including a B-Rep model (208). The method (300) further includes identifying (304) a reference shell face from the plurality of faces and an associated reference shell edge based on reference identification criteria. The reference shell face includes the reference shell edge. The method (300) further includes sequentially identifying (306) a set of consecutively adjacent shell faces from remaining of the plurality of faces and a corresponding set of shell edges based on subsequent identification criteria. The method (300) further includes validating (308) a loop formed by the reference shell face and the set of consecutively adjacent shell faces based on through pocket validation criteria.

No. of Pages : 54 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024

(21) Application No.202411048863 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LPG CYLINDER LIFTER

(51) International classification :B62B1/14, B62B3/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present disclosure provides a system for lifting and transporting LPG cylinders, comprising a stand configured to support the weight of an LPG cylinder, a set of tripod wheels attached to said stand, wherein said tripod wheels are configured to enable the stand to traverse obstacles up to 2 inches in height, a handle detachably connected to said stand, wherein said handle facilitates the lifting and maneuvering of the LPG cylinder onto said stand, and a weighing machine integrated into the base of said stand, wherein said weighing machine is configured to measure the weight of the LPG cylinder with and without gas. The system includes said stand constructed from steel, aluminum, or reinforced plastic, ensuring the structural integrity to support an LPG cylinder weighing 45-50 kgs. The system includes said handle with an ergonomic grip designed to reduce strain on the user during the lifting and maneuvering process.

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024
(21) Application No.202411048871 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM FOR INTEGRATING DIGITAL CONTENT WITH HANDWRITTEN NOTES

(51) International classification	:G06F0003048830, G06F0016580000, G06F0040169000, G06F0016955000, G06F0016220000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides a system for integrating digital content with handwritten notes, comprising a mobile application configured to capture images of handwritten notes and annotate said images, a browser extension configured to link digital content to specific sections of said captured images of handwritten notes, a database configured to store said captured images of handwritten notes and associated linked digital content, a retrieval mechanism configured to access and present said linked digital content in response to a user's query about said handwritten notes, and a user interface configured to display said linked digital content alongside said captured images of handwritten notes, facilitating enhanced understanding and organization. The system further includes features for highlighting, marking, categorizing, tagging, searching, scanning, presenting, annotating, highlighting, organizing, visualizing, interacting, incorporating voice commands and gesture recognition, and creating digital copies of handwritten notes.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024
(21) Application No.202411048929 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ENERGY CONSERVATIVE EMERGENCY LIGHTING SYSTEM

(51) International classification :F21V3/02, F21L14/04, F21S9/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an energy conservative emergency lighting sys-tem (200) having a lighting device (100), comprising an inflatable column (101) made of fabric material coated with an elastomeric/ polymeric compound; an externally positioned omnidirectionally rotatable lighting fixture (102) on the top of the inflatable column (101) and a controlling machinery (103) at the base of the inflatable column (101); wherein, the inflatable column (101) is air-filled intermittently to a specified pressure through a inflator (201) positioned at the inner bottom of the inflatable column (101); wherein a pressure sensor (202) is fixed within the inflatable column (101) for monitoring air pressure such that the pressure sensor signals the inflator (201) to automatedly inflate when the pres-sure reduces below a first specified pressure and to automatedly stop when the pressure reaches a second specified pressure; wherein the inflator (201) is pow-ered by a rechargeable battery (203) equipped within the inflatable column (101).

No. of Pages : 26 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024

(21) Application No.202411048964 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INNOVATIVE EFFORTS TO STUDY THE IMPACT OF MUSIC ON THE PSYCHE OF ORPHANS

(51) International classification	:A61B0005000000, A61B0005160000, A61B0005024000, A61M0021020000, A61B0005053300
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract A system for assessing the impact of music on the psychological well-being of children residing in orphanages is disclosed. The system includes an audio playback system for delivering a variety of music genres, environmental sensors for measuring light, temperature, and noise levels, and wearable physiological monitors for gauging heart rate, skin temperature, and galvanic skin response. Additionally, a video recording system observes behaviors and interactions, while a data collection and analysis unit aggregates and analyzes data from the environmental sensors and physiological monitors. Behavioral analysis software analyzes changes in behavior or interaction among children, and a music library management system organizes and controls the playback of music. Psychological assessment tools, including standardized tests and questionnaires tailored for children, are also included to assess the psychological impact accurately.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024
(21) Application No.202411048965 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BATTERY-LESS REMOTE CONTROL SYSTEM

(51) International classification :G05B0015020000, G08C0023040000, H02J0007350000, H02J0013000000, H04L0009320000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract Disclosed is a battery-less remote control system comprising an infrared (IR) receiver configured to capture hex values from an original remote control; a microcontroller configured to store said hex values corresponding to keys of said original remote control; an IR transmitter connected to said microcontroller, said IR transmitter configured to send signals to a receiver device based on said stored hex values; a plurality of tactile push buttons connected to said microcontroller, each of said tactile push buttons corresponding to specific stored hex values; a solar power assembly comprising a plurality of solar plates arranged in series, said solar power assembly generating an output voltage greater than 6V; a voltage regulator connected to said solar power assembly and said microcontroller, said voltage regulator configured to regulate said output voltage to 5V for powering said microcontroller.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024

(21) Application No.202411048986 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TRIPLE ANTIBIOTIC POINT

(51) International classification :A61K9/00, A61P31/00, A61K31/4164, A61K31/4965, A61K31/47, A61K31/65
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to a triple antibiotic point and a process for the preparation thereof. triple antibiotic point comprising a mixture of ciprofloxacin, metronidazole, and minocycline antibiotics

No. of Pages : 11 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024

(21) Application No.202411048987 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MODIFIED TRIPLE ANTIBIOTIC POINT

(51) International classification :A61K9/00, A61P31/00, A61K31/4164, A61K31/4965, A61K31/47, A61K31/70
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to a modified triple antibiotic point and a process for the preparation thereof. modified triple antibiotic point comprising a mixture of ciprofloxacin, metronidazole, and clindamycin antibiotics.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024

(21) Application No.202411049039 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN IOT BASED BIOMEDICAL WASTE MANAGEMENT SYSTEM

(51) International classification	:G06N0003040000, G06N0020000000, G06N0003080000, G06N0003000000, G06Q0010060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An IoT based biomedical waste management system (100) is disclosed, Further, the system (100) comprises a plurality of sensors (102) installed inside a facility for detecting one or more parameters. Further, an IoT based communication module (108) communicatively coupled with the plurality of sensors (102). Further, at least one processor (104) operationally coupled with the plurality of the sensors. Further, the at least one processor (104) is configured to fetch the one or more parameters of the biomedical waste. Further, analyse the one or more parameters of the biomedical waste by using a trained AI/ML model (110) to optimize one or more biomedical waste collection routes and schedules based on the one or more parameters. Further, a computing unit (118) communicatively coupled with the at least one processor (104) configured to operate the computing unit (118) to provide real-time notifications to a user for the management of biomedical waste. <>

No. of Pages : 22 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/06/2024
(21) Application No.202411050120 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A COOKING GAS STOVE WITH A DETACHABLE BURNER ASSEMBLY

(51) International classification :F23D14/02, F23D14/46, F23C5/02, F24C3/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The invention relates to a cooking gas stove with a detachable burner assembly designed to address the cleaning challenges associated with traditional non-removable components. The cooking gas stove comprises the detachable burner assembly, a control valve, a fuel supply line, and a housing structure. The detachable burner assembly is positioned above a heat-resistant cooking surface to receive and combust a gaseous fuel. The control valve assembly regulates the flow of the gaseous fuel to the burner assembly. The fuel supply line positioned below the heat-resistant cooking surface in fluid communication with the control valve assembly. The detachable burner assembly comprises a detachable mixing chamber positioned above the heat-resistant cooking surface, and a burner. The detachable mixing chamber is configured to mix the gaseous fuel with air before combustion. The cooking gas stove features a detachable burner and a removable mixing chamber, allowing for thorough cleaning and enhanced kitchen hygiene. Figure 1

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050144 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A LABORATORY INSTRUMENT FOR ULTRA VIOLET (UV) PHOTO DEGRADATION OF CHEMICAL AGENTS, AND USES THEREOF

(51) International classification :B01J0035000000, C02F0001320000, C02F0101300000, C02F0001280000, B01J0021060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
A degradation instrument for photo degradation and remediation of toxicants from polluted water from industry, agriculture and pharmaceutical effluents, employing UV-C lights with enhanced remediation activity with the use of titanium dioxide (TiO2) as photocatalyst and activated charcoal as adsorbent, is disclosed, comprising of three-side closed and one side open door fixed with hinges, constructed of glass finish stainless steel grade (SS304), sheet thickness (1mm) and dimensions 30cm x 30cm x 30cm. The photo degradation device consists of three UV-C installed on the top of the instrument. On bottom side of the instrument, magnetic stirrer with hot plate, constructed of glass finish stainless steel grade (SS304), sheet thickness (1mm), installed as stationery component. This device is specifically designed for photo degradation and remediation of toxicants from polluted water but its advantages like rust free body, low-cost maintenance and easy operation, easy customization as per requirements of study, increase its broad scope of applications in other UV-C lights related studies.

No. of Pages : 15 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050177 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART CLOTHES DRYING APPLIANCE WITH AUTOMATED SHIFTING AND AI-ENHANCED DRYING MECHANISM

(51) International classification	:D06F0058200000, G06N0020000000, D06F0105280000, D06F0058040000, D06F0058260000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to smart automated clothes drying appliance (100). The appliance (100) integrates advanced technologies to optimize the drying process. It features a perforated drying chamber (101) for effective drainage and airflow, an automated shifter mechanism (102) to adjust the chamber based on sunlight conditions, and moisture sensors (103) for continuous humidity monitoring. A rotator mechanism (104) ensures uniform clothes distribution, while an AI and machine learning module (105) optimizes drying parameters and predicts optimal cycles. Additionally, a communicative module (106) for informing users when the clothes inside the drying chamber are dry and ready for removal. TO BE PUBLISHED WITH FIGURE 1.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024

(21) Application No.202411049728 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EVALUATION OF THE POSSIBLE MECHANISM OF ACTION OF PRUNUS PERSICA FOR NOOTROPIC ACTIVITY

(51) International classification :A61P0025000000, A61P0025280000, A23L0033105000, A61K0036230000, A61K0036736000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to the pharmacological potential of Prunus persica leaf extracts, focusing on their phytochemical composition and therapeutic effects. Extracts were prepared using a novel ethanol maceration method, yielding hydroethanolic extracts rich in flavonoids, glycosides, alkaloids, and saponins. Phytochemical analysis confirmed the presence of these compounds, suggesting antioxidant and neuroprotective properties. Acute toxicity studies demonstrated safety at high doses in animal models. Behavioral tests, including the elevated plus maze and Morris water maze, revealed enhanced cognitive performance following extract administration. Additionally, the extracts showed efficacy in mitigating lithium-induced head twitches and sodium nitrite-induced respiratory arrest. These findings highlight the potential of Prunus persica leaf extracts as neuroprotective agents with therapeutic implications for cognitive disorders.

No. of Pages : 19 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202411049750 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT-BASED MONITORING INTERFACE FOR BOX-TYPE SOLAR COOKER

(51) International classification :F24S0020300000, F24C0007080000, G08B0005220000, G08B0025010000, A47J0036320000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT An IoT-based monitoring Interface for box-type solar cooker comprises solar box cooker (100), a microcontroller (101), a WIFI module (102), temperature sensors (103), a mobile application (104), an alert system (105). In another embodiment the microcontroller (101) is used to calculate the remaining food cooking time at a particular instant. In another embodiment the WiFi Module (102) securely establishes communication between Arduino processor and an android application in smart phone. In another embodiment the temperature sensors (103) are used tomeasure ambient temperature and the cooking pot, absorber plate, and glass sheet temperature inside Box Type Solar Cooker respectively. In another embodiment the mobile application (104) is used for displayed the cooking time of food and temperature inside box cooker. In another embodiment the alert system used to notify the user to indicate completion of cooking process there by easing the monitoring of Box Type Solar Cooker.

No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202411049814 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A ONE-POT PROCESS FOR PREPARATION OF 2-SUBSTITUTED-1H-BENZO[D]IMIDAZOLE DERIVATIVES

(51) International classification :A61K31/4164, A61K31/4184, C07D235/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
The present invention relates to a new, one-pot, greener synthetic methodology for preparation of versatile 2-substituted-1H-benzo[d]imidazole derivatives (3a-az), with good to excellent results by reacting o-phenylenediamines with readily available methyl and/or phenyl acetals and Trifluoro methyl and/or difluoromethyl hemiacetals direct heating to 100-120º C without using any solvent, additives or metal catalysts.

No. of Pages : 27 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202411049878 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A NEW METHOD FOR ALLOCATING EMBEDDED COST OF TRANSMISSION SYSTEM IN THE DEREGULATED POWER SECTOR

(51) International classification :G06Q30/02, G06Q50/06, H02J3/00, G06F113/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Embedded cost is defined as the revenue requirement needed to pay for all facilities plus any new facilities added to the power system during the life of the contract for transmission service. In the literature, some techniques have been explained to allocate the costs of transmission facilities to its users. This work proposes a new method for allocating embedded costs to the transactions and pool in the deregulated power sector. The proposed method allocates the embedded cost of transmission facilities among its users in a non-discriminatory manner and provides the correct economic signals in the simplest possible way. It is very much clear that the new proposed method is transparent, fairest, logical and more accurate among all the existing methods as it is able to overcome all shortfalls of existing methods. It can be applied to a deregulated power system with accuracy and convenience.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049264 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR ASSESSING THE IMPACT OF GLOBAL CHAIN TECHNOLOGY ON CYBER SECURITY RISKS IN THE INDIAN BANKING SECTOR

(51) International classification :G06N0020000000, G06Q0010060000, H04L0009080000, G06F0021570000, H04L0009060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a system and method designed to assess the impact of global chain technology on cyber security risks within the Indian banking sector. As global chain technologies, including blockchain and distributed ledger systems, gain prominence in financial services, they introduce both opportunities and vulnerabilities in cyber security. The system integrates advanced data collection, AI-driven analytics, and machine learning algorithms to identify, analyze, and mitigate potential risks associated with these technologies. Key components include a robust data collection module for gathering diverse data sources, an AI-powered data analysis module for risk identification, a sophisticated risk assessment engine to evaluate impacts, and a responsive risk mitigation module providing actionable recommendations. The invention aims to enhance the resilience of banking institutions against evolving cyber threats, thereby supporting secure and sustainable adoption of global chain technologies in the Indian banking landscape.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024

(21) Application No.202411049363 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ACTIVE REAR VIEW MIRROR CLEANER

(51) International classification :B60R1/06, B60S1/54
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The acronym "ORVM" refers to "Outside Rear View Mirror." It is a part that is frequently seen on cars, trucks, and motorbikes. The ORVM is a crucial safety element that enables the driver to see clearly into the behind and sides of the car as well as the surrounding area. Active Rear View Mirror Cleaner is provided for cleaning the side-view mirrors on vehicles.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024

(21) Application No.202411049364 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PROXIMITY-BASED ATTENDANCE MANAGER

(51) International classification	:G07C0001100000, G06Q0050200000, G07C0001140000, G07C0001120000, H04N0019890000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Smart Attendance System is designed to be integrated with school's existing systems. Traditional attendance methods such as attendance or card swiping can be easily abused as ID cards may get lost or may be used by some other to mark attendance in absence of the actual owner of the card. However, each Biometric is unique, making it nearly impossible for students/audience to fake or use attendance records. Attendance tracking is flawed and may result in a nomination from a student joining on behalf of another student. With smart time and attendance using proximity-based detection and Biometric recognition, the risk of error and fraud is greatly reduced. Polling writing, data collection, and coordination is a time-consuming and error-prone task. Smart time and attendance simplify this process by freeing up valuable time and resources that can be used for other important tasks.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024

(21) Application No.202411049365 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : GREEN CORRIDOR FOR EMERGENCY VEHICLES USING INTERNET OF THINGS, GOOGLE MAPS AND GPS

(51) International classification :G08G0001096500, G08G0001010000, G08G0001087000, H04W0004020000, G08G0001096700
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
It is suggested to create an invention in order to address the issue of the lengthy line of cars, which exacerbates traffic congestion and pollution. Road congestion causes delays for emergency vehicles in delivering necessary services, endangering multiple lives. The invention “Green Corridor for Emergency Vehicles using Internet of Things, Google Maps and GPS” is an attribute of the Smart traffic management system using Internet of Things (IoT), Google maps and Global Positioning System (GPS).

No. of Pages : 9 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024

(21) Application No.202411049366 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATIVE OBJECT DETECTION WHEELCHAIR FOR ANIMAL

(51) International classification	:A61H0003000000, A61G0005100000, A61H0003040000, A61G0005040000, A01K0013000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
The advantages of an animal wheelchair include its straightforward design, ability to assist injured animals in walking, support for rehabilitation, adjustable dimensions that allow the wheelchair to fit animals of various sizes, and ease of use.

No. of Pages : 8 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049367 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLI-SAFE: ELEVATING ROAD SAFETY VIA INTEGRATED HARDWARE AND MACHINE LEARNING FOR PROACTIVE HAZARD AVOIDANCE SYSTEM

(51) International classification :G08G0001160000, A61K0045060000, E01C0011000000, E01C0023060000, G08G0001017000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Driving carelessly can lead to fatalities, especially near potholes or steep bends. The Supreme Court revealed that, in the last five years, potholes and trench falls caused around 15,000 road fatalities, which is deemed unacceptable. According to the Road Transport and Highway Ministry's annual report, accidents from potholes or falls increased by 25%, with 1,481 fatalities in 2021 and 1,856 in 2022 in India. Last year alone, there were over 4.5 lakh accidents in India, resulting in 1.5 lakh fatalities and 4 lakh injuries. Accidents increased by 11.9 percent compared to the previous year. According to the report, Assam had 180 deaths, Madhya Pradesh had 200 deaths, and Uttar Pradesh had 1,030 deaths. The World Health Organization predicts that road accidents will be the fifth most common cause of death by 2030. In the pursuit of improving vehicular safety, this model introduces an integrated control system that combines advanced hardware with cutting-edge machine learning.

No. of Pages : 10 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024

(21) Application No.202411049368 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SOLAR CHARGE-BASED BOTTLE FAN

(51) International classification :A45F3/16, H01M10/46, H02J7/00, H02J7/35
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
High-performance solar fans are employed in both fixed and portable arrangements. A ventilation fan can be used to remove air from under roofs and/or has the advantage of portability. Solar panels can be used to power portable fans. An eco-friendly solar chargeable device consists of a fan that gives instant relief from hot or cold weather. This device operates with a battery cell.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049369 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT BASED OBSTACLE AVOIDING CAR

(51) International classification :G01S0015931000, G01S0007521000, B60W0030095000, A61K0048000000, G10K0011000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
This invention discusses a unique method that uses an ultrasonic sensor and IOT for the purpose of identifying obstacles and informing the system. This method can avoid collision with the object by monitoring the distance using an Arduino Uno and an ultrasonic sensor.

No. of Pages : 8 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024

(21) Application No.202411049370 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTIVE TIRE PRESSURE CONTROL SYSTEM FOR ENHANCED EFFICIENCY AND SAFETY

(51) International classification :B60C0023000000, H03M0007300000, E01F0013120000, H03M0007400000, B60C0011110000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Generally, when working with traditional tires. We tend to deflate the tires when we want to move across different types of terrains and all-season tires usually cause problems in different conditions, so we have to deflate the tires to make them work efficiently manually. But sometimes this is not the best possible way to overcome the problem. Here comes our device which can deflate the tire as required according to the situation and inflate the tire accordingly.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024
(21) Application No.202411049112 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED CLEANING AND SORTING DEVICE FOR EATABLES

(51) International classification :A23N12/02, A47J43/24, B08B3/02, B08B3/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses an automated cleaning and sorting device for eatables comprises a body 100 configured with a chamber 130 for storing eatables, motorized rollers 140 with bristles for thorough cleaning, and nozzles 150 for water spraying, managed by proximity sensors and a microcontroller. A gas sensor identifies nonedible items, which are removed via a motorized member. The sorting mechanism includes rods 170 arranged in a diverging pattern, adjustable through a touch-enabled screen 180 to match user-defined sizes. The device is equipped with wheels for mobility, suction cups for stability, and a barrel 200 for collecting defective eatables. Powered by an integrated battery and operable remotely via a communication module, this invention enhances cleaning efficiency, sorting accuracy, and operational convenience in food processing.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050426 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR EFFECTIVE DISTRIBUTED NETWORK CHARGING FOR ELECTRIC VEHICLES

(51) International classification :G06Q50/06, B60L53/64, B60L53/63, B60L53/66, B60L55/00, H02J3/32, H02J3/38
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A unique solution to electric vehicle (EV) charging infrastructure uses dispersed network capabilities to optimize grid utilization and consumer convenience. The solution addresses grid congestion and peak load with dynamic pricing, smart scheduling, and decentralized network administration. Dynamic pricing rewards off-peak charging and balances energy distribution by adjusting charging costs based on grid demand. Smart scheduling prioritizes charging requests based on car battery levels, trip needs, and electricity pricing to save resources. Decentralized management lets charging stations make decisions locally and work with a central server to enhance performance. An easy-to-use interface delivers real-time updates, notifications, and charging session management. The technology supports vehicle-to-grid (V2G) and renewable energy integration and is scalable. This distributed network charging system advances EV infrastructure by improving grid stability, lowering costs, and promoting sustainable energy habits. It addresses existing difficulties and prepares for future electric mobility and energy management demands.

No. of Pages : 23 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024

(21) Application No.202411050444 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A MICROEMULSION SYSTEM FOR TOPICAL DELIVERY OF TROLAMINE SALICYLATE

(51) International classification :A61K31/107, A61K31/14, A61K31/205, A61K47/44, A61K31/23
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present technology relates to formulation development and evaluation of the Trolamine microemulsion system. The highest microemulsion zone was achieved for the microemulsions having Tween 80 : Ethanol in a ratio of 1:1 concentration. The pH range is 5.3-6.5, TMS content of the microemulsion formulations were within the range of 92.5 %. The A6 formulation was found to possess the lowest viscosity value (2021 ± 113.12 cps), average globule size (nm)of the optimized formulation was found to be in the range of 90.30, where as Zeta potential (mV) was drug content of the optimized formulation was found to be - 29.8 and exhibited 88.67±2.9 % drug permeation.

No. of Pages : 34 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202411050482 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FINGERPRINT-ENABLED REMOTE CONTROL FOR ENHANCED USER EXPERIENCE AND SECURITY

(51) International classification	:G06F0021320000, H04W0012060000, G06F0021000000, H04L0009320000, G06F0003035400
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention relates to a fingerprint-enabled remote control designed to enhance user experience and security. Integrating a fingerprint sensor, microcontroller, and memory storage, the device authenticates users by capturing and processing fingerprint data. Upon authentication, it retrieves personalized settings from memory, adjusting remote control configurations to suit individual user preferences. Administrators can manage access levels, ensuring only authorized users control specific features. The device operates conventionally for unregistered users but offers enhanced functionality through biometric authentication. Contextual awareness and adaptive learning capabilities further tailor user experiences, while real-time configuration adjustments based on authenticated fingerprints provide immediate personalization. By combining convenience with robust security measures, the invention aims to redefine remote control interaction, optimizing usability and user satisfaction across various electronic devices. Accompanied Drawing [Figure 1]

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024

(21) Application No.202411049371 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : REGENERATIVE GRAVITATIONAL SLIDE

(51) International classification :H02J7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Gravitational slides are coming into picture where the trekkers are carried back to the base station by such slides. The length of such slides ranges from a few meters to several kilometers. Riding such a slide is a thrilling and adventurous task for the tourists. Such slides exist in various parts of the world. These are curved metal passage through which the wheeled cart slides to reach the base station.

No. of Pages : 10 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049372 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEMS FOR MANAGING KNOWLEDGE IN LAW FIRMS

(51) International classification	:G06Q0050180000, G06Q0010100000, G06F0016248000, G05B0019418000, H04M0003493000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The current system created special methods for law firms to manage their knowledge. For instance, a single system offers a single user interface for finding and accessing law-firm records as well as for researching case law or other legal materials for an online legal research service.

No. of Pages : 8 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049380 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PROCESS FOR PREPARING SILVER NITRATE CREAM FOR BURN WOUND AND COMPOSITION THEREOF

(51) International classification :A61K8/02, A61K9/06, A61K31/055, A61K31/14, A61K33/38, A61K31/4164, A61K31/17
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
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Filing Date :NA

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(57) Abstract :
The present invention relates to a process for preparing a silver nitrate cream and quantitative determination of silver nitrate for treating burn wounds. The cream comprises 10-13 wt.% cetostearyl alcohol, 6-10 wt.% liquid paraffin, 0.09-0.1 wt% chlorocresol, 0.9-1.2 wt.% Cetrimide, 0.09-0.11 wt.% allantoin, 0.18-0.20 wt% chlorhexidine gluconate solution, and 0.18-0.20 wt% silver nitrate The process involves heating separate oily and aqueous phases, combining to form an emulsion, and sequentially adding allantoin, chlorhexidine, and silver nitrate under specific conditions. The cream provides an optimal balance of immediate and sustained silver ion release for antimicrobial activity without excessive saltiness. Allantoin and chlorhexidine promote wound healing. The stable formulation resists browning/blackening and staining. The novel composition addresses limitations of previous silver-based burn wound treatments.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049438 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR VEHICLE SECURITY AND THREAT SCANNER

(51) International classification	:G06F0011360000, G06F0021550000, G07C0005080000, G06F0021570000, H04L0012400000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
A system (100) for vehicle security and threat scanner is disclosed. A hardware unit (120) enables communication with a plurality of electronic control units in a vehicle (125). The core module includes a fault injection module (130) configured to perform a plurality of fault injections to evaluate potential vulnerabilities in the vehicle. A telematics and over-the-air update security module (135) evaluates a plurality of security features. A threat scanner module (140) allows identification and reporting of potential threats detected during the fault injection process. A report generation module (145) generates a plurality of reports to the user through a user interface (150). FIG. 1

No. of Pages : 43 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049469 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SENSOR-DRIVEN ADAPTIVE LIGHTING SYSTEM FOR COMMERCIAL SPACES

(51) International classification :H05B0047110000, H05B0047115000, A01G0007040000, H05B0047125000, H05B0047190000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Sensor-Driven Adaptive Lighting System for Commercial Spaces is designed to provide intelligent lighting control using a network of advanced sensors. These sensors continuously monitor two critical factors within the commercial space: occupancy and natural light levels. By detecting the presence and movement of people, the system can determine where and when lighting is needed. Simultaneously, the sensors measure the amount of natural light available, allowing the system to adjust artificial lighting to complement it. This dual monitoring capability enables the system to make real-time adjustments to the lighting, ensuring that energy is used efficiently and lighting conditions are always optimal. As a result, the system enhances the comfort and productivity of occupants by providing the right amount of light exactly where it is needed, reducing issues such as eye strain and improving focus. Furthermore, by only using artificial light when necessary and at appropriate levels, the system significantly reduces overall energy consumption. This not only leads to cost savings for the business but also contributes to environmental sustainability by lowering the carbon footprint. In summary, the Sensor-Driven Adaptive Lighting System intelligently integrates data from occupancy and light sensors to create an efficient, comfortable, and productive lighting environment while minimizing energy use.

No. of Pages : 17 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202411049496 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NUTRITRACK: A PERSONALIZED PATIENT NUTRITION MONITORING DEVICE FOR ENHANCED HEALTH MANAGEMENT

(51) International classification	:G16H0010600000, G16H0020600000, G16H0050300000, A61B0005000000, A61B0005020500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
NutriTrack is a cutting-edge personalized patient nutrition monitoring device designed to enhance dietary management and health outcomes. This innovative system integrates advanced sensors, artificial intelligence, machine learning, and Internet of Things (IoT) technologies to provide real-time tracking and detailed analysis of nutritional intake and physiological responses. The device includes food intake sensors embedded in utensils, wearable physiological sensors, and an intuitive mobile application that offers visual dashboards, personalized dietary recommendations, and alerts. NutriTrack seamlessly integrates with electronic health records (EHR) to support healthcare providers with comprehensive patient data. By offering tailored dietary plans and real-time feedback, NutriTrack empowers patients to take control of their health, improves adherence to nutritional guidelines, and aids in the management of chronic diseases. This invention represents a significant advancement in personalized healthcare, addressing the limitations of traditional dietary monitoring methods with a sophisticated, user-friendly solution.

No. of Pages : 10 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024

(21) Application No.202411049517 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AI-POWERED ASSISTIVE NAVIGATION AND INTERACTION SYSTEM FOR VISUALLY IMPAIRED INDIVIDUALS

(51) International classification :A61H0003060000, G09B0021000000, G06N0003040000, G01S0015870000, G05D0001020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to an AI powered assistive navigation and interaction system for visually impaired individuals. The system comprises a sophisticated sensor suite comprising numerous sensors together with cameras, LiDAR (light Detection and ranging) sensors, ultrasonic sensors, and inertial size gadgets (IMUs); computer vision algorithms for real-time object detection, classification, and scene understanding; a convolutional neural networks; an augmented reality (AR) interface, and a cloud storage to store user profiles, navigation preferences, and environmental maps securely in remote servers. The present invention system aims to enhance the mobility and independence of visually impaired individuals through the development of actual-time lane detection and object popularity device. Leveraging advanced PC imaginative and prescient strategies, the machine utilizes a combination of photo processing algorithms and gadget getting-to-know fashions to locate lanes on roads and identify various gadgets in the surrounding surroundings in actual time. not like present answers, which frequently focus on specific obligations or environments, our technique gives a comprehensive solution designed to help visually impaired individuals navigate numerous urban and indoor environments safely and correctly. By offering real-time feedback and steering, the machine empowers users to navigate a strange environment with confidence, reducing the reliance on help from others and improving their typical quality of existence.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202411049528 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MICROBIAL FUEL CELL SYSTEM FOR DETECTING HEAVY METAL CONCENTRATION

(51) International classification	:H01M0008160000, C02F0003000000, H01M0004860000, G01N0027447000, H01M0008045370
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present disclosure provides a microbial fuel cell system for detecting heavy metal concentration. The system comprises a polyethylene tube, an anode comprising biochar configured to support microorganism growth, an agar gel matrix within the polyethylene tube, a cathode comprising aluminum, and a voltmeter configured to measure potential difference between the anode and the cathode.

No. of Pages : 27 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202411050496 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BIODEGRADABLE BIOPOLYMERIC FILM DERIVED FROM CHICKEN FEATHERS FOR SUSTAINABLE PACKAGING

(51) International classification	:C08J0005180000, C08L0067040000, C08H0001060000, A61L0031100000, C08L0003020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT This invention relates to the development (100) of a biodegradable and biocompatible biopolymeric film derived from waste chicken feathers. The process involves extracting (101) keratin from chicken feathers and blending it with gelatin and glycerol to form a novel bioplastic. The resulting biopolymeric film exhibits desirable properties such as transparency, strength, and biodegradability, making it an ideal alternative to conventional plastic packaging. The invention aims to address the environmental pollution caused by synthetic plastics and provides a sustainable, economical solution for various industrial applications, particularly in the food and bio-packaging sectors. The process (100) leverages the natural properties of keratin, gelatin, and glycerol to create a film that is eco-friendly and effective in reducing plastic waste. TO BE PUBLISHED WITH Fig. 2.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202411050553 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLIGENT SLEEPSENSE™ BABY SWING: A SMART AND ADAPTIVE BABY MOTION SENSOR SYSTEM FOR AUTOMATIC SWING ACTIVATION AND DEACTIVATION

(51) International classification :A61F0013420000, A47D0009020000, A61B0005110000, A47D0013100000, A61M0021000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
The present invention relates to a smart and adaptive baby motion sensor system for automatic swing activation and deactivation. The system comprises motion sensor to detect the baby's motion; a moisture sensor in the baby diaper to alert for timely change baby diaper; and an algorithm to interpret sensor data and determine the baby's sleep status. The "Intelligent SleepSense™ Baby Swing" is an innovative baby swing equipped with a cutting-edge Baby Motion Sensor System designed to enhance the comfort and safety of infants during their sleep routines. The key feature of this system lies in its ability to intuitively respond to the baby's sleep patterns. Once the sensor detects signs of the baby falling asleep, the swing gradually slows down and comes to a gentle stop. Conversely, upon sensing the baby waking up, the system promptly resumes the swinging motion to soothe and comfort the baby back to sleep. The ability to detect wetness in a baby nappy using a moisture sensor is an extra function of the Intelligent SleepSense™ Baby Swing. The Intelligent SleepSense™ Baby Swing is not only a time-saving and convenient solution for parents but also prioritizes the well-being of the baby by providing a responsive and adaptive environment. The incorporation of this intelligent sensor technology into baby care products represents a significant leap forward in the realm of childcare, ensuring a harmonious and peaceful experience for both infants and their caregivers.

No. of Pages : 10 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024

(21) Application No.202411050554 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEEP LEARNING BASED APPROACH FOR LAND SURFACE IDENTIFICATION

(51) International classification :B41M0001120000, G06Q0010040000, G06Q0040020000, C03C0017320000, H04W0016220000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Impenetrable surface has been perceived as a critical marker in evaluating metro-politan conditions. Nonetheless, precise impenetrable surface extraction is as yet a test. Adequacy of impenetrable surface in metropolitan land-use grouping has not been all around tended to. This paper investigated extraction of impenetrable sur-face data from Landsat Enhanced Thematic Mapper information dependent on the reconciliation of part pictures from direct ghastly combination examination and land surface temperature. Another methodology for metropolitan land-use charac-terization, in light of the joined utilization of impenetrable surface furthermore, populace thickness, was created. Five metropolitan land-use classes (i.e., low-, medium-, high-, and extremely focused energy neighborhoods, and busi-ness/modern/transportation utilizes) were created in the city of Indianapolis, Indi-ana, USA. Results showed that the incorporation of division pictures and surface temperature gave generously worked on impenetrable surface picture. Precision evaluation demonstrated that the root mean-square mistake and framework blun-der yielded 9.22% and 5.68%, individually, for the impenetrable surface picture. The general arrangement precision of 83.78% for five metropolitan land-use clas-ses was obtained.

No. of Pages : 12 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050178 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM FOR PREDICTING USER BEHAVIOR USING ADVANCED KEYSTROKE AND BIOMETRIC DATA

(51) International classification	:G06F0021310000, G06F0021320000, G06N0020000000, H04W0012065000, G06F0003023000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT The present invention introduces a system designed for modeling and predicting user behavior using enhanced keystrokes and multimodal biometrics. The system analyzes unique typing patterns such as speed, rhythm, and error frequency, alongside contextual factors to provide an understanding of the user behavior over digital platforms. The present system integrates additional behavioral biometrics like mouse movements, touchscreen gestures, and voice patterns to establish a continuous authentication mechanism, while predictive modeling anticipates future user actions, which enhances personalized experiences and enables proactive responses. The present subject matter further utilizes privacy-preserving technologies to protect sensitive data, while initial testing has shown encouraging accuracy in predicting user behavior. TO BE PUBLISHED WITH FIG.2

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050202 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DISASTER SHELTER MANAGEMENT SYSTEM AND METHOD THEREOF

(51) International classification :G16H0040670000, G06Q0010060000, G06Q0010040000, G16H0010600000, G06Q0010080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ShelterLink is an advanced disaster shelter management system designed to optimize operations and enhance evacuee safety and comfort. It features a smart sensor network to monitor real-time occupancy, temperature, humidity, and air quality data. The system includes a ventilation module with HEPA filters and UV light disinfection, dynamically adjusting airflow based on sensor data. Interactive self-serve booths provide real-time updates on shelter capacity, resources, and local information. A central command center processes data for resource optimization and shelter management, utilizing machine learning and cloud-based storage. Software components integrate data aggregation, resource optimization, evacuation planning, and information dissemination, ensuring seamless coordination via a secure communication network. The system offers multilingual support and accessibility features, integrating external data sources for enhanced evacuation planning.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050203 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HIGH ENTROPY ALLOY (HEA) COATING SYSTEM AND METHOD THEREOF

(51) International classification	:A61C0008000000, A61L0031020000, C22C0030000000, A61L0027040000, C09D0163000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention is related to the system and method for efficiently applying high entropy alloy (HEA) coatings on magnesium alloys. The system features a micro-tool fabricated from a green compact and employs a micro-electrical discharge machining (micro-EDM) process for electrical discharge coating (EDC). This process enables precise deposition of HEA onto magnesium alloys, significantly reducing setup time for complex-shaped parts. The method includes preparing HEA coatings using electrical discharges, applying the coatings to magnesium alloys, and optimizing parameters for uniform, defect-free coatings. Enhanced with graphene nanopowder, the HEA coatings exhibit superior corrosion resistance, biocompatibility, mechanical properties, and reduced bacterial adhesion. This innovative approach is particularly suitable for orthopedic and dental implants, providing improved performance and durability while streamlining the coating process. Comprehensive evaluations ensure the coatings meet stringent requirements for medical and industrial applications.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050204 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TALENT SCOUTING SYSTEM

(51) International classification	:G06Q0010100000, G06Q0030020000, G06N0020000000, G06N0005040000, G06Q0050000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
The patent AI-Powered Talent Scouting and Recommendation Device for the Entertainment Industry presents a novel approach meant to improve the entertainment industry's talent scouting procedures. Utilizing cutting-edge artificial intelligence (AI) methods, such as data analytics and machine learning, the device transforms talent identification and recommendation systems. Through the examination of many data sources, including video auditions, resumes, and social media profiles, the tool identifies trends and connections that suggest talented individuals will succeed. Providing individualized recommendations based on contestant-specified parameters helps casting directors, talent agencies, and production companies find and connect with talent more effectively. The device continuously improves its recommendation algorithms to guarantee relevance and accuracy over time using iterative learning and feedback mechanisms. This innovation claims to simplify talent scouting processes, promote inclusivity, and help in the production of interesting and varied entertainment.

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024

(21) Application No.202411050205 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HAVAN KUND SYSTEM

(51) International classification	:G05D0023190000, G16Z0099000000, A61B0018000000, H04L0067120000, G05D0023220000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
A smart “Havan Kund” system featuring a heat-resistant structure, temperature control system, smoke filtration unit, user interface, and safety features is disclosed. The temperature control system including temperature sensors, a microcontroller, and a heating element, maintains the desired temperature range. The smoke filtration unit including advanced filters, and a fan system, captures pollutants, and filters the smoke. The user interface allows setting, and monitoring the temperature range through a mobile application. Safety features encompass an automatic shutdown mechanism, a safety grid, and a tilt sensor. The smart havan kun system presents an efficient, environmentally friendly, user-friendly, and safe approach to perform the havan ceremonies.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050206 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HYBRID ELECTRIC PROPULSION SYSTEM FOR AN AIRCRAFT

(51) International classification	:B64D0027020000, B64D0027240000, H01M0050200000, B64D0031060000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a hybrid electric propulsion system for aircraft, integrating a primary jet engine and an electric motor to enhance thrust and fuel efficiency while reducing emissions. The system includes a battery pack for storing electrical energy, recharged by a generator driven by the jet engine. A control unit optimizes the operation of both engines based on flight conditions. A cooling module maintains optimal temperatures for the electric motor and battery pack. Additional features include an auxiliary electric propulsion unit, photovoltaic cells for supplemental power generation, a power management unit to balance power distribution, and an aerodynamic optimization module with morphing surfaces. The system also incorporates solid-state batteries for improved energy density, a supercapacitor bank for rapid energy discharge, machine learning algorithms for predictive power adjustment, and phase change materials for efficient thermal management. This innovative system significantly improves overall aircraft performance and sustainability.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202411049886 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SOLEUS PUSH UP DEVICE FOR ACTIVATING CALF MUSCLES

(51) International classification	:A63B0021000000, A63B0023120000, A61H0001020000, A61P0003100000, A63B0071060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to an innovative device designed to enhance the function of the soleus muscle, located in the Calf, to aid in managing cardiovascular health and diabetes. This device, named the 2Heart Soleus Push-Up Device* , focuses on stimulating the soleus muscle through targeted exercises, which can significantly improve blood circulation, reduce blood sugar levels, and promote overall cardiovascular health. The 2Heart Soleus Push-Up Device is engineered to be user-friendly and accessible for a wide range of individuals, including those with limited mobility. It consists of a stable platform that supports the feet, coupled with a resistance mechanism that provides controlled feedback during the push-up motion of the soleus muscle. The device is designed to be adjustable, catering to varying resistance levels suitable for different user needs and fitness levels

No. of Pages : 32 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/06/2024

(21) Application No.202411049915 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : “A SYSTEM FOR GENERATING LEGAL DOCUMENTS AND A METHOD THEREOF

(51) International classification :G06Q0050180000, G06Q0010100000, G06F0016332000, G06F0040186000, G06F0016930000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system (100) for generating legal documents comprising a user-interface (102) configured to receive user input specifying a document type and relevant details, a knowledge base (104) storing pre-defined document templates and legal concepts, a natural language processing (NLP) module (106) configured to retrieve a template corresponding to the user-specified document type from the knowledge base (104), and analyze the user input and the retrieved template to generate customized clauses, a processing unit (108) operatively coupled with the user-interface (102), the knowledge base (104), and the NLP module (106), wherein the processing unit (108) is configured to integrate the generated clauses with the retrieved template to form a draft document, consult the knowledge base (104) to ensure compliance of the generated clauses with relevant legal regulations, and present the draft document to the user for review and refinement.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/06/2024

(21) Application No.202411049949 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A COMPOSITION AND PROCESS FOR DEVELOPING E-TACTILE TILES FROM NON-METALLIC ELECTRONIC WASTE POWDER

(51) International classification	:B09B3/00, C04B18/04, C04B16/04, C04B14/02, C04B28/02
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABTRACT The present invention relates to a composition for developing E-Tactile tiles using a blend of materials designed to enhance sustainability and performance. It includes Non-metallic electronic waste powder (EWP) as a primary component, comprising 6.17% by weight, promoting eco-friendly disposal and recycling practices. Secondary components, such as cement, fine aggregate, coarse aggregate, additional E-waste powder, water, and superplasticizer, are meticulously combined in specific proportions to formulate one cubic meter of concrete. The method involves mixing these components to form a homogeneous composition, pouring it into molds for tactile tiles, and vibrating the molds to ensure uniformity and density. After a 24-hour setting period at room temperature, the tiles undergo curing for 28 days to achieve desired properties like wet transverse strength and abrasion resistance. This approach integrates sustainability with stringent performance requirements, advancing the field of tactile paving systems for improved urban accessibility.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024

(21) Application No.202411049541 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MAGNETIC IMPLANT DRIVER FOR DENTISTRY

(51) International classification :A61C8/00, A61B17/00, A61C13/235
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A magnetic implant driver (100) for dentistry is disclosed. The driver (100) comprises a shaft (102). The shaft (102) is constructed from a non-magnetic material. The driver (100) further comprises a driver head (104) arranged on a distal end of the shaft (102) and comprising an internal recess (106) to engage a dental implant cover screw (110), and a magnetic portion (108) positioned proximally to the driver head (104) on the shaft (102). The magnetic portion (108) is adapted to magnetically hold and contain the dental implant cover screw (110) during placement or retrieval procedures. The driver (100) is approachable in narrow regions such as a vial or a test tube for retrieval of dental implant cover screw (110).

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202411049542 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BIOACTIVE GLASS (BAG) NANOPARTICLES COATED GUTTA PERCHA AND METHOD FOR PREPARING THE SAME

(51) International classification :A61C5/42, A61C5/55, B82Y30/00, B82Y40/00, A61K6/54, C08J3/28
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A gutta percha (100) for endodontic procedures is disclosed. The gutta percha (100) comprises a coagulated latex (102) and a thin and uniform coating of Bioactive Glass (BAG) nanoparticles (104) onto a surface of the coagulated latex (102) using a Radio Frequency (RF) magnetron sputtering machine (302). The BAG nanoparticles (104) provide antimicrobial activity by releasing Bioactive Glass (BAG) ions into a root canal during a root canal treatment. The BAG nanoparticles (104) are in a range of 1 to 100 nanometers in diameter. Additionally, the coating of the BAG nanoparticles (104) enables a slow release of Bioactive Glass (BAG) ions into the root canal for providing long-lasting antimicrobial effects. Furthermore, the gutta percha (100) comprises a sealer (202) containing a Releasing solvent to enhance the antimicrobial effect by facilitating the release of Bioactive Glass (BAG) ions from the gutta percha (100).

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024

(21) Application No.202411049543 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : GUTTA PERCHA WITH NANOPARTICLES COATING AND METHOD OF PREPARATION

(51) International classification :A61C5/42, A61C5/55, B82Y30/00, B82Y40/00, A61K6/54, C08J3/28
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A gutta percha (100) with nanoparticles coating for endodontic procedures is disclosed. The gutta percha (100) comprises a coagulated latex (102) and a thin and uniform coating of graphene nanoparticles (104) deposited onto a surface of the coagulated latex (102) using a Radio Frequency (RF) magnetron sputtering machine (302). The graphene nanoparticles (104) provide antimicrobial activity by releasing graphene ions into a root canal during a root canal treatment. The graphene nanoparticles (104) are in a range of 1 to 100 nanometers in diameter. Additionally, the coating of the graphene nanoparticles (104) enables a slow release of the graphene ions into the root canal for providing long-lasting antimicrobial effects. Furthermore, the gutta percha (100) comprises a sealer (202) containing a graphene-releasing solvent to enhance the antimicrobial effect by facilitating the release of graphene ions from the gutta percha (100).

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024

(21) Application No.202411049544 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NANOPARTICLES COATED GUTTA PERCHA AND METHOD FOR PREPARING THE SAME

(51) International classification :A61C5/42, A61C5/55, B82Y30/00, B82Y40/00, A61K6/54, C08J3/28
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT A nanoparticles coated gutta percha (100) for endodontic procedures is disclosed. The gutta percha (100) comprises a coagulated latex (102) and a thin and uniform coating of silver nanoparticles (104) deposited onto a surface of the coagulated latex (102) using a Radio Frequency (RF) magnetron sputtering machine (202). The silver nanoparticles (104) provide antimicrobial activity by releasing silver ions into a root canal during a root canal treatment. The silver nanoparticles (104) are in a range of 1 to 100 nanometers in diameter. Additionally, the coating of the silver nanoparticles (104) enables a slow release of the silver ions into the root canal for providing long-lasting antimicrobial effects. Furthermore, the gutta percha (100) comprises a sealer containing a silver-releasing solvent to enhance the antimicrobial effect by facilitating the release of silver ions from the gutta percha (100).

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024

(21) Application No.202411050207 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DUAL-FUNCTION OMR MARKER

(51) International classification :B43K8/04, B43K8/08, B43K23/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
A dual function OMR (Optical Mark Recognition) marker 100 comprises, a plurality of foam tips used to fill bubbles in the OMR sheet, and for error immediate correction a first foam tip 102 is used to fill the bubble in the OMR sheet, and a second foam tip 114 is used for immediate error correction; a plurality of indicator window house inside the marker body, the plurality of indicator window indicates the level of ink inside the marker, a first indicator window 104 contains a black ink 106, and a second indicator window 110 contain a white ink 112; a plurality of ink is housed inside the plurality of the indicator window; a plurality of protective caps, which is detachable coupled to the marker body to cover the plurality of the foam tip.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050213 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LASER LAMP SYSTEM

(51) International classification	:G01S0017890000, G01S0017931000, B60Q0001200000, G01S0007497000, B60Q0001080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention presents an advanced laser lamp system for vehicles, integrating laser beams into fog lamps to enhance visibility in adverse weather conditions. The system includes LiDAR 104 (Light Detection and Ranging) to track obstacles and vehicles, while Artificial Intelligence 102 (AI) uses sensor data to enable and optimize the fog lamp's performance. The system extensively improves traditional fog lamps by combining laser technology with artificial intelligence 102 (AI), providing superior illumination and real-time adaptive capabilities. Artificial intelligence 102 (AI) analyzes environmental data to detect road hazards, dynamically adjusting light intensity and angle for optimal visibility. Features include automatic activation and adaptive lighting patterns based on real-time conditions. This system aims to reduce accidents caused by poor visibility, enhancing overall road safety.

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050214 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DHOOP DISPENSER SYSTEM AND METHOD THEREOF

(51) International classification	:A47G0033000000, F25D0023020000, H04L0067100000, G06Q0010060000, H04L0067120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention discloses an app-controlled dhoop dispenser that represents a significant advancement in the field of religious ritual accessories, providing a convenient, safe, and personalized solution for maintaining a consistent fragrance during pooja ceremonies. It includes a dispenser unit, a mobile application, and a cloud-based server. This invention enhances the spiritual experience while ensuring the safety and well-being of users by using the power of mobile technology and cloud computing.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050215 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A FERMENTER

(51) International classification	:C12M0001000000, C12M0001340000, C12M0001060000, C02F0003340000, A01G0025160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
The present invention discloses a novel and effective solution for the biotechnological processes which requires controlled microbial growth and metabolic activity. A spirally arranged nozzle air sparger tube made of cellulose acetate membranes, a nutrient delivery tube made of silicone, and solar panels are incorporated into the fermenter. The fermenter optimizes even distribution of oxygen transfer, nutrient delivery, and energy utilization. This innovative design has the potential to revolutionize fermenter technology and enhance the sustainability of the bioprocessing operations across various industries.

No. of Pages : 11 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050216 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WI-FI CONNECTIVITY SYSTEM

(51) International classification	:H04W0084120000, H04W0048180000, H04W0024020000, H04W0028020000, H04W0088060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A centralized transmitter 102 system enhances Wi-Fi connectivity in high-traffic venues. The system comprises a centralized transmitter 102 broadcasting a Wi-Fi signal, distributed receivers 104 ensuring consistent coverage, and user dongles for seamless connectivity. Receivers strategically placed throughout the venue eliminate dead zones, while dongles 106 automatically detect, and connect to the strongest signal without manual network selection. This approach simplifies network architecture, reduces congestion, and interference, and optimizes overall efficiency. The dongle-based connectivity maintains stable connections as users move within the venue. By addressing common issues of traditional Wi-Fi networks, this invention provides a reliable, and user-friendly solution for high-quality Wi-Fi access in crowded environments such as seminar halls, conference centers, and event spaces. The system delivers uninterrupted connectivity, and improves the overall user experience in high-density settings.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050217 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLIGENT WATERING SYSTEM FOR ENHANCED IRRIGATION

(51) International classification	:A01G0025160000, G05B0015020000, A01G0025090000, A01G0025020000, A61B0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
This invention presents a smart irrigation system featuring a NodeMCU ESP8266 microcontroller for wireless communication and control, a soil moisture sensor, and a relay module that governs a water pump based on soil moisture data. The system integrates with a mobile application, enabling remote monitoring and management of soil moisture levels and irrigation via the internet. A cloud-based data logging and analytics system stores historical data, optimizing watering schedules through advanced analytics. Security protocols, including authentication and encryption, safeguard data transmission between the microcontroller, mobile application, and cloud system. The method for managing irrigation involves deploying the microcontroller and sensor, establishing a wireless link, and utilizing real-time data to automate irrigation while providing notifications and alerts. The system is energy-efficient, scalable, and customizable, with additional features such as weather forecast integration, low-power sleep modes, and solar power compatibility, ensuring efficient, sustainable, and user-friendly irrigation management.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024

(21) Application No.202411050218 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADVANCED SMART SHOES

(51) International classification :A43B3/34, A43B3/40, A43B3/42, A43B3/44, A43B3/46, A43B3/48
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
This invention discloses smart shoes made of electroactive polymers (EAP), equipped with GPS, and GSM modules for real-time location tracking. The shoes communicate location data to a central server, and user's mobile device via Bluetooth, and SMS. An emergency button 312 triggers an SOS alert to pre-defined contacts. The shoes further enhance security with an optional camera, and microphone 306. These features allow users to capture evidence, and send alerts in critical situations. Data storage ensures retrievable records. This invention offers a novel approach to personal safety, particularly when carrying a mobile device is inconvenient. However, privacy considerations necessitate proper consent, and legal frameworks for camera, and microphone usage.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202411050555 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CNN BASED HAND GESTURE RECOGNITION SYSTEM FOR HCI ENABLED DEVICES

(51) International classification	:G06F0003010000, G06N0003040000, G06N0003080000, G06K0009620000, G06F0003030000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
In an era marked by rapidly advancing technology, the empowerment and inclusion of differently-abled individuals in our society remain paramount. This research work presents an innovative solution to contribute to the betterment of society by addressing the needs of differently-abled individuals through hand gesture recognition using Convolutional Neural Networks (CNN). The objective of this study is to harness the capabilities of deep learning and computer vision to create an accessible, intuitive, and versatile system for differently-abled individuals. The research focuses on the development of a real-time hand gesture recognition system capable of interpreting a wide array of gestures. A comprehensive dataset is introduced, featuring a wide variety of hand gestures, including both static and dynamic gestures. The CNN architecture utilizes multiple convolutional and pooling layers to automatically learn spatial hierarchies of features, enabling the model to recognize gestures accurately. To ensure adaptability to individual users, a transfer learning technique is applied, fine-tuning the network for personalized recognition.

No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :02/07/2024

(21) Application No.202411050625 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : HIGH-QUALITY BLUETOOTH SPEAKER SYSTEM WITH PREMIUM WOOD ENCLOSURE AND ADVANCED SOUND FEATURES

(51) International classification	:H02J0007000000, H04R0001020000, H01M0010480000, H04R0003000000, H04R0001200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a high-quality bluetooth speaker system (100) with premium wood enclosure and advanced sound features. The system (100) comprises an enclosure module, a subwoofer, a power supply module, an amplifier module, a battery management module, a safety switches and a connectivity module. The enclosure module is configured to provide durability and enhance acoustic properties. The subwoofer is configured to optimize sound clarity and prevent interference. The power supply module is configured to manage power distribution efficiently. The amplifier module is configured to deliver balanced audio output and high-quality wireless streaming. The battery management module is configured for overcharge, over-discharge, short circuit, and under voltage protection. The safety switches for controlling battery and AC power to prevent overcurrent and protect the amplifier. The connectivity module is configured to allow seamless integration of additional speakers.

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202411050645 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FUNGICIDAL COMPOSITION

(51) International classification :A01N43/82, A01N47/28, A01P3/00, C07D271/06, C07D401/12, C07D403/12, C07D413/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to a novel, synergistic fungicidal composition comprising Fluxapyroxad as the first component, Azoxystrobin as the second component, Kasugamycin as the third component and Soy protein as the fourth component. Said fungicidal composition provides an effective and environmentally friendly solution for controlling fungal diseases in various agricultural crops, particularly in rice crop. Further, the present invention relates to a process for preparing said fungicidal composition.

No. of Pages : 26 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202411050646 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "A WEB-BASED SUPPORT VECTOR MACHINE WITH BOOTSTRAP BAGGING USING REDUCED ERROR PRUNING (SVMBBREP) SYSTEM FOR EARLY DIABETES PREDICTION"

(51) International classification	:G06K0009620000, A61P0003100000, G06N0020000000, G16H0050200000, A61B0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a novel web-based hybrid boosting machine learning system known as SVMBBREP (Support vector machine with bootstrap bagging using reduced error pruning) for early prediction of diabetes patients. The proposed method involves 1. Data collection: Gather data on type 2 diabetes patients, 2. Data preprocessing: Clean and process data to remove noise and reduce dimensionality, 3. Feature extraction: employ the MRMR method to select relevant features to predict diabetes. 4. Compare classification models 5. Model evaluation 6. Hybrid model 7. Prediction 8. Web-based system. In this research endeavor, our goal is to pioneer a novel web-based hybrid machine learning system i.e. SVMBBREP for diabetes prediction, this will provide valuable support to doctors and empower healthcare professionals and individuals to take proactive measures for early detection of diabetes. Figure 1.

No. of Pages : 15 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202411050666 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM FOR FABRICATING METAMATERIAL-BASED ANTENNA FOR WIDEBAND APPLICATIONS AND METHOD THEREOF

(51) International classification	:H01Q0001380000, H01Q0025000000, H01Q0013100000, H01Q0001120000, H01Q0015000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
The present invention discloses a system (100) for fabricating metamaterial-based antenna for ultra-wideband (UWB) applications. The system (100) comprises a coplanar waveguide (CPW)-fed antenna (101) excited by a signal source (102) and a metamaterial array (103) positioned behind the CPW-fed antenna (101). The metamaterial array (103) includes a circular ring slot (103-1) combined with modified radiators (103-2), which can be T-shaped, to manipulate the electromagnetic waves and enhance the antenna's performance. The metamaterial array(103) acts as a reflector, redirecting and focusing radiation for increased gain. The CPW-fed antenna is supported by a supporting substrate (104) wherein the supporting substrate is FR-4 substrate. The metamaterial array (103) can be designed as a compact 3x3 array having dimensions of 14.8 mm x 14.8 mm x 0.25 mm.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202411050693 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HYBRID SOLAR-POWERED VACUUM-BASED WATER PUMPING SYSTEM FOR AGRICULTURAL IRRIGATION AND DRINKING WATER IN TERRAINS

(51) International classification :C02F0001280000, A01G0025160000, F03D0009250000, C02F0001780000, F04B0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT: Title: Hybrid Solar-Powered Vacuum-Based Water Pumping System for Agricultural Irrigation and Drinking Water in Terrains The present disclosure proposes a hybrid water pumping system (100) adapted to continuous and efficient operation, providing a reliable and efficient water supply for various crops, including cultivated in elevated and uneven terrains. The hybrid water pumping system (100) comprises a pair of tanks (102), plurality of barrels (106, 108, 110, 112), a container (116), and a pump (118). The proposed hybrid water pumping system (100) is capable of operating continuously throughout the year. The proposed hybrid water pumping system (100) ensures a reliable water supply, reduces operational costs, and supports sustainable farming practices. The proposed hybrid water pumping system (100) that is a reliable, efficient, and sustainable water pumping solution suitable for community based drinking water supply, agricultural irrigation in elevated and uneven terrains, providing year-round operation with minimal environmental impact and operational costs.

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202411050793 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT AND AI-POWERED ROBOTIC ARM SYSTEM FOR AUTOMATED PLANT SOWING AND WEED REMOVAL

(51) International classification :B25J0009160000, G06N0020000000, G06N0005040000, H04L0067120000, A61B0090000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
ABSTRACT The invention relates to an IoT and AI-powered robotic arm system (100) designed for automated plant sowing and weed removal, enhancing precision and sustainability in agriculture. Leveraging advanced AI algorithms (102), machine learning models (107), and IoT sensors (104), the system (100) ensures accurate seed placement, real-time weed detection, and adaptive responses to varying field conditions. The robotic arm features interchangeable tools for diverse agricultural tasks and employs AI-driven path planning for efficient field coverage and obstacle avoidance. A user-friendly interface allows for remote monitoring and control, promoting convenience and accessibility. The present system (100) aims to boost agricultural productivity, reduce chemical inputs, and support sustainable farming through intelligent automation and data-driven insights. TO BE PUBLISHED WITH FIG. 1.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202411050928 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ROOTLENS- A SMART ROOT IMAGING SYSTEM

(51) International classification :G06T0007000000, A01N0063000000, A01G0025160000, B01L0003000000, A01G0031000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is a RootLens- A Smart Root Imaging System (Figure 1). The invention pertains to the agriculture and plant sciences, wherein capturing and analyzing the root traits of a crop plant grown in soil or lab conditions is often a challenging task. Roots often adapt in response to abiotic or biotic stressors present in the soil. The methods in use for both in-situ and ex-situ root image analysis are highly expensive and offer limited root attribute measurements. The RootLens has Ro-POT, Ro-CAM (to capture root images of plants either grown in the soil i.e. field conditions or inside a Ro-POT under lab conditions), an automated imaging platform, and Ro-SOFT, which analyses root images and calculates traits such as root number, root length, root diameter, root surface area, total root length, and root volume. The RootLens offers a cost-effective solution for crop biologists and has high practical relevance.

No. of Pages : 23 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202411050938 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BRAIN TUMOR DETECTION THROUGH TRANSFORMATIVE DEEP NEURAL NETWORKS

(51) International classification :G06N0003040000, G06N0003080000, A61B0005000000, G06T0007000000, G06K0009620000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention relates to a method to detect brain tumor through transformative Deep Neural Networks. The method comprises deep neural network models utilize a combination of vision transformer (Vit-b16) with Long Short-Term Memory (LSTM), DenseNet201 with Gated Recurrent Unit (GRU) and InceptionResNetV2 with GRU architectures. The present invention method follows a systematic approach, including data pre-processing, segmentation, feature extraction and deep neural network classification. The present method focuses on the development and evaluation of an integrated deep neural network for the detection of brain tumors based on MRI images. The integration of different models with GRU enhances the capability to accurately identify and classify brain tumors. Detecting brain tumors is a critical task in medical image processing, and advancements in machine learning and deep neural networks have significantly contributed to this domain. Detecting brain tumors is a critical task in medical image processing, and advancements in machine learning and deep neural networks have significantly contributed to this domain. The preset invention aims to contribute to the field of medical image processing by providing a robust and accurate framework for brain tumor detection, enabling early diagnosis. Among these models, the InceptionResNetV2 + GRU model achieved the highest accuracy of 99.49%.

No. of Pages : 19 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202411050939 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTEGRATED CNN-RNN ARCHITECTURE FOR IMPROVED LUNG AND COLON DISEASE DETECTION

(51) International classification :G06N0003040000, G06N0003080000, G06T0007000000, G06K0009620000, A61P0011000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an innovative deep-learning method that seamlessly integrates CNNs and RNNs to accurately detect lung and colon diseases from medical imaging data. The method comprises both CNNs and RNNs and employing fully connected layers with a softmax activation function, the model aims to achieve accurate and robust classification of lung and colon diseases from medical imaging data; LC25000 Dataset as input; and data vectorization to convert the image data into a format suitable for input to the deep learning models. The CNN component excels in extracting discriminative visual features from CT scans, while the RNN component effectively models the inherent temporal dependencies within the data. Through rigorous evaluation on multiple publicly available datasets, including the LUNA16 dataset for lung nodule detection, the ILD-Chest dataset for interstitial lung disease classification, and the CVC-Clinic DB and CVC-Video and datasets for polyp detection in colonoscopy videos, proposed integrated CNN-RNN models consistently outperformed existing methods, setting new benchmarks for lung and colon disease detection tasks. Extensive experiments were conducted by integrating various CNN architectures, such as DenseNet201, EfficientNetB3, Inception v3, InceptionResNetV2, MobileNetV3Large, and Xception, with GRU and LSTM components for sequence modelling. The results demonstrated exceptional performance, with the EfficientNetB3, MobileNetV3Large, and Xception architectures combined with GRU and LSTM achieving an impressive accuracy of 99.96%. Timely and precise identification of lung and colon diseases is crucial in improving patient outcomes and survival rates

No. of Pages : 27 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202411049545 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : OBTURATION TOOL WITH SIDE VENT PROVISION AND METHOD FOR MANUFACTURING THE SAME

(51) International classification :A61C5/50, A61C5/60, A61C3/00, A61C19/00, A61C5/40, A61C5/55
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT An obturation tool (100) with a side vent provision is disclosed. The obturation tool (100) comprises a cartridge (102) to store the thermo-plasticized gutta percha (204), wherein the thermo-plasticized gutta percha (204) is adapted to fill an axial cross-section of a root canal (202) of a tooth (200). An injector (104) connected to the cartridge (102) to receive the thermo-plasticized gutta percha (204) stored in the cartridge (102). The injector (104) comprises a first notch (108) and a second notch (110) formed at a first length and a second length from an apical end (106) of the injector (104), respectively. The first notch (108) and the second notch (110) ooze out the received thermo-plasticized gutta percha (204) laterally inside the root canal (202) of the tooth (200). The obturation tool (100) smoothly fills wide irregular canals and improves lateral filling of the thermo-plasticized gutta percha (204). Claims: 10, Figures: 4 Figure 1 is selected.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051219 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED CROP MONITORING SYSTEM

(51) International classification	:G06Q0050020000, G06F0003041000, H04N0007180000, G06F0001160000, G06F0003042000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An automated crop monitoring system, comprising a first body 101 installed on an agricultural field, a touch interactive display panel 102 that is accessed by a user for providing input regarding area of field where crops are to be monitored, plurality of second bodies 201 that is manually accessed by the user for installing each of second bodies 201 at each of sub-unit area, an artificial intelligence-based imaging unit 202 to detect exact area of sub-unit at each side of second bodies 201 which are to be inspected in sync with an ultrasonic sensor mounted on second bodies 201, a motorized dual axis slider 203 for aligning an artificial intelligence-based image capturing module 204 mounted on slider 203 over the detected exact area to capture images of crops cultivated in the sub-unit area from varying angles and lengths, and a sensing module for monitoring quality of the cultivated crops.

No. of Pages : 24 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024

(21) Application No.202411051220 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CROP MANAGEMENT DEVICE

(51) International classification	:G06Q0050020000, A01G0007000000, A01G0025160000, B60L0050600000, G01B0011250000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A crop management device, comprising a pair of inverted U-shaped frames 101 connected with each other via a string 102 at opposite ends of an agricultural field, a pair of motorized drill bits 103 penetrates in surface for stabilizing frames 101 on field, a pair of motorized rollers 105 with string 102 rotate for wrapping/unwrapping string 102 to maintain optimum tension in string 102, a motorized grooved wheel 106 with an inspection unit 107 to rotate on string 102 for maneuvering along string 102 provide to-and-fro motion to unit allowing inspection of crops, an imaging unit 204 for detecting presence of pest in crop, a first robotic arm 205 with second plate 202, equipped with a blade 206 for cut-opening crop, a second robotic arm 207 with second plate 202 and equipped with a bucket 208 for collecting soil and transferring soil on rectangular member 209 attached with plate.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024

(21) Application No.202411051221 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WASTE ENERGY MANAGEMENT SYSTEM FOR ELECTRICALLY DRIVEN VEHICLES

(51) International classification :H01M10/6572, H02J7/00, H02J7/34, B60L58/10, B60L58/24, B60L58/12, B60L50/60
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A waste energy management system for electrically driven vehicles, comprising a Peltier plate 101 in thermal coupling with the battery pack 102 for absorbing heat emitted from the battery pack 102 for conversion into electrical energy, an auxiliary battery 103 connected with the Peltier plate 101 for storing converted electrical energy, a temperature sensor 104 configured with the battery pack 102 for detecting battery pack 102 temperature, a voltage sensor 106 configured with the battery pack 102 to detect battery pack 102 voltage, a relay 107 to open a circuit associated with the battery pack 102 and the motor 108 and close a circuit connecting the motor 108 and the auxiliary battery 103 to supply the converted electrical energy to the motor 108 to extend the vehicle range and a current sensor 109 linked with the battery pack 102 detects current outputted by the battery pack 102 to the motor.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051222 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PLASTIC BOTTLE RECYCLING DEVICE

(51) International classification : B29B17/00, B29B17/04, G06F3/0488, G06F3/041, B25J19/02, B25J15/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A plastic bottle recycling device, comprising a cuboidal housing 101, having a primary hopper 102 with multiple motorized blades 212 for shredding of plastic bottles into flakes, a rectangular plate 201 by a primary hydraulic pusher 202 pushes bottles towards blades 212, multiple nozzles 115 washes flakes, a sieve 116 retains washed flakes, a hot air blower 203 dries flakes, a rectangular secondary frame 118 pushes dried flakes off sieve 116 into a secondary hopper 108, an iris lid 215 dispenses dried flakes into a strand making unit 109 for making of strand, a circular sliding unit 216 with a U-shaped fork 207 collects strands into a bundle, a robotic arm 112 places bundle in a cuboidal container 110, a pair of rectangular members 209 by secondary hydraulic pushers 208 compress bundle between members 209, and a rectangular gate 210 by a motorized pivot joint 211 dispenses compressed bundle.

No. of Pages : 25 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051223 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TRAFFIC MANAGEMENT SYSTEM AND METHOD OF USE THEREOF

(51) International classification	:G08G0001010000, G08G0001080000, G08G0001040000, G08G0001081000, E01F0013060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A traffic management system and method of use thereof, comprising at least one traffic signal assembly 101 associated with a road junction of lanes, a beacon 201 head for communicative coupling with in-vehicle sensors installed in vehicle, a retractable vehicle barrier 102 for restricting the passage for vehicles, a retractable pedestrian barrier 103 restricts a passage of pedestrians, a control module 202 determines real time traffic density on lanes and multiple control modules 202 for centralized monitoring and a method of use of system comprises steps of collecting traffic data at one or more of junctions, traffic data including number of vehicles on lanes intersecting at junction, types of vehicles on lanes, presence of pedestrians for crossing of one of lanes and activating specific traffic signals of traffic signal assemblies of one or more junctions for determined duration of time period for enabling passage of traffic with minimized wait times.

No. of Pages : 19 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051224 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : COMMUNICATION ASSISTIVE DEVICE FOR SPEECH AND VISUALLY IMPAIRED

(51) International classification	:G09B0021000000, G10L0015220000, G06F0021320000, A61H0003060000, G06F0003010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A communication assistive device for speech and visually impaired, comprises of a hollow body 101 developed to be adhered with vertical fixed surface, first touch enabled screen 103 accessed by user to give inputs in case user speech is impaired, microcontroller processes the input, a first artificial intelligence-based imaging unit 104 captures images of the user, first microphone 105 enables user to give voice command, a telescopically operated link 106 extends to position plate 107 out from body 101, speaker 108 generates voice alert, second touch enabled screen 109 accessed by individual to change mode of output, primary rectangular member 110 deploys braille script using pneumatic pins, second microphone 112 enables individual to give voice commands regarding information to be conveyed, second artificial intelligence-based imaging unit processes multiple images of the individual, secondary rectangular member 113 deploys braille using secondary pneumatic pins 115.

No. of Pages : 22 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051225 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MULTI-MODE COMMUNICATION ASSISTIVE DEVICE

(51) International classification :G06F0003160000, G06F0040400000, G10L0015180000, G10L0015220000, A47K0007020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
A multi-mode communication assistive device, comprising a first and second platforms (101, 102) via a telescopically operated rod 201 positioned on a ground surface, plurality of suction cups 103 for adhering first platform 101, a pair of C-shaped handles 104 for allowing user to carry device, a push-button 105 to activate device, an imaging unit 106 for detecting user's height, a first display panel 107 for enabling user to select type of one-way communication, a first gesture detection sensor for reading gestures/signs made by user, a speaker 108 for voice alert regarding gestures/signs made by user, a second display panel 109 for displaying gestures/signs to understand what user desires to communicate, a microphone 110 for receiving voice commands from individual, a GPS (Global Positioning System) module for detecting real-time location of platforms, NLP (Natural Language Processing) protocol utilized to convert audio alerts to native language.

No. of Pages : 25 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051226 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED NUTRIENT DISPENSING DEVICE FOR AGRICULTURAL FIELD

(51) International classification	:A01M0007000000, G05D0001020000, A01C0021000000, H04N0007180000, H04N0005440000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An automated nutrient dispensing device for agricultural field, comprises of a housing 101 positioned in an agricultural field configured with multiple chambers 102 stored with different nutrients, an artificial intelligence-based imaging unit 104 create a 3-D map of the field, NPK sensor 105 via a telescopically operated rod 106 detects nutrient level of the soil, L-shaped bar 107 configured with multiple electronic nozzles 108 connected with the chambers 102 via multiple conduits 109 for dispensing the nutrient, electric pump embedded within the chambers 102 for pumping the nutrients towards the nozzles 108, motorized slider 110 configured over housing 101 for translating the bar 107 towards the soil, hollow conical unit 111 configured with the nozzles 108 to penetrate in the soil, motorized ball and socket 112 incorporated between the bar 107 and nozzles 108 for orienting the nozzle, and an anemometer detects speed and direction of wind in surroundings.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051227 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CHARGING SYSTEM FOR AN ELECTRIC VEHICLE POWERED BY A BATTERY PACK

(51) International classification :H02J7/00, H02J7/02, H02M3/155, H02M3/335, H02M1/00, B60L53/00, G05F1/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A charging system for an electric vehicle powered by a battery pack, comprising a a primary rectification circuit 101 converting an AC voltage into a DC voltage, a primary capacitor connected with an output of the rectification circuit 101 for filtering the converted DC voltage, a DC-to-DC conversion circuit 102 for a stepping up or stepping down of the converted DC voltage, a high frequency transformer, linked at an output with a secondary rectification circuit and a secondary capacitor, is provided in the DC-to-DC conversion circuit 102 for voltage scaling and isolation to produce a low frequency DC voltage, an inverter circuit 103 connected at an output of the secondary capacitor, for converting the low frequency DC voltage into a high frequency AC voltage and the high frequency AC voltage is applied across the battery pack 107 for charging of the battery pack 107.

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051228 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DUAL-AXIS GYRO-STABILIZED ATMOSPHERIC DATA ACQUISITION DEVICE

(51) International classification	:F16L0027080000, G01C0021180000, G02B0027640000, H02K0016000000, G01C0019260000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A dual-axis gyro-stabilized atmospheric data acquisition device, comprises an elongated housing 101 having a first parachute 102 and a second parachute 103 for descending of the housing 101, a sensor suite configured with the housing 101 for collecting atmospheric data, orientation and acceleration data of the housing 101, a dual-axis gyrostabilizer 107 mounted on the housing 101 for controlling orientation of the housing 101, two Plummer blocks 201 mounted on a rigid base 202 of the gyrostabilizer 107 allowing rotation of outer gimbal ring 203 along first axis, two ball bearings 204 attached oppositely on the outer gimbal ring 203 allowing rotation to connected inner gimbal ring 205 along a second axis, and a motor 206 mounted perpendicularly within the inner gimbal ring 205 incorporating a flywheel 207 to impart a gyroscopic effect for stabilization of the housing 101 along the first and second axes.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202411050977 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN A MATHEMATICAL BASED MODAL FOR CURRENCY ESCROW TRANSACTIONS

(51) International classification :G06Q0020400000, G06Q0030060000, G06Q0040040000, G06Q0020060000, G06Q0020380000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to design a mathematical based modal for currency escrow transactions. The system includes receiving a digital title request regarding an asset, creating a digital title for the asset in a digital title database, receiving, from a financial institution computing system, an asset transfer request regarding the asset that is the subject of the mathematical based currency (MBC) transaction, verifying that an identity of a seller in the MBC transaction matches the identity of the owner of the asset. Therefore, responsive to the verification that the identity of the seller in the MBC transaction matches the identity of the owner of the asset, the method includes transmitting, to the financial institution computing system, a positive title verification and updating the identity of the asset of the digital title for the asset to match an identity of a buyer in the MBC transaction.

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202411050997 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ARTIFICIAL INTELLIGENCE SYSTEM FOR PREDICTIVE DIAGNOSIS AND PERSONALIZED MANAGEMENT OF DIABETES, INFECTIOUS DISEASES, AND LIFESTYLE DISEASES

(51) International classification	:G16H0050300000, G16H0050200000, A61P0003100000, G06N0020000000, G16H0050700000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT: Diabetes affects a significant number of individuals worldwide, leading to early death and many health issues. The prevalence of diabetes is increasing due to lifestyle factors and a population that is getting older. Diabetes affects a significant number of individuals worldwide, leading to early death and many consequences. The prevalence of diabetes is increasing due to lifestyle factors and the ageing population. Diabetes affects a vast number of individuals worldwide and is a significant contributor to early death and health issues. The prevalence of diabetes is increasing due to lifestyle factors and a population that is getting older. This systematic review aims to examine the impact of Artificial Intelligence (AI) on enhancing diabetes prevention, diagnosis, and management. The paper also emphasises the potential for individualised and proactive healthcare.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202411051020 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WEARABLE HAPTIC DEVICE FOR GUIDING USER'S BREATHING PATTERN

(51) International classification :A61B5/08, A63B23/18, A61B5/113, A61B5/087
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a haptic device (100) designed to guide a user's breathing pattern. The device comprises a body designed to be worn by the user, a controller (302), user interface module (302), actuator (312), pump (308), and valve (306, 312). The user interface module allows the user to select one of the pre-defined breathing patterns, each consisting of inhaling, holding, and exhaling breath for specific durations. The controller, in response to the selected breathing pattern, controls the pump and valve to inflate and deflate the actuator, thereby providing haptic feedback to the user. The device may also include a display (106) for visual guidance of the breathing pattern and a power source (114). The controller configured to collect real-time user's respiratory data using one or more sensors (314) and determine the inherent breathing pattern of the user using the collected user's respiratory data. Further, select the user most suitable breathing pattern from the pre-defined breathing patterns based on the inherent breathing pattern. Figure 1.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051270 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INLINE MULTI-CAN CRUSHING DEVICE WITH DUAL OPERATION MODES

(51) International classification	:B30B0009320000, H02J0003380000, B02C0023160000, H01L0031180000, B23C0003060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to an inline multi-can crushing device that integrates both automatic and manual operation. The device comprises a plurality of pistons housed within piston blocks arranged to crush cans placed in can containers above. Pistons are connected to a crankshaft via piston rods and connecting links. The crankshaft is supported by bearing stands and can be rotated by an electric motor using a belt. A wheel mounted on the crankshaft facilitates manual operation when electricity is unavailable. The can crushing device offers several advantages including efficient multi-can crushing, minimal force requirement, and the ability to operate in both automatic and manual modes.

No. of Pages : 22 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051315 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SEED COATING BIOFILM COMPOSITION, PROCESS FOR PREPARING THEREOF AND USES THEREOF

(51) International classification	:A01C0001060000, A61K0008490000, A01C0001020000, C02F0003100000, A61Q0017000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
The present invention discloses a seed coating biofilm composition comprising starch, clay having a weight percentage in a range of 15-25% with respect to the starch, glycerol having a weight percentage of 30% with respect to the composition, and zinc sulphate having a weight percentage in a range of 1-10% with respect to the clay. The invention also discloses a process of preparing the seed coating biofilm and method of its application on seeds to optimize nutrient usage and facilitating better germination, and yield growth by providing nutrients directly in the immediate vicinity of the germinating seed, and wherein the biofilm swells by absorbing water and disintegrates, thereby boosting the growth of seedling during its critical early stages of development.

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051327 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EDUCATION AND BUSINESS MANAGEMENT SYSTEM FOR PREVENTING MENTALLY DISABLE STUDENT USING NLP-BASED PHYSICAL VIOLENCE DETECTION

(51) International classification :G06Q0050200000, G06F0021620000, G10L0025630000, A23L0033155000, A23L0033135000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention discloses an education and business management system designed to proactively prevent student mental health disorders by employing sensors-enhanced computer vision and natural language processing (NLP) for physical violence detection. Traditional methods of monitoring student behavior often lack real-time responsiveness and fail to address emerging mental health challenges effectively. This innovative system integrates advanced sensors and algorithms to monitor student interactions, analyze video and audio data for signs of physical violence and verbal aggression, and predict potential mental health issues. Real-time alerts enable timely interventions by school administrators and counselors, ensuring a safer and supportive educational environment. The system's robust data privacy and security measures safeguard sensitive information, maintaining confidentiality while enhancing the overall well-being of students within educational institutions.
Accompanied Drawing [FIGS. 1-2]

No. of Pages : 20 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024

(21) Application No.202411051333 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : “DEVICE FOR PERFORMING PICK AND PLACE OF OBJECTS”

(51) International classification	:B25J0009160000, A63B0022000000, B25J0009100000, A47B0021030000, G06F0003010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a device for performing pick and place of objects comprises of a fixed base, providing a stable foundation that withstands operational forces, for heavy-duty tasks, the base is made wider and more robust, an upper arm, extends from the base, contributing significantly to the device's workspace due to its longer length, the shorter, sturdier lower arm connects the base to the upper arm, handling reaction forces effectively, universal joints at the base of each arm enable rotational and tilting motions, ensuring flexibility and precise movement, a rigid, lightweight moving platform mounted on the arms serves as the attachment point for an electromagnetic end-effector, which interacts with ferrous objects, the end-effector adapted with grippers or a vacuum head for various applications, the device's movements are driven by a plurality of stepper motors at the base, connected through gearboxes, pulleys, ensuring precise and reliable operation. Ref Figure 1

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/07/2024

(21) Application No.202411051038 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : IMPACT OF AI MODEL IN E COMMERCE COMPANIES FOR PERSONALIZED RECOMMENDATION

(51) International classification :G06Q30/02, G06Q30/06, G06Q30/0601, G06N20/00
(86) International Application No :NA
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(87) International Publication No : NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Impact of AI model in E commerce companies for personalized recommendation The impact of AI models in E-commerce companies for personalized recommendations has greatly enhanced the shopping experience for customers. By utilizing advanced machine learning algorithms, these models are able to analyze large amounts of customer data such as browsing history, purchase behavior, and preferences to create personalized recommendations tailored to each individual. This not only increases the likelihood of purchases, but also improves customer satisfaction and retention. Additionally, AI models can continuously learn and adapt to changing trends and preferences, making the recommendations even more accurate and relevant over time. This helps E-commerce companies to stay ahead of the competition by offering a unique and personalized shopping experience for their customers. Furthermore, these AI models also assist businesses in optimizing their inventory and supply chain management processes by predicting demand and ensuring the right products are in stock, leading to increased sales and reduced costs. Overall, the implementation of AI models for personalized recommendations in E-commerce has proven to be highly beneficial for both businesses and customers, resulting in increased sales, improved customer satisfaction, and a competitive edge in the market.

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202411051125 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ANALYTICAL AND CONCEPTUAL BASED RESEARCH FOR SOLAR RADIATION CONCEPTS UNDER ELECTROMAGNETIC RADIANT ENERGY AS PREDICTIVE ALLOCATION

(51) International classification	:G03F0007000000, A01G0015000000, G01J0001420000, F24S0020200000, G06F0030200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Abstract: This invention presents a novel framework for predicting solar radiation based on an analytical and conceptual approach integrating electromagnetic radiant energy principles. The system leverages real-time data, historical patterns, and advanced predictive algorithms to enhance the accuracy of solar radiation allocation under various atmospheric conditions. Applications include optimization of solar energy systems, improved climate modeling, and enhanced environmental monitoring.

No. of Pages : 9 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202411051131 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A METHOD OF RAMI 4.0 IMPLEMENTATION IN INDOOR MUSHROOM GROWTH

(51) International classification	:G06Q0050020000, G06Q0010060000, A01G0007040000, A01G0018000000, A01G0009240000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention provides a method for implementing the Reference Architectural Model Industry 4.0 (RAMI 4.0) in indoor mushroom growth environments. The system integrates IoT devices, sensors, actuators, a central control unit, and a cloud-based analytics platform to monitor and optimize growing conditions, automate processes, and enhance data-driven decision-making, resulting in improved efficiency, precision, and scalability in mushroom cultivation. The model also takes into account the life cycle of various mushroom species, accounting for the specific requirements at various growth stages, such as mycelial colonisation, pinning, and fruiting. Additionally, the model considers the impact of any contaminants, assisting growers in anticipating and mitigating the dangers associated with unwanted infections. This feature increases the model's reliability and ensures a more realistic representation of real-world cultivation conditions. Gardeners of all skill levels can utilise the suggested simulation model because of its user-friendly design. By using visualisation tools, farmers can receive intuitive insights into how different components affect mushroom growth and use this knowledge to make well-informed decisions for the best possible crop management. To sum up, the abstract's description of the simulation model gives gardeners a useful tool for cultivating mushrooms indoors, allowing them to create and maintain optimal growth conditions that will optimise yield and quality.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202411050797 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATIC INDOOR HYDROPONIC PLANT GROW POT

(51) International classification :A01G0031020000, C12M0001000000, A01G0009240000, A01G0031000000, A01G0007040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
This project aims to develop an "Automatic Indoor Hydroponic Plant Grow Pot" using advanced technologies to automate hydroponic gardening. The system integrates sensors, motors, and microcontrollers to precisely control and monitor nutrient delivery, light, temperature, and humidity, minimizing human intervention and enhancing indoor gardening convenience.

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024

(21) Application No.202411050820 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A TELEROBOTIC TARGET-SPECIFIC PESTICIDE APPLICATOR FOR GREENHOUSE AND OPEN-FIELD

(51) International classification	:A61B0034000000, A61B0034300000, A61B0034350000, A61B0090500000, A61B0034370000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This present innovation design and development of telerobotic target-specific pesticide applicator for precise pesticide application for greenhouse and open fields. The robot comprises a prime mover (1 00) for navigation in crop rows, target-specific pesticide application (200) to apply pesticides selectively based on foliage and an electronic control unit for both prime mover navigation and spraying system. In addition, it also incorporated with the mechatronic powered four-bar mechanism (300) for the conversion of vertical boom into horizontal boom to suit different field crops without any modifications. Further, the robot was fitted with the sensor-based robot working parameters (400 (i.e., spray liquid level in the tank, nozzle clog and robot movement) and the environmental parameters (500) (temperature (501), humidity (50 l), luminosity (502) and wind velocity (503)) for the congeniality of spraying operation and alerts the operators with audiovisual signals. The actual field evaluation of the developed invention at optimized operating parameters found that the theoretical field capacity, actual field capacity and field efficiencies are 0.20 ha h' 1 , 0.15 ha h'1 and 75%, respectively. The total cost of the developed invention was Rs. 1,20000/($ 1443.61). The total operation cost of the present invention is 664 Rs per ha with a net benefit of33972 (Rs year'1) with a payback period of three years. The developed invention can be suitable for all types of greenhouses and open field crops with little modifications. Therefore, the present invention has the potential for more acceptability as well as adoptability among farming communities.

No. of Pages : 30 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202411050847 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN IMPROVED ROOF COMPOSITION FOR RURAL HOUSES

(51) International classification :C08L0097020000, B32B0005020000, B32B0027120000, C09D0011100000, G06K0019060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention provides a sustainable roof composition for rural houses, utilizing natural fibers such as bamboo, coconut coir, jute, and straw, combined with recycled plastics and rubber, and eco-friendly binders like lignin, starch, and natural resins. This composition is lightweight, durable, and thermally insulating, offering resistance to rain, wind, and pests. The manufacturing process is simple and locally adaptable, enabling rural communities to produce and maintain the roofing materials, promoting environmental sustainability and self-sufficiency.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024

(21) Application No.202411051334 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : “GYROID HEAT EXCHANGER (GHE) FOR AVIATION APPLICATIONS”

(51) International classification	:G01G0019070000, F24H0009000000, G05B0015020000, E21B0041000000, B32B0027320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a gyroid heat exchanger (GHE) for aviation applications comprises of a three-dimensional spiral structure associated with the heat exchanger, for providing an intricate network of interconnected channels tailored for optimal heat exchange efficiency and fluid dynamics, wherein the structure is constructed from lightweight materials to reduce overall aircraft weight and fit into confined spaces, maximizing surface area of the structure for heat exchange enhances thermal performance of the structure, thereby aiding the structure to adapt aviation environments, including high-altitude operations and rapid temperature fluctuations, a self-cleaning mechanism integrated within the structure to reduce contaminant accumulation and maintenance needs, nano-enhanced thermal coatings coated over the structure, thereby creating a layer to improve heat conduction and dissipation and an integrated health monitoring provides real-time data on structural integrity and thermal performance over dashboard of an aerial vehicle. Ref Figure 1

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/07/2024

(21) Application No.202411051177 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : FORMULATION AND CHARACTERIZATION OF PHARMACEUTICAL AEROSOL FOR THE TREATMENT OF ASTHMA BY INHALATION THERAPY

(51) International classification	:A61K0009000000, A61P0011060000, A61P0011000000, A61K0009160000, A61K0031580000
(86) International Application No	:NA
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(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
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(57) Abstract :

The present invention relates to the pharmaceutical aerosol formulation designed for the effective treatment of asthma through inhalation therapy. The formulation includes albuterol sulfate as the active pharmaceutical ingredient, combined with HFA-134a propellant, ethanol cosolvent, and oleic acid surfactant to ensure optimal dispersion and aerosolization. Rigorous stability testing confirms the formulation's physical and chemical stability over extended periods, maintaining efficacy and safety. Adapted for use with metered-dose inhalers (MDIs), the aerosol delivers a fine particle fraction (FPF) of 60% for efficient deposition in the lower respiratory tract, providing rapid relief of asthma symptoms. This innovation aims to enhance patient compliance and quality of life by offering a reliable and targeted therapeutic option, minimizing systemic side effects associated with traditional oral treatments.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202414050773 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CARBON MOLECULAR SIEVE PRODUCTION SYSTEM AND METHOD

(51) International classification	:B01J0020200000, B01D0071020000, B01D0067000000, C01B0032306000, B01D0069080000
(31) Priority Document No	:2024100406343
(32) Priority Date	:11/01/2024
(33) Name of priority country	:----------
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention belongs to the field of carbon molecular sieve production technology and relates to a carbon molecular sieve production system and method. The carbon molecular sieve production system includes a feeding device, a kneading powder machine, a drying device, a kneading powder machine, a kneading mixer, an extrusion machine, a screening machine, a carbonization furnace, and a deposition furnace. The carbon molecular sieve production system and method are used to reduce energy consumption and improve the quality of carbon molecular sieve production.

No. of Pages : 60 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050222 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SCRAMJET ENGINE COMBUSTOR SYSTEM

(51) International classification :F02K7/14, F02K7/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A scramjet engine combustor comprises an inlet section with converging-diverging geometry for deceleration and compression of high-velocity airflow. It features an inward-facing trapezoidal leading edge with triple surface striations for enhanced fuel-air mixing and an inner semi-circular convex protrusion for smooth airflow. The design includes inward-facing and dual-stepped triangular leading edges with outward-facing trapezoidal cavities to optimize airflow, extend residence time, and reduce turbulence. It also employs fuel injectors for efficient fuel-air mixing, a combustion zone for rapid exothermic reactions, a throat section for pressure distribution, and an expansion section to convert thermal energy into thrust. This configuration aims to improve combustion efficiency, reduce thermal and mechanical loads, and enhance overall performance.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202411050299 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A METHOD FOR SPEECH CORRECTION AND A SYSTEM THEREOF

(51) International classification :G02B0027010000, G06F0003010000, G06F0016245700, A61B0005020500, G06F0016280000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure discloses a system (100) and a method for speech correction for the user. The system (100) comprises a head-mounted display (HMD) (102), a first set of sensors (102), a second set of sensors (104), a server (110) and one or more user devices (112). The HMD (102), the server (110) and the one or more user devices (112) are communicatively coupled via a communication network (108). The first set of sensors (104) and the second set of sensors (106) are communicatively coupled to the HMD (102) for transmitting biometric measurement and kinesiologic measurement respectively of the user. The server (110) is configured to receive one or more parameters comprising audio signals corresponding to speech, biometric data and kinesiologic data of the user from the HMD (102). The server (110) is further configured to generate a progress metric representing progress of the user in terms of speech correction. Fig. 1

No. of Pages : 24 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202414043917 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A METHOD TO PRODUCE SYNTHETIC GRAPHITIC MATERIAL

(51) International classification	:C01B32/05, C01B32/318
(31) Priority Document No	:63/577,945
(32) Priority Date	:06/06/2023
(33) Name of priority country	:----------
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
A method for producing high-purity synthetic graphitized carbonaceous materials with impurity levels below 100 ppm, derived from plant-based biomass extracts. The method involves mixing furan-ring containing precursor compounds with polymerization catalysts and additives, followed by polymerizing the mixture at temperatures between 20°C and200°C. The solid polymers are carbonized and graphitized using heat treatments up to 1500oC and 3000o C, respectively. Besides disclosing the specifics of the process, typical materials characteristics (X-ray diffraction, Raman spectroscopy, specific surface area, impurity content and electrochemical test data) of the synthesized graphite are also disclosed. Details of the additives used to control the reaction, to add electrochemical performance to the graphite, and to catalyze the graphitization reaction, are presented.

No. of Pages : 38 No. of Claims : 20

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023
(21) Application No.202321024458 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A DEWATERING DEVICE

(51) International classification :C02F11/125, C02F11/12, B30B9/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :House No. 1157, Murtijapur, Mhada Colony, Cidco N2, Aurangabad-431003 Aurangabad ---------- ----------

(57) Abstract :
ABSTRACT A DEWATERING DEVICE A dewatering device (100, 200) comprising a body (115, 212) configured with said dewatering device (100, 200) and an inlet (102, 202) configured with said body (115, 212). Wherein an outlet (103, 203) configured with said body (115, 212) and a screening device (104, 204) configured between said inlet (102, 202) and said outlet (103, 203). Further, an aperture (105, 205) configured with said screening device (104, 204), and a screw (101, 201) confined within said screening device (104, 204). Whereas a ring (109, 209) configured with said screening device (104, 204) and a compression zone (108, 208) configured with said ring (109, 209). However, a ring (108a, 208a) configured with said compression zone (108, 208). Moreover, said screw (101, 201) can be configured with a bearing (111, 210) and a housing (112, 211) to facilitate smooth rotation of said screw (101, 201) within said screening device (104, 204) in order to perform the dewatering of sludge or reject from said dewatering device (100, 200). Figure no. 01

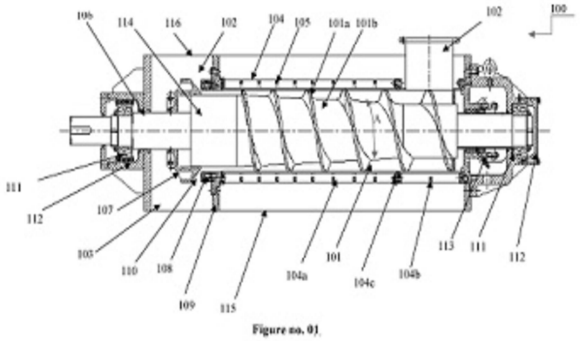

Figure no. 01

No. of Pages : 24 No. of Claims : 31

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2023

(21) Application No.202321039113 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NON-HORMONAL INTRAUTERINE DEVICE HAVING CONTRACEPTIVE AND ANTIMICROBIAL PROPERTIES

(51) International classification	:A61F0006140000, A61K0009000000, A61P0015180000, A61P0015000000, A61K0031570000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Non-hormonal intrauterine device having contraceptive and antimicrobial properties is disclosed herein. The embodiment disclosed herein provides a non-hormonal intrauterine device (100) that achieves simultaneous contraception and antimicrobial prophylaxis. The device (100) includes, a plurality of arms (102), a piston (106), and a body (104), wherein each of the arms (102) and the body (104) are provided with electro spun fibers containing active pharmaceutical agent. The electro spun winding of fibers loaded with active pharmaceutical agent facilitates in controlling sustained release of the active pharmaceutical agent into the uterus cavity over a prolonged time period. FIG. 1

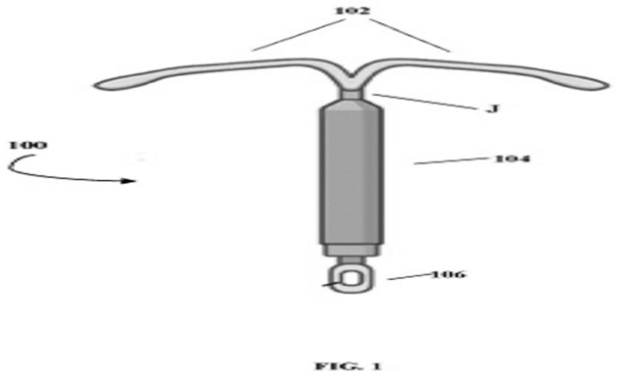

FIG. 1

No. of Pages : 51 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2024

(21) Application No.202321039116 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : OSTEO IMPLANT

(51) International classification :A61F2/28, A61F2/32
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE OF INVENTION: OSTEO IMPLANT The present disclosure relates to an implant (100). The implant (100) includes a body (120) and an elongated portion (110). The elongated portion (110) being tapered such that it is wider at its proximal end than its distal end. The elongated portion (110) includes a plurality of ribs (111) extending along its length. The ribs (111) includes an angled orientation forming an angle wherein the ribs (111) includes an angled orientation, forming an angle ß with an axis (150) of the elongated portion (110). The elongated portion (110) includes at least one channel (112) on its outer surface. The channel (112) extends over at least a portion of the outer surface of the elongated portion (110). Fig. 2

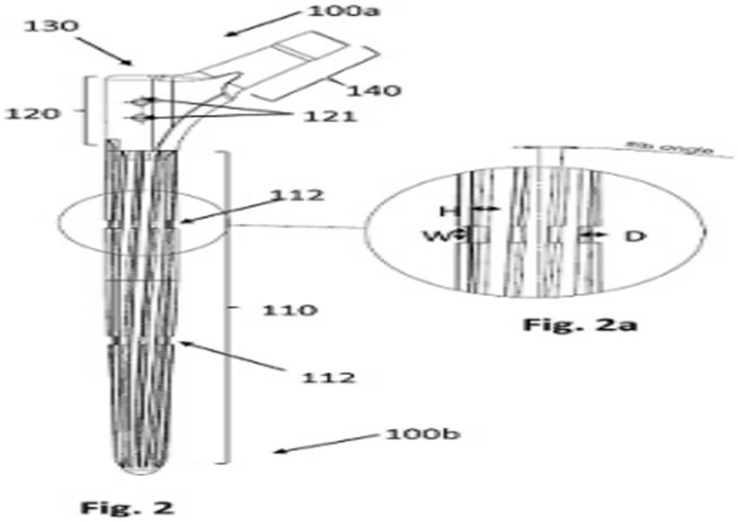

Fig. 2a
Fig. 2

No. of Pages : 20 No. of Claims : 17

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2023

(21) Application No.202321039117 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IMPLANT SYSTEM AND METHOD THEREOF

(51) International classification	:A61F0002460000, A61F0002300000, A61B0017160000, A61F0002380000, A61B0017170000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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Address of Applicant :Krishnalayam, Kudukka valappil, Edakkeppuram, Cherukunnu PO, Kannur, 670301, Kerala ---------- ----------

(57) Abstract :
TITLE OF INVENTION: IMPLANT SYSTEM AND METHOD THEREOF An implant system and a method for accurate placement of an implant is disclosed. The method includes the step of performing a primary provisional reaming (PP reaming) in a bone to obtain a cavity having a depth corresponding to which a maximum range of motion of a joint is achieved, indicating a soft tissue balance. The method further includes establishing a bone reference mark (BRM) corresponding to a length of a stem of a trial for which maximum range of motion of the joint is achieved, the length of the stem corresponds to the depth of the cavity; and performing a secondary scratch fit reaming (SS reaming) in the bone cavity w.r.t to the diameter of the implant till a scratch fit of an implant is achieved. Fig. 1

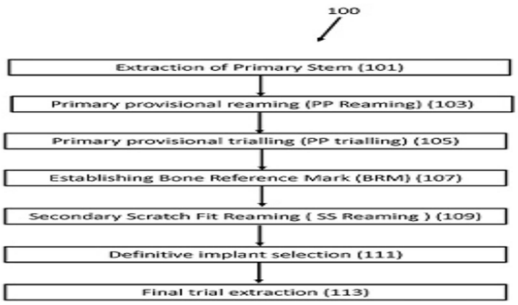

Fig. 1

No. of Pages : 37 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2023

(21) Application No.202321039118 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEVICE FOR OSTEO IMPLANTS

(51) International classification	:A61B17/16, A61B17/17, A61F2/32
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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Address of Applicant :Krishnalayam, Kudukka valappil, Edakkeppuram, Cherukunnu PO, Kannur, 670301, Kerala ---------- ----------

(57) Abstract :
TITLE OF INVENTION: DEVICE FOR OSTEO IMPLANTS The present disclosure relates to a device (100) for defining a bone cavity. The device (100) includes a link member (110), a reamer (120) and a guide member (130). The link member (110) includes at least one rotatable coupling mechanism to couple the guide member (130) and the reamer (120). The reamer (120) and the guide member (130) are coupled to opposite ends of the link member (110). The reamer (120) is configured to rotate around the pivot of the guide member (130). The guide member (130) being configured as a pivot point. The guide member (130) includes a head portion (131) and a tail portion (132). The tail portion (132) of the guide member (130) couples to the implant (300). Fig. 1

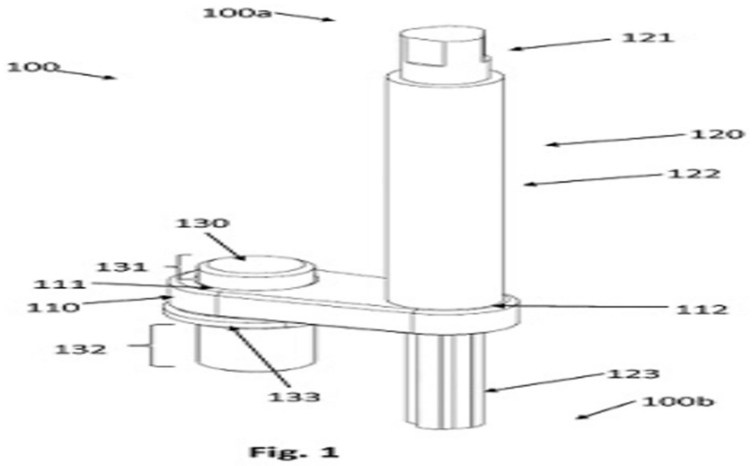

Fig. 1

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2023

(21) Application No.202321039119 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUGMENTS FOR OSTEO IMPLANTS

(51) International classification :A61F2/32, A61F2/30, A61B17/56
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE OF INVENTION: AUGMENTS FOR OSTEO IMPLANTS The present disclosure relates to an augment (100) for an implant (10). The augment (100) includes an elongated member (110) and a lateral member (130). The elongated member (110) is placed in a gap between a bone (1) and the implant (10). The elongated member (110) includes a curvature corresponding the curvature of the implant (10). The lateral member (130) is coupled to the elongated member (110) to be placed on top of the implant (10). The lateral member (130) is provided at a predefined angle with the elongated member (110). Fig. 2

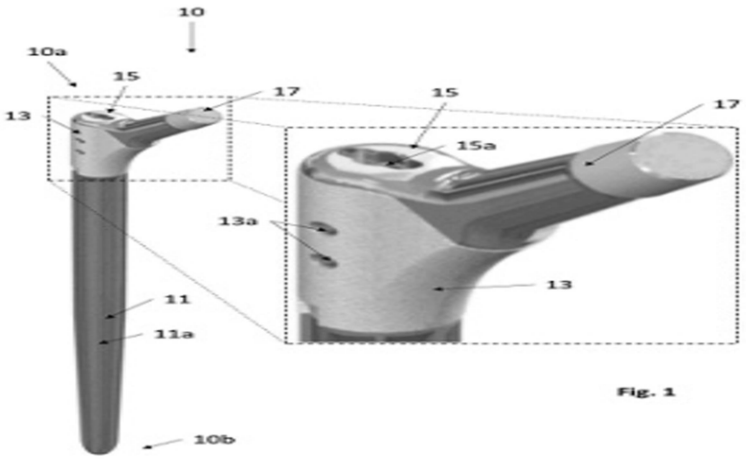

Fig. 1

No. of Pages : 20 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/06/2023

(21) Application No.202321039197 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR GENERATING HAPTIC FEEDBACK THROUGH A WEARABLE SOLE

(51) International classification :G06F3/01, B25J9/16, A43B3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system and method for generating haptic feedback through a head mounted device and a wearable sole is disclosed. The system comprises of a wearable sole configured with a sensor arrangement that includes a first layer of fibrous bioelectronics and a second layer of ferromagnetic fluid to trigger haptic feedback to user. The user wears a head mounted device over which the virtual scene is displayed. The processing system utilizes machine learning algorithm to extract characteristic features of displayed scene and selectively trigger a sensor arrangement such that the haptic feedback is generated in consonance with the characteristic features of the virtual environment and based on type of cutaneous afferents to be actuated in user sole.

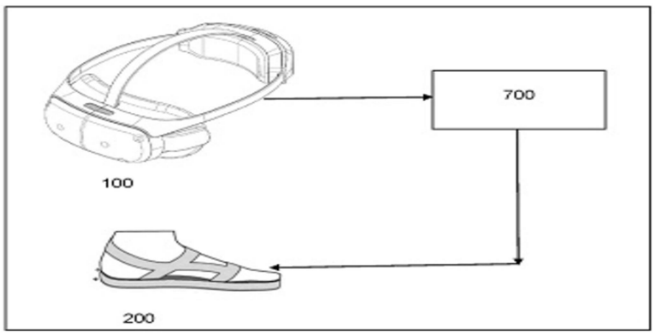

Fig. 1

No. of Pages : 33 No. of Claims : 20

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/09/2023
(21) Application No.202321059428 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A LIGHTWEIGHT POWER AWARE SYSTEM FOR GENERATING A LARGE NUMBER OF RANDOM AND SECURE BITS

(51) International classification	:C12Q0001682500, C12Q0001681600, H04L0009320000, B01J0019000000, H04N0021835000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is related to a lightweight power aware system for generating a large number of random and secure bits. The proposed system consisting of a sub-threshold conduction similarity calculator unit (STCSCU) [506], a STCSCU row selector (SRS) [505], a STCSCU column selector (SCS) [504] wherein the SRS [505] and SCS [504] are subjected to input bits, a current comparator stage and buffers (CCSB) [507] connected with said STCSCU [506], configured to compares the output current of the STCSCU [506] with the pre-calculated reference current (IREF), thereby giving an output response of 1 or 0 and a secret key storage register (SKSR) [509] enabled to collect the responses.

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/05/2023
(21) Application No.202221064976 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "FALLOPIAN TUBAL MILKING INSTRUMENT IN LAPAROSCOPIC SURGERY "

(51) International classification	:A63B0021072000, A61F0006220000, A61B0017420000, B60K0015040000, B62H0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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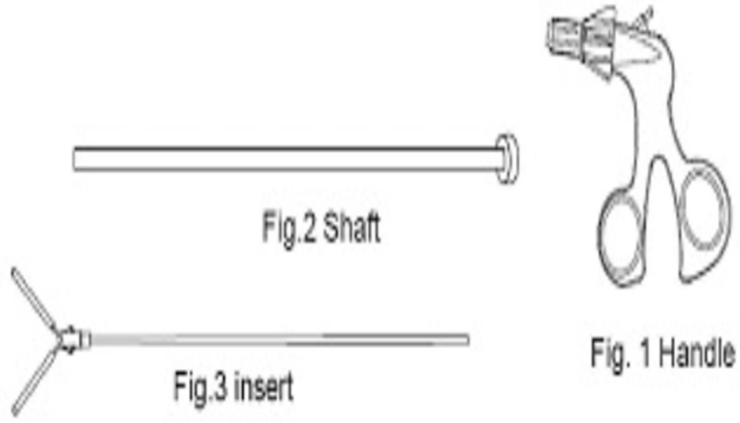
(57) Abstract :
A fallopian tubal milking instrument in laparoscopic surgery comprising a hollow shaft having a longitudinal axis; a reciprocally movable push rod having proximal end operably connected with lever means and distal end operably connected with a plurality of prongs extending through said hollow shaft; a coupling means engaging said hollow shaft and having a first pivot pin extending transverse said longitudinal axis; a pivotally movable prongs having a passage through which said first pivot pin extends, said prongs are coupled to said push rod; and an actuating means for imparting reciprocal motion to said push rod relative to said hollow shaft, said actuating means operably connected with said lever means fixedly engaging said push rod wherein said lever means is engaged with said hand operated actuating means imparting pivotal motion to said lever means upon movement and thereby reciprocating the movement to said prongs connected vide said push rod. Fig. 1-3



No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/02/2023
(21) Application No.202321011157 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SCREENING DEVICE

(51) International classification :D21D5/02, B01D39/10, B01D29/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A SCREENING DEVICE The present invention envisages a screening device (100) comprising, a surface (101) configures with said screening device (100) and an aperture (102) configured with said surface (101). Wherein said screening device (100) can be manufactured of plate form of material with the composition which includes but not limited to carbon (C) without exceeding 0.05%, silicon (Si) without exceeding 1%, manganese (Mn) without exceeding 2%, phosphorus (P) without exceeding 0.2%, sulphur (S) without exceeding 0.2%, chromium (Cr) without exceeding 18%, molybdenum (Mo) without exceeding to 2.5% and nickel (Ni) without exceeding to 11.5% of the total material composition of said screening device (100). Figure no. 01

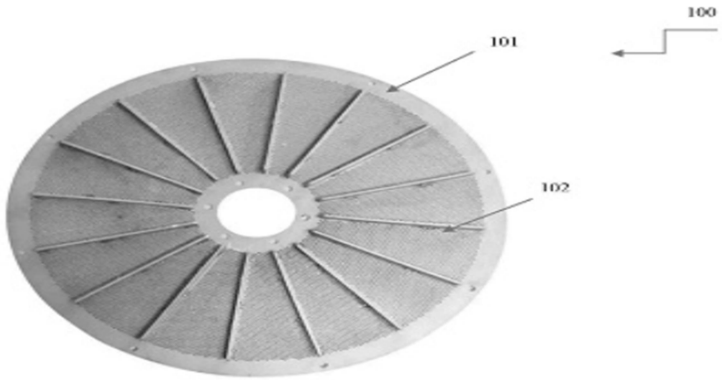

Figure no. 01

No. of Pages : 18 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/02/2023
(21) Application No.202321011158 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SCREENING DEVICE

(51) International classification	:D21D5/02, B01D39/10, B01D29/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A SCREENING DEVICE The present invention envisages a screening device (100) comprising, a surface (101) configures with said screening device (100) and an aperture (102) configured with said surface (101). Wherein said screening device (100) can be a screen basket manufactured of plate form of material with the composition which includes but not limited to carbon (C) without exceeding 0.05%, silicon (Si) without exceeding 1%, manganese (Mn) without exceeding 2%, phosphorus (P) without exceeding 0.2%, sulphur (S) without exceeding 0.2%, chromium (Cr) without exceeding 18%, molybdenum (Mo) without exceeding to 2.5% and nickel (Ni) without exceeding to 11.5% of the total material composition of said screening device (100).

Figure no. 01

No. of Pages : 17 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/11/2023
(21) Application No.202321075665 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEPOLLUTING CONCRETE COMPOSITION

(51) International classification :C04B22/06, C04B12/04, C04B14/04, C04B28/24
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A depolluting concrete composition is described herein. The depolluting concrete composition comprises an anatase mineralogical type titanium dioxide (TiO2) powder having 97.476% purity and a zeolite powder. The optimum percentage of titanium dioxide (TiO2) powder in concrete is in range of 2 to 3 % with replacement of cement in concrete mix and zeolite powder in concrete is in range of 10 to 15 % with replacement of cement. The composition reduces nitrogen oxide pollutants directly from the polluted air by titanium dioxide (TiO2) powder with the help of ultraviolet light. The composition reduces carbon dioxide pollutants directly from the polluted air by zeolite powder. The concrete composition useful for the concrete surfaces which are directly exposed to polluted environment.

No. of Pages : 20 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/05/2023
(21) Application No.202321034132 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PROCESS FOR PREPARATION OF NANO STRUCTURED NATURAL AND HYBRID COMPOSITE PLANT NUTRIENTS

(51) International classification	:A61K0008190000, C05D0009020000, C05G0005270000, A61K0047260000, A61K0047690000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A PROCESS FOR PREPARATION OF NANO STRUCTURED NATURAL AND HYBRID COMPOSITE PLANT NUTRIENTS The present invention relates to a process for the preparation of nanostructured natural and hybrid composites of plant nutrient formulations. More particularly, present invention relates to a process for the preparation of a nano structured plant nutrient composition consisting of processed cow urine and/or its distillate as a dispersing medium with plant nutrients and natural polymers that enhance the bioavailability of macro- and micronutrients to the plants. Moreover, present invention also significantly improves the stability of plant nutrients as well as the dispersing medium under normal conditions, thereby highlighting the utilization of available nutritionally rich cow urine and reducing the dependency on groundwater for preparing novel nano formulations. (Fig. 1)

No. of Pages : 40 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/05/2023
(21) Application No.202321034139 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PROCESS OF SYNTHESIS OF NANO DAP PLANT NUTRIENT

(51) International classification :A61P0035000000, A61P0011000000, C05C0003000000, A61K0009000000, G06Q0010000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A PROCESS OF SYNTHESIS OF NANO DAP FORMULATION WITH USE OF REDUCING AND STABILIZING AGENT The present invention relates to the novel manufacturing process of nanostructured diammonium phosphate (DAP) composite plant nutrients and/or biomolecules using natural and/or synthetic polymers as an encapsulating agent. More particularly, said invention provides novel production of nano DAP and its formulation through the utilization of natural as well as synthetic materials that multifunctionally act as reducing and stabilizing agents for the solubilization of commercially available DAP. Moreover, the present invention facilitates significant improvement of commercially available DAP through novel nano-structured DAP formulations for the growth and stability of plants under normal conditions. (Fig. 1)

No. of Pages : 33 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :17/05/2023

(21) Application No.202321034462 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : MAHUA, MAHUA KE PHOOL KA TEL AUR ANYA UTPAD

(51) International classification :A61K 36/185, A61K8/92 , A61K8/92

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(72)**Name of Inventor :**
1)BABU SHANKER
Address of Applicant :HOUSE NO. 1521 CHAMAN COLONY DHANAS CHANDIGARH ---------- ----------

(57) Abstract :
mahuva ke phoolo se banane wale uttad evam isko bechane ke swarup:- 1. Sadharan paket ke sath:- jis tarah sukhe meve ya sukhe khajoor ko paketo mai asani se uplabdh karvaya ja sakta hai isi tarah isse bhi uplabdh karvaya jayega. 2. Mahuva aushadhi tel ke roop mai:- mahuva tel ka aushadhiy upyog gathiya v sar dard, purani kabj, bhagandar etc. rogo mai kiya jata hai. 3. Mahuva mithai ke roop mai:- mahuva ke upyog se alag-alag prakar ke sudh desi mithai banai ja sakti hai. jo ke sabhi manushyo ke sehat ke liye upyogi hogi.

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/02/2024

(21) Application No.202421014122 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR PREDICTION OF HEALTH OF A BATTERY

(51) International classification :G01R31/392, G01R31/396
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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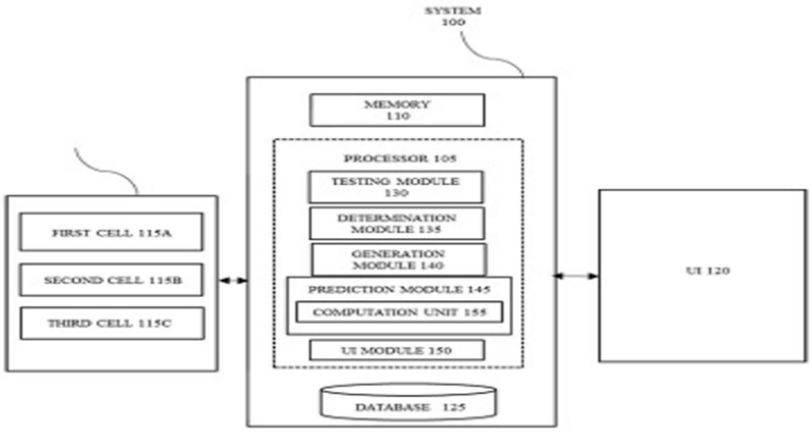
(57) Abstract :
ABSTRACT A SYSTEM AND A METHOD FOR PREDICTION OF HEALTH OF A BATTERY The present disclosure relates to a system (100) and a method (200) for prediction of capacity deterioration of battery (115). The system (100) includes a testing module (130), a determination module (135), a generation module (140), a computation unit (155) and a prediction module (145) to perform various tests on the battery based on different factors or pre-defined values, to obtain various RPT data from the performed tests and then predict the capacity fade for the battery by utilizing a chemistry agnostic model based on the obtained data. The method (200) includes various steps to be executed by the system (100) in order to provide accurate capacity fade for the battery and thereby, predict the capacity deterioration of the battery (115).



No. of Pages : 36 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/11/2023
(21) Application No.202321075666 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SPRAYABLE DEPOLLUTING COATING FOR CONCRETE SURFACES

(51) International classification :C04B41/50, C01G41/68, C09D7/61, C09D1/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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2)Dr. Indrajit Patel
Address of Applicant :Birla Vishvakarma Mahavidyalaya, Mota Bazaar, Vallabh Vidyanagar, Anand - 388120, Gujarat, India ---------- ----------

(57) Abstract :
ABSTRACT A sprayable depolluting coating for concrete surfaces is described herein. The depolluting coating comprises a silane-siloxane liquid as a surface penetration agent, an anatase mineralogical type titanium dioxide (TiO2) powder having 97.476% purity and a zeolite powder. The titanium dioxide (TiO2) powder along with a zeolite powder and the silane-siloxane liquid of the depolluting coating are mixed in the proportion ranging from 1:4 to 1:6. The depolluting coating of the present invention reduces nitrogen oxide and carbon dioxide pollutants by DAC (Direct Air Capture) directly from the polluted air by depolluting reaction with the help of ultraviolet light. The depolluting coating can convert any newly made as well as existing concrete surfaces into the depolluting concrete surfaces.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/01/2024
(21) Application No.202421004502 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "INDOLE IMPREGNATED ANTIMICROBIAL URINARY CATHETER."

(51) International classification :A61L29/00, A61L29/08, A61L29/14, A61L29/16, A61M25/00, A61K31/404, A61P31/04, A61L29/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to impregnation of urinary catheter with pure Indole to inhibit the biofilm formation by pathogenic fungi and bacteria. Particularly, silicon urinary catheter is impregnated with pure Indole to avoid catheter associated urinary tract infection (CAUTI) by pathogenic fungi (Candida albicans) and bacteria (Escherichia coli, Staphylococcus aureus and Pseudomonas aeruginosa). The main goal of present invention is to develop a method pure Indole impregnated a urinary catheter with antimicrobial and antifungal activities and for the inhibition of Catheter Associated Urinary Tract Infection (CAUTI). Another goal of is to provide method of impregnation of silicon urinary catheter with pure form of pure indole. This impregnation method is simple inexpensive, safe and effective with minimum use of pure Indole as compared to previously reported impregnation methods. Pure Indole impregnated urinary catheters are able to inhibit the biofilm formation C. albicans, E. coli, S. aureus and P. aeruginosa. Bioactive molecules like pure Indole are reported to inhibit colonization and biofilm formation by microbes. C. albicans, E. coli, S. aureus and P. aeruginosa which can cause CAUTI in hospitalized patients. Impregnated catheter is characterized for biofilm formation by C. albicans, E. coli, 5. aureus, and P. aeruginosa shows that pure Indole impregnated catheter inhibited biofilm formation as compared to non-impregnated catheter. The Phytochemical impregnated urinary catheter can reduce the CAUTI by C. albicans, E. coli, S. aureus and P. aeruginosa.

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/03/2024
(21) Application No.202421024318 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN ARTIFICIAL INTELLIGENCE BASED CROP HEALTH MONITORING AND DISEASE PREDICTION SYSTEM

(51) International classification	:G06Q0030020000, G06K0009620000, G06N0007000000, A01G0025160000, G06Q0050020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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3)BAGAL, Shishir Ashokrao
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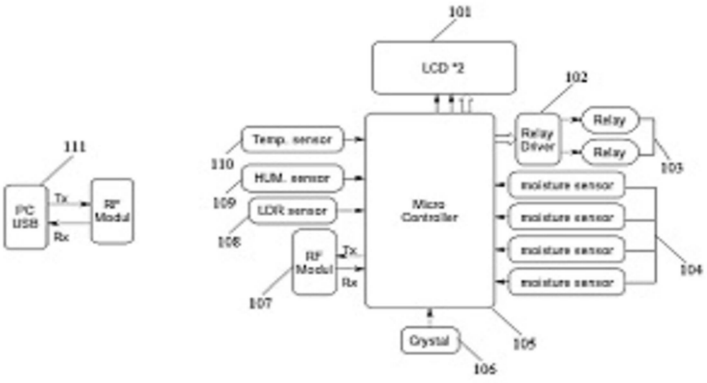
(57) Abstract :
The present invention relates to an artificial intelligence based crop health monitoring and disease prediction system. Its primary objective is the early detection and prediction of diseases, enabling farmers to protect their crops and minimize losses. Leveraging artificial intelligence (101) algorithms and an electronic system (hardware part) consisting of various networks of sensors to detect temperature sensor (110), moisture sensor (104), humidity sensor (109) and light around the plant or crop. Data is collected by various sensors and stored on the cloud. The system accurately predicts disease outbreaks by analyzing environmental conditions and historical data. Real-time monitoring and personalized recommendations empower farmers to make informed decisions, enhancing agricultural efficiency and sustainability



No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/10/2023
(21) Application No.202321072667 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PIN-TUMBLER ARRANGEMENT FOR A LOCK ASSEMBLY

(51) International classification :E05B15/00, E05B15/14, E05B27/00, E05B27/02, E05B3/00, E05B9/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A PIN-TUMBLER ARRANGEMENT FOR A LOCK ASSEMBLY The present discloses a pin-tumbler arrangement (500) for a lock assembly (1000) comprising a sleeve (30); a lock housing (20) configured to be received within the sleeve; a plurality of first series of perforations (22) configured on the lock hous-ing; a lock cylinder (10) configured to be received within the lock housing; a plu-rality of second series of perforations (12) configured on the lock cylinder; and a closing means (40) configured to be mounted on the sleeve enclosing at least the lock housing, the plurality of first series of perforations, the lock cylinder, the plu-rality of second series of perforations, and the plurality of tumbler pins (28A, 28B) to define the pin tumbler arrangement, characterized by the sleeve made from sheet metal and the lock cylinder, lock housing made from brass; arcuate cut-out segments(27) and channels(29) configured on the lock housing to optimize the weight of the pin-tumbler arrangement.

No. of Pages : 37 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/03/2024

(21) Application No.202421018278 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : “THERANOSTIC NANOFIBER COMPOSITE, METHOD AND APPLICATION THEREOF”

(51) International classification :A61K9/70, A61K47/42, A61K47/50, A61K47/64, A61K35/00, A61K49/18, B82Y30/00, B82Y40/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT “THERANOSTIC NANOFIBER COMPOSITE, METHOD AND APPLICATION THEREOF” Disclosed herein is a theranostic nanofiber composite for multimodal cancer therapy. Embodiments herein also provide a method for the preparation of the theranostic nanofiber composite. The theranostic nanofiber composite, according to the embodiments herein, comprise electrospun nanofibers containing an EGFR targeting peptide and incorporating a conjugate of lanthanide-doped upconversion nanoparticle and a therapeutic drug. The nanofiber composite is biocompatible, and exhibit enhanced mechanical properties, minimal hemolytic effects, and sustained drug release. FIG. 1A

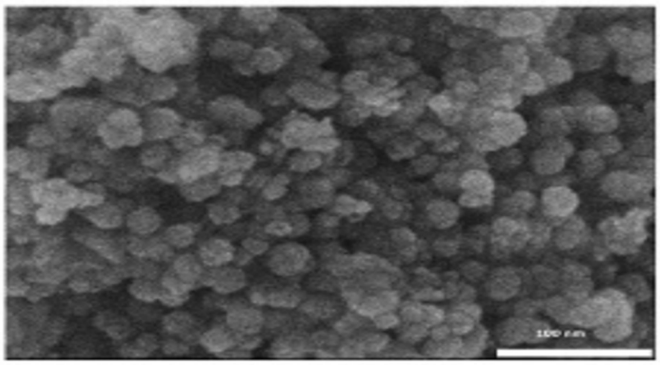

FIG. 1A

No. of Pages : 51 No. of Claims : 25

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/03/2024
(21) Application No.202421020590 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A COMPUTER READABLE STORAGE MEDIUM, EMBODYING A SET OF INSTRUCTIONS EXECUTABLE BY A PROCESSOR TO PERFORM A METHOD FOR PREDICTING CROP YIELD AND SUGARCANE POL IN CANE

(51) International classification	:G06Q0050020000, G06N0020000000, G06N0007000000, A01B0079000000, G06Q0010040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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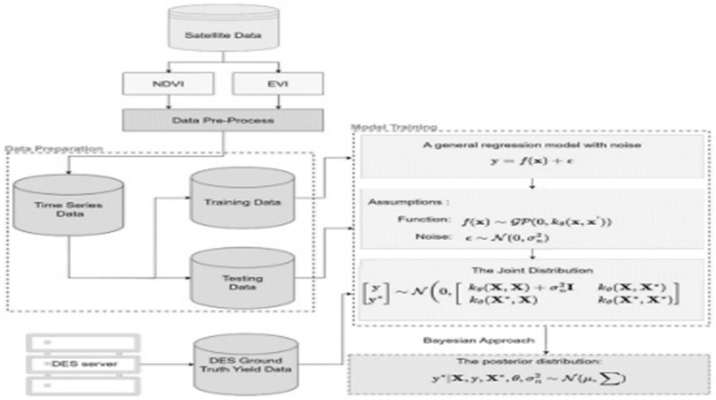
(57) Abstract :
The present invention relates to a computer readable storage medium, embodying a set of instructions executable by a processor to perform a method for predicting crop yield and sugarcane Pol in Cane wherein the said method comprising the steps of: receiving data, said data including: normalized difference vegetation index data; soil moisture data; surface temperature data; and rainfall data; and pre-processing, the received data on a processor; training and testing, the said received data by using a general regression model with noise, and applying, a probabilistic bayesian approach to generate the real-time estimate of the sugarcane Pol in Cane, yield, irrigation scheduling and prescribing harvesting time to industry and farmers using the remote sensing data and ground truth data relating to crop yield and sugarcane Pol in Cane with an aim to increase the crop yield, Brix, Pol in Cane.



No. of Pages : 11 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/04/2024

(21) Application No.202421029519 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD OF PRODUCTION OF AN ORGANIC ACID BY INTEGRATED FERMENTATION AND ADSORPTION SYSTEM

(51) International classification :C07C51/42, C07C51/47, C12P7/10, C12P7/56
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to a method of production of an organic acid by integrated fermentation and adsorption system comprising: a) pre-treating a biomass with one or more reagent to obtain a pretreated biomass; b) contacting the pretreated biomass of step a) with a neutralising reagent to neutralise the sulphate or chloride impurities and to obtain a suspension; c) initiating hydrolysis under condition using a hydrolysis reagent and continuing with fermentation with addition of one or more microbe and followed by maintaining pH via pH loop consisting of an ion-exchange resin column(s) and a solid liquid separation unit; d) processing by continuation fermentation till sugars are completely utilized by microbe and to obtain ion-exchange resin column(s) containing adsorbed organic acid; e) contacting the ion-exchanged resin column(s) of step d) with a base solution to desorb the organic acid solution; f) passing the desorbed organic acid solution of step e) through activated carbon bed and then filters to obtain a treated solution; and g) passing the treated solution of step f) through a cation exchange resin column to obtain a pure organic acid stream followed by concentration to obtain the desired concentration.

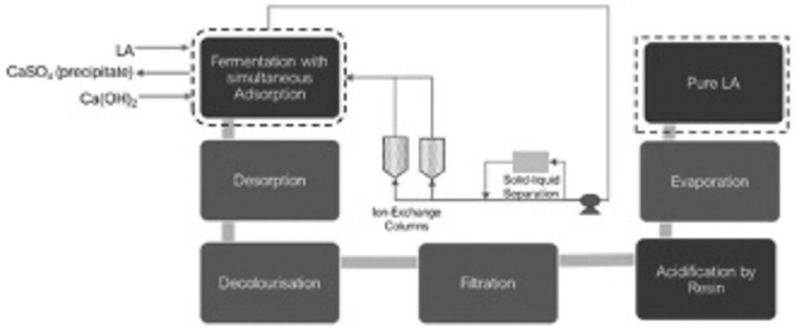

Figure 1

No. of Pages : 24 No. of Claims : 22

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/02/2024
(21) Application No.202421014480 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HIGH-STRENGTH NANO-STRUCTURED PEARLITIC STEEL AND THE METHOD OF MANUFACTURING THE SAME

(51) International classification :B82B1/00, B82B3/00, C22C38/00, C22C38/02, C22C38/04, C22C38/06, C22C38/22, C22C38/52
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to High strength Nano-structured pearlitic steel having an interlamellar spacing in the range of 60-135 nm have been produced in bulk by austenitization at 1000°C to 1200°C for a period between 1 to 2.6 hours and isothermal transformation between 580-730°C for a period between 40 mins to 120 mins. The present invention more particularly relates to a type of steel grade, which by virtue of its composition and unique heat treatment can lead to the formation of bulk nano-pearlitic microstructure with average inter-lamellar spacing interlamellar spacing in the range of 60-135 nm; capable of rendering hardness of the resulting steel block is between 340 HV to 425 HV with yield strength in the range from 1 GPa to 1.2 GPa, ultimate tensile strength in the range from 1.6 GPa to 2 GPa and tensile ductility in the range of 12 to 14%. Figure 1

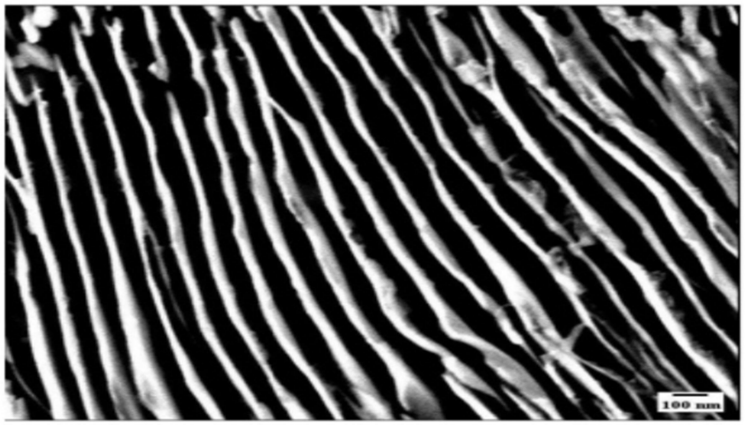

Figure 1. SEM microstructure of steel having held at 590°C [Example 1]

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/02/2024
(21) Application No.202421014524 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PEPTIDES-BASED DRUG AND METHOD THEREOF

(51) International classification :A61K38/00, A61K38/05, A61K38/06, A61K38/07, C07K1/06, C07K1/10, C07K14/001
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT PEPTIDES-BASED DRUG AND METHOD THEREOF The present invention relates to the peptides-based drug. Particularly, the present invention provides peptides-based drug having composition of Homo-Aromatic Tyrosine peptides (Di-Tyrosine, Tri-Tyrosine and Tetra-Tyrosine peptides) which includes two, three and four Tyrosine Amino-acids respectively in the peptide chains.

No. of Pages : 30 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/04/2024
(21) Application No.202421030360 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : “ELECTROCHEMICAL BIOSENSOR, METHOD FOR MANUFACTURING AND APPLICATION THEREOF”

(51) International classification :B82Y30/00, B82Y40/00, H01G11/36, H01G11/48, C25B11/043, G01N27/30, G01N27/26
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT “ELECTROCHEMICAL BIOSENSOR, METHOD FOR MANUFACTURING AND APPLICATION THEREOF” Disclosed herein is an electrochemical biosensor for detection of biological toxins. Embodiments herein further disclose a method of manufacturing the electrochemical biosensor and a method for detection of biological toxins using the electrochemical biosensor. The electrochemical biosensor, according to embodiments herein includes a carbon electrode embedded with a composite comprising at least one conductive polymer and at least one nanoparticle functionalized with primary amine; at least one bidirectional cross-linker; and at least one blocking agent. Further the biosensor can be used in impedance spectroscopy as well as in a voltammetry based 3 electrode system. The biosensor is portable, simple to use, cost-effective, having high sensitivity and easy to manufacture. FIG. 1

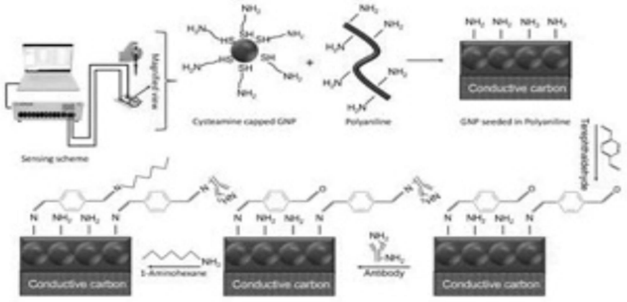

FIG. 1

No. of Pages : 35 No. of Claims : 33

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/04/2024

(21) Application No.202421031810 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD FOR DETECTION OF BREAST CANCER BIOMARKER USING CARBON QUANTUM DOTS.

(51) International classification :G01N33/574, G01N33/68, C12Q1/6886, B82Y15/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number:NA
Filing Date :NA

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(57) Abstract :
The present invention relates method for breast cancer biomarker detection by carbon quantum dots. The invention is unique in detection of breast cancer biomarker using Antibody Anti CA15-3 conjugated carbon quantum dots from human serum samples. The breast cancer biomarker is detected by decrease in fluorescence intensity peak as monitored in fluorescence spectroscopy. The claimed breast cancer biomarker detection method shows many advantages including label free, rapid, simple, cost-effective, high sensitivity which helps to overcome the limitations of high cost and time consumption exhibited by many other traditional clinical assays for cancer detection using biomarker from human serum.

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/04/2024
(21) Application No.202421029520 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NOVEL METHOD FOR PRODUCTION OF SUGARS FROM LIGNOCELLULOSIC BIOMASS MATERIAL

(51) International classification :C12P19/00, C12P19/02, C12P7/10, C13K1/02, C13K1/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to a method for production of sugars from a lignocellulosic biomass material comprising: a) pre-treating 5 to 20% w/v of the lignocellulosic biomass material with 0.1-20% w/v of one or more reagent to obtain a pretreated slurry; b) subjecting the pretreated slurry to solid-liquid separation to separate a liquid stream and a solid residue; c) adjusting the pH of the solid residue from step b) using a neutralising stream to obtain a slurry; d) hydrolysing 5-20 % w/v of the slurry from step c) in a fermenter/reactor using enyzme (2-15 FPU/g of biomass) and a buffer to obtain sugars; e) processing by fermentation of the sugars to produce an organic acid in the fermentation broth; f) downstream-processing of the fermentation broth to produce organic acid and an effluent stream containing residual sugars, organic acid & its conjugate salt; and g) recycling the effluent stream of step f) in step a) or step c) or step d).

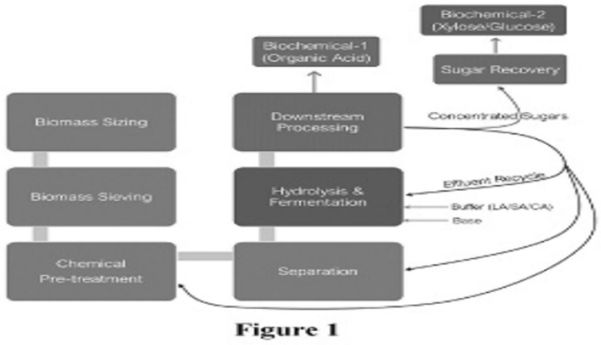

Figure 1

No. of Pages : 20 No. of Claims : 20

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/04/2024

(21) Application No.202421031520 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "FORMULATION AND EVALUATION OF TRANSDERMAL GEL OF SODIUM SALT OF BOSWELLIC ACID"

(51) International classification	:A61K31/19, A61K31/56, A61K9/00, A61K9/06, C07J63/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention enhances Boswellic acid solubility via Sodium salt formulation, offering improved anti-inflammatory activity. A transdermal gel of sodium Boswellic acid is produced through spray drying. Incorporating various penetration enhancers like Sodium lauryl sulphate (SLS), Glycerin, Menthol, and Oleic acid in transdermal gels enhances solubility and penetration, with Sodium lauryl sulphate (SLS) proving most effective. Sodium Boswellic acid exhibits superior anti-inflammatory properties compared to both marketed diclofenac sodium gel and oral sodium Boswellic acid. The conversion to sodium salt enhances hydrophilicity, increasing solubility and efficacy. The study successfully achieves its objectives, introducing a novel sodium Boswellic acid gel formulation with heightened anti-inflammatory potential via transdermal administration.

No. of Pages : 23 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202421033560 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A REGENERATING ELECTRIC AUTO RICKSHAW SYSTEM

(51) International classification :B62K5/02, B60L50/61, H02J7/14, B60L50/60
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a regenerating electric auto rickshaw system. The regenerating electric auto-rickshaw presents a groundbreaking solution in the technical field of electric vehicles, particularly auto-rickshaws, aimed at enhancing energy efficiency and sustainability. This innovative system incorporates dual batteries, electric motors, and a generator, utilizing kinetic energy regeneration to extend the travel range and reduce environmental impact. The primary battery propels the vehicle, while the generator harnesses energy from wheel motion to recharge a secondary battery, ensuring uninterrupted operation. With a user-friendly interface and real-time monitoring, this eco-friendly auto-rickshaw offers a cost-effective and perpetually regenerative solution for urban commuting needs. The invention aligns with the growing demand for sustainable transportation, contributing to resource optimization and a greener urban environment.

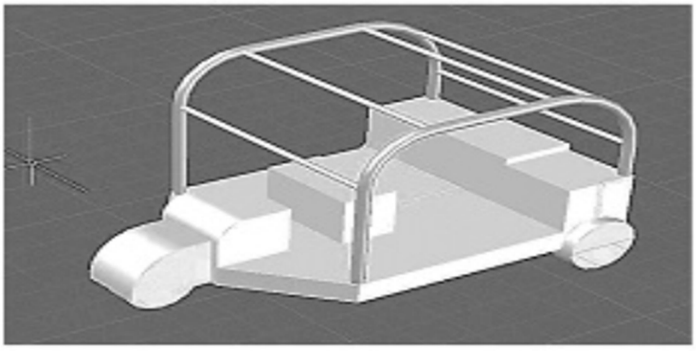

Figure 1

No. of Pages : 9 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202421033561 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN ARM AND THIGH PROTECTOR

(51) International classification :A41D13/05, A41D13/08, F41H1/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to an arm and thigh protector. The invention pertains to an advanced protective apparatus designed for military personnel, specifically focusing on arm and thigh protection. The apparatus incorporates a unique combination of materials, including Kevlar, ballistic, and polyethylene fiber, ensuring lightweight yet effective bulletproofing. Employing a human-centered design thinking approach, the apparatus prioritizes comfort, flexibility, and usability. The arm protector features adjustable straps, elastic buckles, and an innovative overlapping mechanism with nylon webbing and Velcro for enhanced security. Additionally, a pocket (103) for emergency tools is integrated into the arm protector. The thigh protector (202) adopts a pant-shaped design with an adjustable waist belt, promoting both comfort and a secure fit. The invention revolutionizes personal armor by addressing real-world concerns faced by soldiers during combat. Overall, this invention represents a significant advancement in military personal protective equipment.

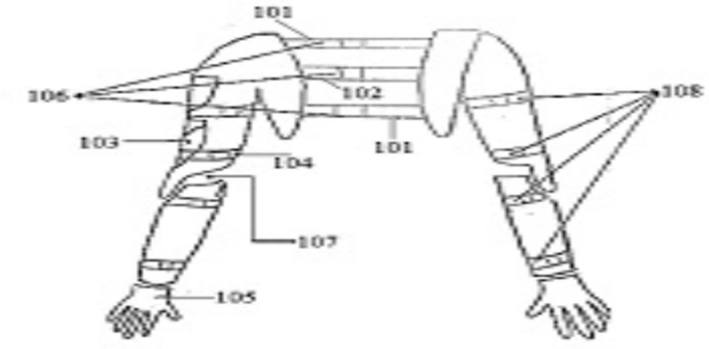

Figure 1

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202421033562 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PEN GRIP

(51) International classification :B43K23/008, B43K23/012
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a pen grip. This invention introduces a pen grip apparatus designed to revolutionize the traditional writing experience. The apparatus features a soft and customizable grip material that molds to the user's finger shape, ensuring a strain-free and comfortable writing experience during extended use. A pivotal rubber ring, strategically attached at the midpoint of the grip, acts as a stabilizer, redistributing load to reduce pressure points and prevent writer's callus. Additionally, the rubber ring serves as a protective mechanism, safeguarding the pen from potential damage due to accidental falls. The apparatus is versatile, accommodating various grip styles, including overhand and underhand grips, providing a universally comfortable solution. The combined features enhance overall stability, improve handwriting precision, and enable users to write for extended durations without discomfort, thereby increasing the longevity of the writing instrument.

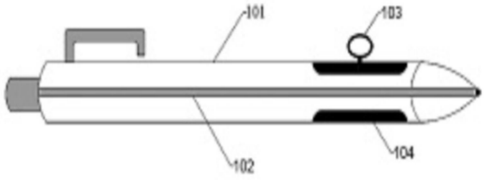

Figure 1

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :26/04/2024

(21) Application No.202421033563 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : A MULTI PASSENGER ELECTRIC TANDEM BIKE

(51) International classification :B62K3/12, B62M6/90, B60L50/60, B62J1/18
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a multi passenger electric tandem bike designed for urban transportation, offering an innovative solution to contemporary mobility challenges. The tandem bike features a robust frame capable of accommodating up to four riders comfortably, powered by two 600 W motors and an in-house-crafted rechargeable lithium-ion battery system. Safety features include disk braking, auto brake cut-off, and a lighting system with auxiliary power. The bike's three-wheeler configuration ensures enhanced stability, while the control unit enables synchronized motor operation for smooth acceleration and braking. With a range of up to 30 km on a single charge and user-friendly features such as padded seating and adjustable backrests, this tandem bike offers a sustainable, efficient, and enjoyable mode of transportation for diverse urban settings.

Figure 1

No. of Pages : 14 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202421033564 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A HEALTH DIAGNOSTIC DEVICE

(51) International classification	:A61B5/00, A61B5/0537, A61B5/02, G16H40/67, G16H10/60, G16H50/30
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is related to a health diagnostic device. It aims to integrating multiple diagnostic techniques into a single device, it offers rapid, comprehensive, and non-invasive health assessments. This invention surpasses existing products by providing correlated analysis of various health parameters, including body composition, heart function, lung activity, and brain signals. Utilizing advanced machine learning features, it delivers instant digital reports via email and physical reports through an integrated printer. The device, centered around a Bio-Impedance Analysis platform, incorporates components such as electrodes, load cells, and sensors for precise measurements. With its ability to provide detailed insights into hydration status, cell health, and overall body composition, this innovation holds immense potential for clinical interventions and health management practices. Its versatility makes it applicable in diverse settings, from hospitals for patient monitoring to public spaces for general health assessments, promising significant advancements in healthcare accessibility and diagnostics.

Figure 1

No. of Pages : 12 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/12/2023
(21) Application No.202321082673 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SPRAYABLE PHOTOCATALYTIC COATING FOR CONCRETE SURFACES

(51) International classification	:B01J0035000000, B01D0053860000, B01J0037020000, B01J0021060000, C04B0041000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A sprayable photocatalytic coating for concrete surfaces is described herein. The sprayable photocatalytic coating comprises a silane-siloxane liquid as a surface penetration agent and an anatase mineralogical type titanium dioxide (TiO2) powder having 97.476% purity. The titanium dioxide (TiO2) powder and the silane-siloxane liquid of the photocatalytic coating are mixed in the proportion ranging from 1:4 to 1:6. The photocatalytic coating of the present invention reduces nitrogen oxide pollutants by DAC (Direct Air Capture) directly from the polluted air by photocatalytic reaction with the help of ultraviolet light. The photocatalytic coating can convert any newly made as well as existing concrete surfaces into the photocatalytic concrete surfaces and it does not require the use of unnecessary photocatalytic materials inside the concrete mix while concrete production.

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/12/2023
(21) Application No.202321082674 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SPRAYABLE ZEOLITE BASED COATING FOR CONCRETE SURFACES

(51) International classification :C04B0028020000, C04B0111000000, C04B0041000000, B01D0053860000, C09D0005080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A sprayable zeolite based coating for concrete surfaces is described herein. The sprayable coating comprises a silane-siloxane liquid as a surface penetration agent and a zeolite powder as cementitious material. The zeolite powder and the silane-siloxane liquid of the coating are mixed in the proportion ranging from 1:4 to 1:6. The coating of the present invention reduces carbon dioxide pollutants by DAC (Direct Air Capture) directly from the polluted air by ion exchange reaction. The coating can convert any newly made as well as existing concrete surfaces into the concrete surfaces that reduces carbon dioxide pollutants more efficiently and it does not require the use of unnecessary additional materials inside the concrete mix while concrete production.

No. of Pages : 14 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/01/2024
(21) Application No.202421004048 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PROCESS FOR PREPARATION OF ZNAL LAYERED DOUBLE HYDROXIDE NANOPARTICLES

(51) International classification :B82Y30/00, B82Y40/00, B01J35/45, B01J35/73
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention is related to a process for preparation of ZnAl layered double hydroxide nanoparticles. According to the invention, the textile industries generate huge amount of highly toxic color wastewater. A potential solution to this global environmental pollution demands the appropriate design and synthesis of artificial photocatalysts with high activities. The presence of Methyl Orange(MO) dye causes distinct acute impact on health therefore the removal of this dye from aqueous solution is highly desirable. ZnAl layered double hydroxides(LDHs) as a photocatalyst was developed. The highest degradation of MO dye was found to be 95.21% within a time period of 1 h. Also the reusability and stability of ZnAl photocatalyst were found to be steady up to 5 successive cycles.

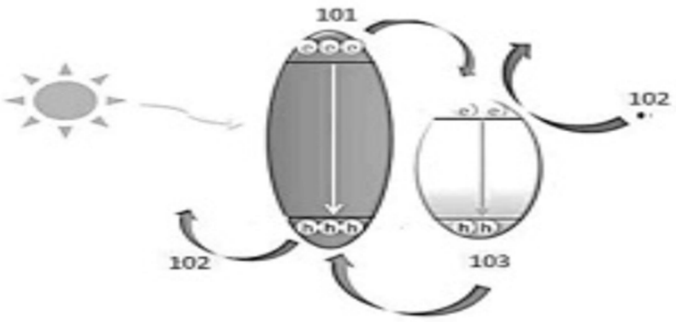

Figure 2

No. of Pages : 14 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/04/2024

(21) Application No.202421034355 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LAWSONE PESSARY FORMULATION AND PROCESS FOR ITS PREPARATION

(51) International classification :A61K31/122, A61K47/10, A61K9/10, C07C50/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
Lawsone pessary formulation and process for its preparation. The present invention relates to a Lawsone pessary formulation and process for its preparation. The present invention further relates to a Lawsone pessary formulation for use in the treatment of Vaginal Candidiasis.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024
(21) Application No.202421026318 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A NON-INVASIVE BLOOD GLUCOSE MEASURING DEVICE

(51) International classification :A61B5/145, G01N33/497
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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3)TIVARI, Harsh H.
4)URKUDE, Rashmi D.
5)KALE, Ankit S.
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Address of Applicant : NA
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(57) Abstract :
The presented invention proposes a non-invasive blood glucose measuring device. non-invasive device catering to Type 1 diabetes mellitus patients, offering real-time blood glucose level measurements through breath acetone analysis. Employing the breath acetone concentration sensor for acetone detection, it bypasses the discomfort of traditional invasive methods. Equipped with an Arduino Nano microcontroller and a 16*2 LCD display, the device swiftly processes breath data into glucose readings, facilitating immediate intervention. Its continuous monitoring capability aids in comprehensive glucose management, while its user-friendly design enhances patient compliance. By eliminating needle pricks and subcutaneous sensors, it minimizes infection risks and skin irritations, ensuring safer, hygienic diabetes care. Its industrial applications span healthcare institutions, pharmaceutical research, and home healthcare, providing accessible and cost-effective solutions. This invention heralds a transformative approach to diabetes management, heralding improved patient experience and better health outcomes.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202421028326 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : “A COMPOSITE PRESSURE VESSEL AND A FABRICATION METHOD THEREOF”

(51) International classification :F17C1/06, F17C1/00, B65H81/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT “A COMPOSITE PRESSURE VESSEL AND A FABRICATION METHOD THEREOF” The disclosure herein relates to a composite pressure vessel (100) having a filament wrapped composite shell, and a method (200) for fabricating the composite pressure vessel. The pressure vessel includes a shell (104) which is formed by winding a filament (F) made of a composite material in a helical pattern around end portions (102F, 102S) of a liner (102) of the pressure vessel, and wrapping the filament in a hoop pattern around a main portion (102M) of the liner; and a plurality of support members (108F, 108S) provided on the liner which provide support for winding the filament around the end portions of the liner. The pressure vessel and the method facilitate in increasing strength to weight ratio and gravimetric efficiency, reducing manufacturing difficulty and material costs. Fig. 2

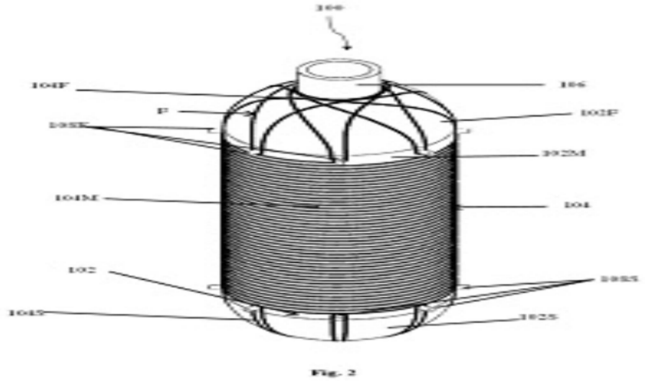

Fig. 2

No. of Pages : 20 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/05/2024

(21) Application No.202421035790 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "ANTIBACTERIAL, ANTI-OXIDANT, AND BIODEGRADABLE PACKAGING FILM FOR PERISHABLE HORTICULTURE PRODUCE AND ITS METHOD OF PREPARATION"

(51) International classification :C08L101/16, B65D65/46, C08L91/00, C08L89/00, C08L5/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The current disclosure introduces a packaging film for perishable horticulture produce. The film is biodegradable and designed to effectively provide anti-oxidant and antibacterial activity to various perishable food items of horticulture. A sustainable and environment-friendly packaging film has been developed with antioxidant activity and antibacterial protection for the above-mentioned food items. Thus, the present invention relates to a novel antioxidant, antibacterial, and biodegradable packaging film and its production method with natural polymer-sodium alginate, egg white as film material, and black seed oil (Nigelia saliva oil) as an additive.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/05/2024
(21) Application No.202421035804 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "3D-PRINTED POLYHERBAL HYDROGEL COMPOSITION AS ANTIBACTERIAL WOUND HEALING AND A PROCESS OF PREPARATION THEREOF"

(51) International classification :A61K 36/886, A61K36/48, A61K36/61, A61K36/185, A61P17/02, A61P31/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The acute and chronic types of wounds have caused social, financial, and psychological burdens to the world, . so wound management has become an area of concern. To manage this clinical problem, the 3D-printed polyherbal hydrogel is prepared which consists of extracts of Aloe barbadensis Mimosa pudica, and oils of Syzygium aromaticum, and Santalum alburn in a composition along with natural polymers gelatin and sodium alginate. The invention also includes process parameters for preparing the 3D-printed hydrogel by using the above-mentioned plant extracts and polymers. This present invention relates to a novel 3D printed polyherbal hydrogel which is biodegradable, hemocompatible, biocompatible, and has antibacterial properties with wound healing applications.

No. of Pages : 19 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202421033566 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A THERMOELECTRIC COOLING BACKPACK

(51) International classification :F25B21/02, A45F3/04, H01L23/38
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a thermoelectric cooling backpack. a thermoelectric cooling (102) backpack (101) designed to address the escalating threat of heat-related illnesses in urban environments experiencing rising temperatures. Integrating innovative Peltier cooling technology, it targets critical areas of the body with strategically positioned cooling modules (102) and powerful fans, ensuring optimal airflow and temperature regulation. Equipped with a high-capacity battery backup, the backpack offers prolonged cooling operation, enhancing user comfort during outdoor activities. An intuitive control interface allows users to customize cooling settings, while smart sensors continuously monitor ambient conditions and body temperature, automatically adjusting the cooling system for optimal comfort. With a focus on ergonomic design and user-centered innovation, this backpack system approach to temperature regulation, addressing the challenges associated with rising temperatures while promoting user comfort and safety in diverse environments.

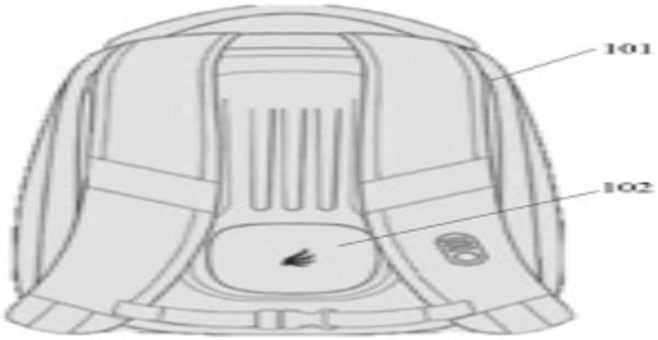

Figure 1

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/05/2024
(21) Application No.202421036584 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN STRATEGIES AND MULTIFUNCTIONALITY OF FLEXIBLE ELECTROMAGNETIC INTERFERENCE SHIELDING MATERIALS

(51) International classification	:B82Y30/00, B82Y40/00, C01B32/158, C01G49/08
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
DESIGN STRATEGIES AND MULTIFUNCTIONALITY OF FLEXIBLE ELECTROMAGNETIC INTERFERENCE SHIELDING MATERIALS The method for the development with the Electromagnetic interference (EMI) shielding for electronic devices has become urgently necessary in recent years due to the rapid development of 5G communication technologies. Developing corresponding EMI shielding materials against harmful electromagnetic radiation is crucial. In the meantime, new shielding applications have a strong need for EMI shielding materials with great flexibility and functional integrity. A simple procedure was used to create the shape-stable phase change composites (SSPCCs) of polypropylene/carbon nanotubes/Ferro ferric oxide/paraffin wax (PP/CNTs/Fe3O4/PW), which had good heat management performance, EMI shielding effectiveness (EMI SE), and the right amount of flexibility. Researchers in this discipline have received a lot of attention because of the battle against electromagnetic interference (EMI). To address the aforementioned issue, researchers have worked very hard to produce electromagnetic wave absorbing and shielding (EMAS) materials that lower EM wave power density. FIG.1

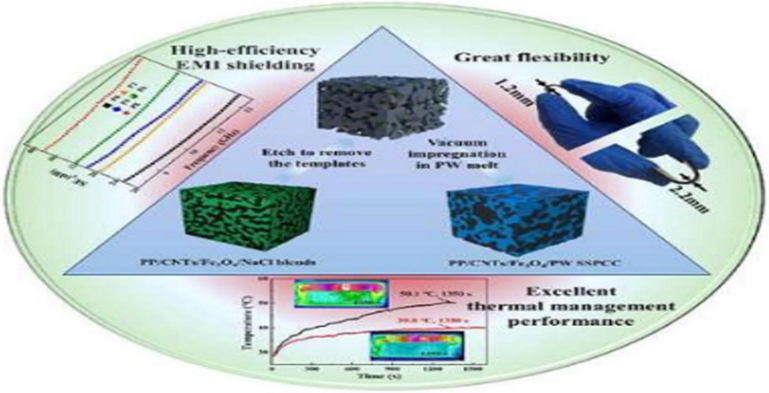

FIG.1

No. of Pages : 15 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/05/2024
(21) Application No.202421036664 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : RECYCLING OF PLASTIC WASTE MATERIALS INTO VALUABLE FUEL PRODUCTS LIKE DIESEL BY USING NANO CATALYTIC PYROLYSIS METHOD

(51) International classification :B01J23/04, B01J23/06, B01J23/60, B09B3/40, B09B3/70, B82Y30/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Plastic wastes were degrading thermally as well as using different catalyst and nano catalyst up to the temperature of 230°C to 350°C gives products such as liquid fuels, like Diesel, gas and char (solid residues). In the pyrolysis process use of thermal energy for decomposition of long-chained polymer molecules to break down into small chain molecules. By controlling the heat flow and pressure of the reaction smaller molecules can be obtained. Conversion of waste plastic into fuel represents recovery of organic content of polymeric waste in the form of valuable petroleum products is the most sustamable way for protection of environment. Study of most commonly used catalyst dolomite and three different Nano catalysts were used during pyrolysis namely, nanoparticles of (1:1) CaO: MgO Nano catalyst and [1:1:1] ZnO: MgO: CaO and Ti02-MgO-CaO [1:1:1] nano catalyst synthesized by using precipitation followed by calcination. Percentage yield and purity of the fuel product was increased by using synthesized trimetallic Nano catalysts.

No. of Pages : 20 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/04/2024

(21) Application No.202421031860 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ELECTROMAGNETIC SUSPENSION SYSTEM FOR A MOBILE MANIPULATOR PLATFORM

(51) International classification	:B25J19/00, B25J19/16, B25J5/00, B25J9/00, F16F9/53
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
The present disclosure provides a suspension system (100a) for a mobile manipulator platform (100b). The suspension system (100a) includes a damper (100d) which includes electromagnets (122) suspended in damping fluid within a cylindrical stator, and a hollow cylindrical permanent magnet (126) including an array of permanent magnets (124) into which the cylindrical stator slides in and out, and a spring (106). The suspension system (100a) includes wheels (102) and sensor(s) to detect parameters associated with movement of the mobile manipulator platform (100b). The suspension system (100a) is connected to a shaft (108) at one end, and the mobile manipulator platform (100b) at another end. The sensors are configured to send signals pertaining to the parameters to a control module (116), where the control module (116) controls power input from a power source to the electromagnets (122) for maintaining stability of the mobile manipulator platform (100b) based on the signals.

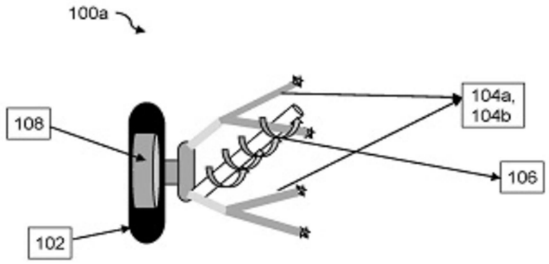

FIG. 1A

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/05/2024

(21) Application No.202421035398 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PROCESS OF PREPARATION 5-CHLOROBENZIMIDAZOLE WITH TRIAZOLE DERIVATIVES

(51) International classification :C07D235/04, A61K4184
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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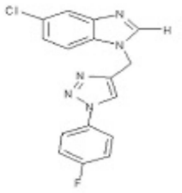
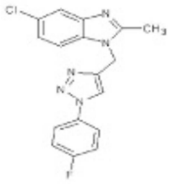
(57) Abstract :
Disclosed is a process of synthesis of 5-chlorobenzimidazole with triazole derivatives which show potent anticancer activity. The compound of formula VIII and formula IX obtained by the synthesis of the present invention is shown below respectively.



Formula VIII



Formula IX

Figure 1

No. of Pages : 19 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/05/2024

(21) Application No.202421036809 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN APPARATUS FOR PROVIDING A MAGNETIC QUICK FIX FOR 3D CONCRETE PRINTING APPLICATIONS

(51) International classification	:B25J15/06, B28B1/00, B28B13/02, B33Y70/00, E04G21/02
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Present invention relates to apparatus (102) for providing a magnetic quick fix for 3D concrete printing applications. Apparatus (102) comprises one or more carbon fiber pipes (104), one or more electromagnetic connectors (106) and at least one manipulator robot (108). The one or more carbon fiber pipes (104) is configured to transfer a concrete aggregate from a concrete mixer upto a nozzle discharge. The one or more electromagnetic connectors (106) are configured to conduct a quick release mechanism during transferring the concrete aggregate. The at least one manipulator robot (108) is configured to provide a precise horizontal axis stability based on movement of the at least one manipulator robot (108) to ensure dynamic balancing and provide a magnetic quick fix for 3D concrete printing applications.

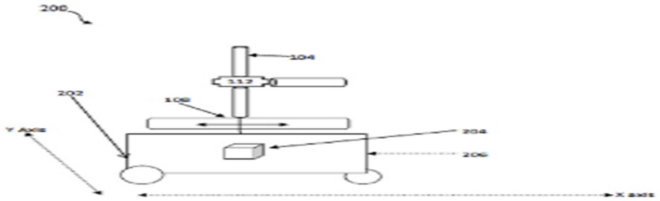

FIG. 2A

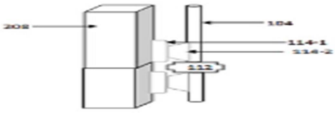

FIG. 2B

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/05/2024
(21) Application No.202421037026 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN INTERNET OF THINGS (IOT) BASED AUTOMATED IRRIGATION AND POMEGRANATE PLANT DISEASE CONTROL SYSTEM USING DEEP LEARNING ALGORITHMS

(51) International classification :G06N0003080000, A61K0036185000, G06Q0040080000, G06N0007000000, G06N0020000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The IoT-based automated irrigation and plant disease control system is a game-changing solution for optimizing crop growth and health. This innovative system includes a network of sensors, a central controller, and deep learning algorithms that work in tandem to ensure that crops receive the necessary amount of water, nutrients. and pesticides. The sensors, deployed in the field, measure critical parameters such as soil moisture, temperature, humidity, and. light intensity and transmit the data to the central controller. The controller, equipped with advanced deep learning algorithms. analyzes the data and makes intelligent decisions regarding irrigation and nutrient application schedules. The system can he programmed to irrigate the crops automatically at specific intervals, and the irrigation schedule is being adjusted based on changing weather conditions. Furthermore, the system is monitoring the crops for signs of disease using image recognition algorithms that detect abnormalities in the plant's appearance and growth patterns. The system detects any signs of disease; it can alert the farmer or gardener via SMS or email and suggest appropriate treatments. The system is also recommended the most effective pesticides based on historical data and machine learning algorithms. The IoT-based automated irrigation and plant disease control system offers an efficient and effective solution to crop management. It leads to reduced water usage and pesticide application, improved crop health and yield, and promotes sustainable agriculture practices. The patent-pending technology has the potential to revolutionize agriculture by providing an innovative solution that benefits farmers, gardeners, and the environment.

No. of Pages : 21 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/05/2024

(21) Application No.202421036189 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : PREDICTIVE ANALYSIS OF E-COMMERCE AGRICULTURAL PRODUCT DEMAND USING MACHINE LEARNING

(51) International classification	:G06Q0030020000, G06N0020000000, G06N0003040000, G06Q0010040000, G06N0020200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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7)Happy Narang

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9)Dr Manikandan K

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11)Dr. Abhishek Rajeshkumar Mehta

12)Prof. Karuna Manthan Patel

Name of Applicant : NA

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(57) Abstract :

PREDICTIVE ANALYSIS OF E-COMMERCE AGRICULTURAL PRODUCT DEMAND USING MACHINE LEARNING The method for the development with the cutting-edge machine learning target prediction algorithm to educate farmers about the market target product and strengthen ties between farmers and bankers in order to centralize information about current government initiatives. The crop forecast machine learning method was developed to increase agricultural revenue. A single model-based demand forecast model is built using this data as the data foundation. In order to address the issue of artificial fixed parameters in machine learning models lacking reasonableness, ARIMA, LSTM, and Random Forest models are trained. LSTM and Random Forest were initially optimized and improved through the use of PSO and the Bayesian algorithm, respectively, before choosing the best parameters to make up the prediction model. A timely and precise price prediction enables farmers to sell their goods at competitive rates by allowing them to choose amongst other neighboring marketplaces. The data may be used by the farmers to make decisions about when to start marketing. FIG.1

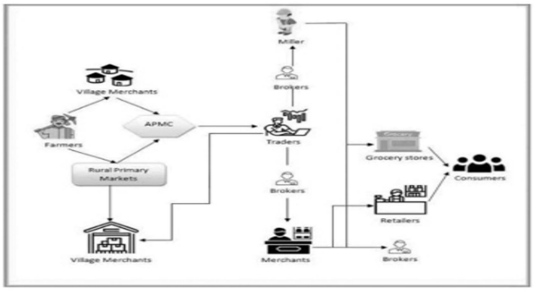

FIG.1

No. of Pages : 16 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/05/2024

(21) Application No.202421036317 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : QUICK OPENING AND CLOSING NOZZLE FOR AUTOCLAVE MACHINES.

(51) International classification :A61L2/00, A61L27/56
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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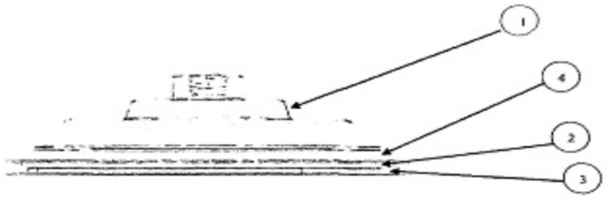
(57) Abstract :
Reliability and productivity of the equipment with proper functioning requires repeated and quick access into their internal space, considerably depends on reliability and duration of opening and closing operations of their covers and hatches. At gas and petrochemical production facilities the pig launching and receiving chambers, dust arresters/collectors, compressor up and downstream hatches/manholes, strainers (filters-mud traps) and many other types of equipment are equipped with process covers and hatches. Therefore, in the last decades in world practice instead of the abovementioned fastening of covers and hatches has started implementation of various design quick opening closures. Keywords: - QOCs Pressure Vessel; ASME Code; Optimum Design; Working Pressure; Structural Analysis; Autodesk Inventor
Reference: FIG.02/03

FIG. 01/03



No. of Pages : 9 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/05/2024

(21) Application No.202421036379 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FORMULATION AND EVALUATION OF POLYHERBAL CREAM FOR THE TREATMENT OF RHEUMATOID ARTHRITIS.

(51) International classification :A61K36/23, A61K36/9066, A61K9/02, A61P19/02, A61P29/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Rheumatoid arthritis (RA) is a chronic autoimmune disease characterized by joint inflammation, pain, and progressive disability. Conventional treatments often provide symptomatic relief but are associated with adverse effects. Herbal formulations have gained attention due to their potential therapeutic benefits and minimal side effects. This study aimed to formulate, optimize, and evaluate a poly-herbal cream for the treatment of rheumatoid arthritis. The poly-herbal cream was formulated using a combination of traditional medicinal plants known for their anti-inflammatory and analgesic properties, including turmeric and celery seeds. The formulation was optimized using a systematic experimental design approach to achieve the desired rheological properties, stability, and enhanced drug release profile. Various factors, such as the concentration of active ingredients, emulsifying agents, and stabilizers, were optimized using statistical tools like Design of Experiments (DOE). The optimized poly-herbal cream exhibited favourable physicochemical characteristics, including smooth texture, acceptable pH, and stability under different storage conditions. The available synthetic drugs for the treatment of arthritis has shown some sever side effect such as heart attack, stroke, kidney disease and stomach irritation, the current work's goal was to create a poly-herbal cream formulation containing the anti-rheumatic and anti-inflammatory herbs celery (ApiumGraveolens) and turmeric (curcuma longa) as alternative treatment for mild rheumatoid arthritis.

No. of Pages : 14 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/05/2024
(21) Application No.202421036682 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TWO STEP SYNTHESIS OF MULTI CAPPED SUPER GRADE SOLID NANO FERTILIZERS FOR AGRICULTURE.

(51) International classification :C05D9/02, C05G5/10, C05G5/30
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Dual capped Nano fertilizers synthesized by using green approach are essential for plant growth, crop health and crop yield. These nanomaterials production process is sustainable and eco-friendly. The use of nano fertilizers has several advantages over traditional fertilizers, including more efficient nutrient uptake and utilization, reduced application rates, soil health, water quality improvement in nearby water bodies and lower making costs. It concludes that the synthesis of nano fertilizers is a promising alternative for sustainable agriculture, with significant potential in promoting crop yields and improving the quality of produce. The synthesis of nano fertilizers involves the production of nano nutrients such as Fe, Cu, Ca, Zn, B, Mn, Mo, Mg, K, Si, S, N,P,K, silica, starch and chitosan in a nano form. The characterization is done by XRD, UV-Visible spectroscopy, SEM and particle size analyzer. 8nm to l00nm sized particles are confirmed from these techniques and successfully field trials carried on various crops and horticulture plants Signature of the applicants

No. of Pages : 16 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/05/2024
(21) Application No.202421036709 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SUNLIGHT ASSISTED SOLVENT FREE SYNTHESIS OF SINGLE , BINARY, TERNARY METAL NANOCOMPOSITES SUCH AS METAL OXIDES, ALLOYS, CORESHELL, FERRITES AND MXENES.

(51) International classification :B82Y30/00, B82Y40/00, C01B32/198, C01G23/047, C01G49/04, C01G49/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Synthesis of nanoparticles becomes very lengthy process when it comes to large scale. There are many methods for synthesis of nanoparticles like green method, chemical methods, sol gel methods, sonication methods etc. but these are time consuming and with less yield and it becomes expensive. In this work we propose synthesis of nanomaterials by using natural resources such as sunlight around temperature range 28 °C to 40 C with in 60 minutes. Organo- sulphur compounds are used as reducing agents and synthesis is solvent free mainly thiourea and cysteine. In this work single, binary and tertiary nanomaterials are synthesized in a large scale which are eco-friendly and rapid in production. Nano materials such as ferrites, copper sulphide, iron oxide etc. are prepared by this method. Compound like alloys, core shell, Ferrites, spinel ferrites, MXene were synthesized by this method. Characterization and confirmation of nanomaterials were done by XRD and SEM

No. of Pages : 17 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/05/2024
(21) Application No.202421036717 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD OF MAKING SIDDHA HERBAL OIL FOR SPEEDY HAIR GROWTH, SMOOTH TEXTURE AND HEALTHY HAIRS.

(51) International classification	:A61K 36/889, A61K36/47, A61K36/886, A61K36/75, A61K36/752, A61K36/185, A61K8/92, A61K8/97
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Twelve ingredients were used in this siddha oil and each one of them is essential for different hair health benefits. Coconut oil has property of easily absorbing on scalp bonding with chemically with other molecules from leaves of different plants which are used in this making of oil. Castor oil has more moisturizing effect so it keeps hair in proper texture. Aloe Vera is hydroxylated molecule so it binds to ingredients which are hydrophilie in other plant materials. Each plant material mentioned below contains specific vitamins, amino acids, flavonoids, minerals etc. which are essential for hair health. Specific proportion of following ingredients is essential while making siddha hair oil. Aloe Vera, Lemon leaves, Mehndi leaves, Hibiscus flowers, Fenugreek seeds, Onion seeds, Amla and Jatamansi are ten herbal plant tissues with two oils i.e. coconut and castor makes this oil complete heath for hairs.

No. of Pages : 8 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/04/2024
(21) Application No.202421034366 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A CONFINED-DEWETTING METHOD FOR SYNTHESIS OF METAL NANOPARTICLES

(51) International classification :B82Y30/00, B82Y40/00, C23C18/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates generally to the field of nanotechnology. Particularly, the present disclosure provides a confined-dewetting method for synthesis of metal nanoparticles comprising: a) depositing a thin metal film on a substrate to form a metal film coated substrate; b) placing the metal film coated substrate in a thermal conducting container followed by adding a liquid form of polymer to obtain a polymer containing metal film coated substrate; c) heating the polymer containing metal film coated substrate under condition to grow nanoparticle and converts the liquid form of polymer to solid polymer film; and d) removing the solid polymer film to obtain a metal nanoparticle. The present disclosure provides a high-density and low-dispersity metal nanoparticles.

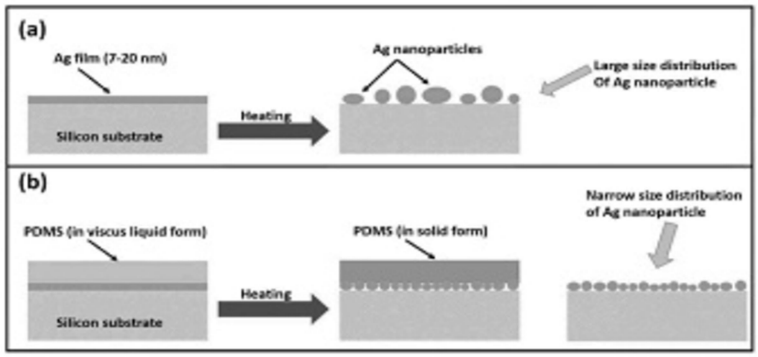

Figure 1

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/05/2024
(21) Application No.202421037396 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HUMANITARIAN DRONE FOR DISASTER RELIEF OPERATIONS.

(51) International classification :B64C0039020000, E04H0001120000, F42B0003000000, F41H0011120000, E04B0001343000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT OF THE INVENTION Our project introduces a specialized fixed-wing drone engineered for humanitarian disaster relief operations, boasting cutting-edge technology to revolutionize rescue efforts in crisis scenarios. The drone integrates a satellite transceiver for seamless real-time communication, alongside a multi-camera system and GPS module for comprehensive situational awareness and precise location tracking. Leveraging advanced algorithms such as OpenCV for human detection and Particle Swarm Optimization for optimized search further enhances its capabilities. Additionally, the drone utilizes NodeMCU for ground WiFi connectivity, with an antenna connected for extended range, and a custom messaging application for efficient communication with ground personnel. Messages transmitted via the Rock Block 9603RF module are relayed to satellites, facilitating coordinated rescue operations. Through meticulous design and integration, our drone promises to significantly elevate disaster relief operations, minimizing the impact of humanitarian crises globally.

No. of Pages : 9 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/05/2024
(21) Application No.202421037433 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED MELANOMA DETECTION USING MATLAB.

(51) International classification :G06T7/00, G06T5/00, G06V10/40, G06V10/764, G06V10/70, G06T7/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT OF THE INVENTION: The Project titled "Melanoma Detection System" is an attempt made to design a computer system that makes the Information Clear about The Melanoma and their types. The objective of this System is to maintain the details of Melanoma. Through this system we provide a smooth interface to the users for navigation through the System that provides information regarding the Melanoma and their Types. This study is limited in the use of simple image processing algorithms, for the sake of clarity, in order to illustrate the use of MATLAB in the calculation of the ABCD Total Dermatoscopy Score (TDS) for potentially malignant melanoma. A high ABCD A = Asymmetry (0-2 points), B = Border (0-8 points), C = Colour (0-6 points), D = Diameter or Differential structures (0-5 points) score means that a lesion is more likely to be a malignant melanoma. The Software powered by Matlab assures clear and efficient services to the Melanoma Detection System. This easy-to-operate system helps to access and Obtain Melanoma and their types. The software is designed to provide Reliable and error free information

No. of Pages : 11 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/05/2024
(21) Application No.202421037049 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : APPLICATION OF EPOXY RESIN COMPOSITES REINFORCED WITH PLANT FIBERS AS INSULATORS IN ELECTRIC TRANSMISSION LINES

(51) International classification :C08J5/04, H01B3/47, H01B3/40, H01B3/48, C08J5/04, H01B3/47, H01B3/40, H01B3/48
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The invention presents a novel approach to enhance the performance and sustainahility of insulators in electric transmission lines through the application of epoxy resin composites reinforced with plant fibers. Traditional insulator materials, such as porcelain or glass, are associated with drawbacks including weight, fragility, and environmental concerns. In response, this invention introduces composite insulators composed of epoxy resin matrices reinforced with plant fibers, offering a compelling alternative with improved mechanical strength, reduced weight, and enhanced environmental sustainahility. The epoxy resin matrix serves as the primary binder, providing structural integrity and electrical insulation properties, while the incorporation of plant fibers, including hemp, flax, jute, bamboo, or kenaf fibers, enhances mechanical properties and sustainahility. These renewable and eco-friendly reinforcements contribute to reducing the carbon footprint associated with infrastructure development. The manufacturing process involves formulating the epoxy resin matrix, incorporating treated plant fibers, molding the composite material into desired shapes, and curing the insulators to achieve optimal performance. Additionally, surface coatings may be applied to provide protection against environmental factors such as moisture and U V radiation. The invention addresses the need for insulator materials that balance performance, durability, and environmental impact in the electric power industry. By leveraging renewable resources and eco-friendly materials, it presents a significant step towards achieving efficient and sustainable electrical transmission systems. The novel combination of epoxy resin composites and plant fibers opens avenues for technological innovation and advancements in insulator design and manufacturing, aligning with the global imperative for eco-friendly solutions in infrastructure development.

No. of Pages : 19 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/05/2024

(21) Application No.202421037056 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : GREEN SYNTHESIS OF DUAL CAPPED COLLOIDAL NANO FERTILIZERS FOR SUSTAINABLE AGRICULTURE.

(51) International classification :B82Y30/00, B82Y40/00, C05G5/35, C05G5/27, C05D11/00, C05D9/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Dual capped Nano fertilizers synthesized by using green approach are essential for plant growth, crop health and crop yield. These nanomaterials production process is sustainable and eco-friendly. The use of nano fertilizers has several advantages over traditional fertilizers, including more efficient nutrient uptake and utilization, reduced application rates, soil health, water quality improvement in nearby water bodies and lower making costs. It concludes that the synthesis of nano fertilizers is a promising alternative for sustainable agriculture, with significant potential in promoting crop yields and improving the quality of produce. The synthesis of nano fertilizers involves the production of nano nutrients such as Fe, Cu, Ca, Zn, B, Mn, Mo, Mg, K, Si, S, N, P,K, silica, starch and chitosan in a nano form. The characterization is done by XR.D, UV-Visible spectroscopy, SEM and particle size analyzer. 10nm to 150nm sized particles are confirmed from these techniques and successfully field trials carried on various crops and horticulture plants

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/05/2024

(21) Application No.202421037477 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : EYESTREAM : A SECURE, REAL-TIME DRONE SURVEILLANCE SYSTEM.

(51) International classification	:B64C0039020000, G08B0013196000, G06Q0020400000, H04N0007180000, G06Q0020200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The problem of unlawful trespassing has long existed in India. The personal security of individuals is seriously threatened by this issue. Landowners on their individual or corporate properties arrested almost 2000 illegal trespassers in 2022, while many went unnoticed. Despite the expensive surveillance capabilities of the security agencies, certain remote and challenging terrains make human surveillance difficult and aerial surveillance expensive. Therefore, an effective solution is required. This innovative surveillance technological system offers to solves the drawbacks of traditional approaches, particularly in the isolated or difficult-to-reach areas. As a result, we have developed the Tx-Stream and Rx-Stream boards, which produce a special system that combines hardware and software to offer a comprehensive solution.On the Transmitter side, a decent quality video camera is connected to favor video capturing at any time of the day. The camera module clicks an image and sent it further to signal processing module for determining whether the image is stable or noisy. If the image is not noisy, it is then compressed, encrypted, segmented and encoded in the image processing module. This final data is then sent directly or indirectly to the receiver board based on the availability of the receiver board. Meanwhile, the receiver side receives the data from the transmitter board or the online server according to the algorithm. All the data is decoded and joined to obtain the complete data. This data is then decrypted and decompressed to form the original image. The image is then fed to the image enhancer, which increases the quality of the image. This enhanced image is displayed on the display screen on the receiver board. Another copy of the same image is then sent to the database to keep a record for future reference. To sum up, the suggested surveillance system successfully tackles the issues of unauthorized trespassing in isolated areas. The system ensures reliable and secure data transmission by utilizing the combined power of cutting-edge hardware and software. Secure online access to the images and the ability to record the frames for later use are made possible by the integration of cloud databases. This creative solution contributes to a safer environment by offering a cost-effective and forward-thinking approach to surveillance.

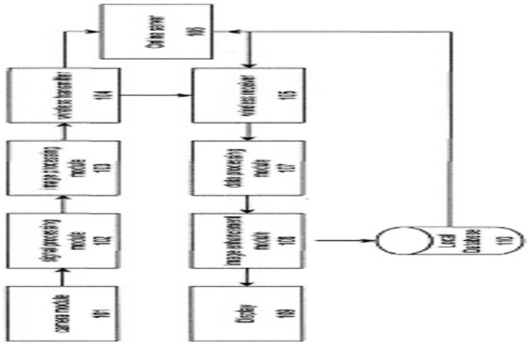

FIGURE 1 : System Block Diagram

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/05/2024
(21) Application No.202421037625 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : REVEALING A FALSE NARRATIVE ON SOCIAL MEDIA USING A MACHINE LEARNING: A NOVEL FRAMEWORK AGAINST THE MODERN WEAPON

(51) International classification	:G06N0020000000, G06N0003080000, G06F0040300000, G06Q0050000000, G06N0003040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The proposed system and method aim to tackle the pervasive issue of false narratives on social media platforms using advanced machine learning techniques. By collecting and analyzing textual content, multimedia elements, user interactions, and metadata from social media sources, the system preprocesses this data through tokenization, sentiment analysis, and normalization. Relevant features such as sentiment scores, linguistic patterns, user engagement metrics, and source credibility indicators are then extracted for classification. Using supervised learning methods, the system categorizes content into factual information, misleading content, propaganda, or false narratives. Validation mechanisms including cross-validation, anomaly detection, and human-in-the-loop verification ensure the accuracy of classifications. Real-time alerts and detailed reports are generated upon detecting false narratives, providing stakeholders with actionable insights to mitigate the spread of misinformation. This comprehensive approach, encompassing data collection, preprocessing, feature extraction, classification, validation, and reporting, represents a significant advancement in combating digital misinformation and safeguarding information integrity in the online realm.

No. of Pages : 18 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/05/2024
(21) Application No.202421036391 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FORMULATION & EVALUATION OF POLYHERBAL ANTI-ACNE CREAM.

(51) International classification :A61K36/61, A61K36/53, A61K36/899, A61K9/06, A61P17/10, A61Q17/04, A61Q19/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
It was concluded that the formulations Polyherbal Anti-acne cream exhibited moderate to highly SPF value, Anti-acne, Anti-fungal, Antiaging and Antitsyrosinase effects. The activities may be due to the synergistic antioxidant property of the herbal ingredients and components of cream formulation. It has been documented that the herbs used in the formulation also contributing antibiotic, skin healing, anti-inflammatory, hyaluronidase, elastase inhibition and collagen synthesis properties to the skin. These properties improve the efficiency of formulation in alleviating of the skin disorders. Percentage inhibition was taken as a measure of herbal cream antimicrobial activity. The formulations showed stable organoleptic features until the period of 3 months. In relation to the microbiology study, pH, consistency, skin irritation test, it can be observed that the herbal cream formulation showed to be no more alteration. This research focuses on skin acne with the aim of developing an effective and safe herbal cream using Melaleuca alternifoliya, Sativa rosemarinus & Cymbopogan citrus. Physical characterization and phytochemical (FT-IR Spectoscopy) testing of the oils have been carried out. Antimicrobial studies showed no detectable microbial contamination and demonstrated good areas of inhibition. Overall, this research report concludes that herbal cream formulation can provide effective and safe formulations leading to patient tolerance and treatment compliance.

No. of Pages : 16 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/05/2024

(21) Application No.202421038369 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN ANCHOR ENDOSSEOUS DENTAL IMPLANT

(51) International classification :A61C8/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to an anchor endosseous dental implant. This innovative implant features a unique mechanical member situated 2mm above the apex, measuring 2mm in length and 1mm in width, opening in three directions at 120 degrees for optimal engagement with surrounding bone. A surprising feature involves the use of a special long driver, applying a single twist to generate 8 to 10 N force, thereby opening slots in the lower one-third of the implant and achieving mechanical interlocking with the adjacent bone. The implant's targeted design aims to significantly enhance primary stability in areas of lower bone density. Its potential impact extends to reduced financial burdens for patients and practitioners, eliminating the need for additional ridge augmentation surgeries. The anchor endosseous dental implant emerges as a transformative solution, promising a new era in implant success, particularly in challenging bone conditions

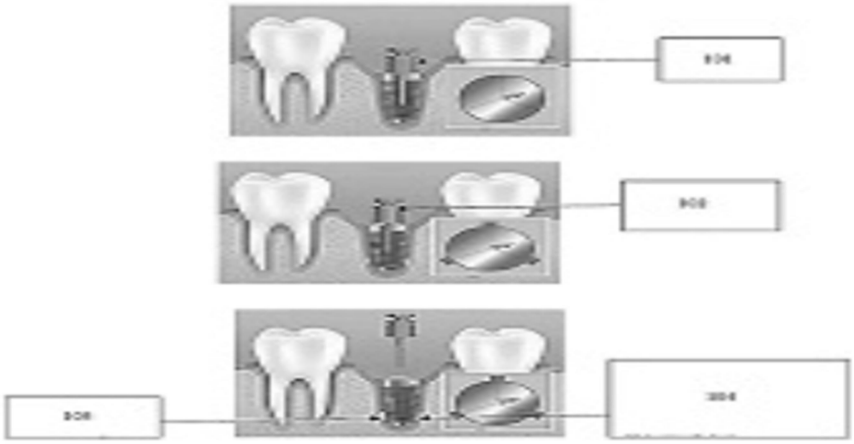

Figure 1

No. of Pages : 10 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/05/2024

(21) Application No.202421038370 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A LEAD APRON TROLLEY SYSTEM

(51) International classification :A47G25/00, A47G25/06, A61B50/13, A61G12/00, A61L2/26, B62B3/00, B62B5/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a lead apron trolley system. The invention a lead apron trolley presents a novel solution addressing the common issue of lead apron damage caused by folds, cracks, and inadequate support. Constructed entirely from stainless steel, the trolley features a horizontal support rail and vertical members, preventing folds and evenly distributing the weight of 0.5 mm lead equivalent lead aprons. A strategically positioned metal sheet maximizes contact with the lead apron, minimizing the risk of damage and ensuring uniform radiation shield support. The trolley's versatility allows for use in various medical settings, including Radiology, Cath lab, OT, CT, mammography rooms, and mobile mammography vans. Offering a cost-effective approach, this invention extends the lifespan of lead aprons, contributing to overall safety and economic efficiency in healthcare environments. The surprising simplicity and efficacy of the Lead Apron Trolley make it a valuable asset for medical institutions reliant on ionizing radiation protection.

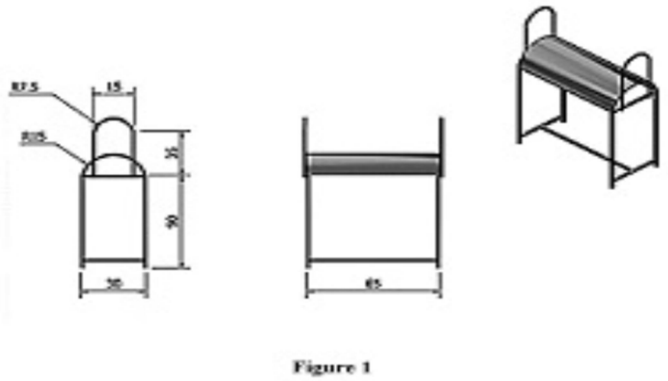

Figure 1

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/05/2024
(21) Application No.202421038371 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM FOR INTERNAL BIO-ENGINEERING OF FEMORAL HEAD

(51) International classification :A61B0017000000, A61B0017740000, A61F0002360000, A61B0017880000, A61B0017920000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a system for internal bio-engineering of femoral head presents an approach to address avascular necrosis comprehensively. The system for internal bio-engineering of femoral head (SIEF) integrates meticulously designed instruments, including a Guidewire for precise drilling, Graft Harvester Set for efficient core decompression, Head Tap Set for restoring femoral head shape, and Graft Impactor cum Slider Set for gentle graft placement. Emphasizing minimal surgical intervention and local graft harvesting, the system offers a holistic, minimally invasive solution for avascular necrosis management in stages 0 to 3. The surgical technique, guided by step-by-step instructions, ensures standardized application. Instruments are constructed from stainless steel alloy or titanium. This innovation aims to revolutionize femoral head preservation, providing optimal healing through biologics and addressing a critical need in avascular necrosis management.

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/05/2024

(21) Application No.202421038372 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A COPPER NANOPARTICLE GEL COMPOSITION

(51) International classification :B82Y30/00, A61K9/06, A61K33/34, A61P31/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention is related to a copper nanoparticle gel composition for the treatment of periodontal diseases. The gel, composed of CuNPs sourced from reliable suppliers, Carbopol 934 polymer, and preservatives, demonstrates promising physical properties such as a pH of 5.76, viscosity of 322.5 cPs, and 425% spreadability. Evaluation of its efficacy against periodontal pathogens including Aggregatibacter actinomycetemcomitans, Porphyromonas gingivalis, Fusobacterium nucleatum, Prevotella intermedia, and Tannerella forsythia reveals potent antimicrobial activity with minimum inhibitory concentrations ranging from 0.4-3.12 µg/ml. Furthermore, the gel exhibits high biocompatibility and cell viability against periodontal fibroblasts, ensuring safety for in vivo use. Time-kill assays confirm efficient eradication of pathogens at various intervals, while biofilm inhibition assays highlight its ability to prevent biofilm formation. Additionally, the gel demonstrates anti-inflammatory and antioxidant properties, enhancing its therapeutic potential.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/05/2024

(21) Application No.202421038374 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN AYURVEDIC TREATMENT APPARATUS FOR CARDIAC AND RESPIRATORY HEALTH

(51) International classification	:A61B5/08, A61B5/0205, A61B5/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is related to an ayurvedic treatment apparatus for cardiac and respiratory health. This invention introduces an approach to a medical pre-processing and main procedure, specifically designed for chest-related therapeutic or diagnostic applications. The pre-processing involves patient positioning, shaving if necessary, and the creation of a loop using a soft dough or a readymade acrylic brim, ensuring comfort and preventing leaks. The main procedure employs a warmed unctuous substance poured over the chest for a specified duration, maintaining a controlled temperature. The apparatus is ready-to-use, user-friendly, and made from a soft material to enhance skin comfort. Notably, it can be reused after proper cleaning, overcoming the limitations of traditional methods. This innovation eliminates the need for repetitive dough preparation, minimizes waste, and provides a cost-effective solution with broad applicability, ranging from heart diseases to abdominal discomfort

No. of Pages : 12 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/05/2024

(21) Application No.202421039493 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A NOVEL METHOD FOR IMPROVING THE NUTRIENT CONTENT OF A BLACK SOIL.

(51) International classification :C05F3/00, C05F9/00, C05F11/02, C05G3/80
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention provides a novel method for improving the nutrient content of a black a using horse waste, goat waste, domestic ash, kitchen waste and leaf litter. The most important substrate for a plant's growth and development is soil. Soil performs a variety of vital functions for an ecosystem. In addition to providing water as a reservoir to keep plants moist, the soil supports the roots of plants. The present invention aims to boost essential nutrients in black soil to improve plant growth, lower irrigation needs because of increased water retention, increase plant yields, and eliminate or significantly reduce pest attack. The ingredients used are black soil, horse waste, goat waste, domestic ash, kitchen waste and leaf litter in the proportion of 60:10:10:10:5:5

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/05/2024
(21) Application No.202421039805 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NEW MODEL FOR DIGITAL IMAGE STEGANALYSIS USING ADVANCED MACHINE LEARNING TECHNIQUE

(51) International classification	:G06N0003040000, G06T0001000000, G06N0003080000, G06K0009620000, G06N0003120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
NEW MODEL FOR DIGITAL IMAGE STEGANALAYSIS USING ADVANCED MACHINE LEARNING TECHNIQUE The increasing use of digital images for data concealment has heightened the need for 5 steganalysis techniques to detect hidden information. Traditional steganalysis methods often struggle to keep pace with the sophisticated embedding schemes used in modern steganography. In response, this research introduces a novel model for digital image steganalysis leveraging advanced machine learning techniques. Our model integrates deep learning architectures with enhanced feature extraction methods to improve detection accuracy 10 and robustness. We employ a convolutional neural network (CNN) as the backbone of our system, which is adept at capturing intricate patterns and anomalies indicative of steganographic content. To further enhance the model's performance, we incorporate a feature selection process using a genetic algorithm (GA) that optimizes the feature set by eliminating redundant and irrelevant data. This hybrid approach not only reduces computational complexity but also increases the sensitivity of the model to subtle embedding traces. The 15 training phase utilizes a large dataset of steganographic and non-steganographic images to ensure comprehensive learning and generalization. We also introduce an innovative loss function designed to penalize misclassifications more effectively, thereby refining the model's decision boundaries. Extensive experiments demonstrate that our proposed model outperform 20 existing state-of-the-art steganalysis techniques in terms of accuracy, precision, and recall. We validate the robustness of our model against various steganographic algorithms and embedding rates, confirming its versatility and adaptability.

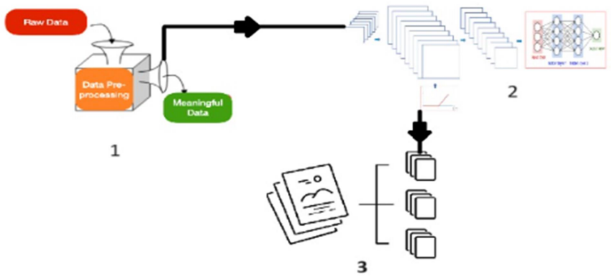

Figure 1

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/05/2024

(21) Application No.202421039913 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WEB3NEXUS - NEXTGEN WEB APP NETWORK.

(51) International classification	:H04W0028020000, H04W0080100000, G06Q0050100000, H04L0067020000, H04W0076150000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Web3 Nexus platform is a cutting-edge web application platform specifically designed for Web3 applications. Utilizing the transformative power of blockchain technology, it offers a secure, transparent, and decentralized environment for both users and developers. Key features include an IPFS file system for resilient and efficient decentralized data storage, a blockchain-based fund transfer application for secure and transparent transactions, a chat application for real-time communication and collaboration, and a comprehensive marketplace for discovering, downloading, and interacting with a wide array of decentralized applications (dApps) and Web3 services. By integrating these features, Web3Nexus overcomes the limitations of traditional centralized systems, establishing a new standard for digital application distribution. This platform has the potential to revolutionize the financial sector by facilitating secure and efficient peer-to-peer transactions, thereby enhancing financial inclusion and democratizing access to financial services. By fostering innovation and supporting the unique needs of decentralized applications, Web3Nexus paves the way for a more integrated, user-friendly, and equitable Web3 ecosystem.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/05/2024

(21) Application No.202421038813 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGNING, OPTIMIZATION AND EVALUATION OF MUCOADHESIVE BUCCAL FILMS FOR THE DELIVERY OF NICOTINE.

(51) International classification :A61K9/70, B82Y5/00, A61K31/4439, A61K47/10, A61K47/38, A61K47/56, A61K47/58
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The goal of the current study was to design and create a novel Nicotine Replacement Therapy form that may elicit a quick onset of action while also prolonging the duration of the pharmaceutical effect by sustained drug release from the formulation. The obtained drug sample of nicotine was characterized by UV spectroscopy at 260 nm and compared with the reported spectra. Optimization, the Box-Behnken design was chosen, which suggested 15 batches based on level factors determined through trials and literature review. As independent variables, the concentrations of carbopol 934, eudragit RLPO, and HPMC E15 were chosen. As response variables, swelling index, adhesion time, mucoadhesive strength, and cumulative % drug release at 5 to 360 min, were chosen. For each response variable, response surface graphs and contour plots were created and examined. Among various formulations suggested by the software, the formulation with maximum desirability was selected as the optimized formulation of mucoadhesive nicotine buccal film. Finally, the mucoadhesive nicotine buccal film was prepared and evaluated for surface pH, film weight and thickness, folding endurance, tensile strength, and extensibility, swelling index, adhesion time, mucoadhesive strength, drug content uniformity, in-vitro drug release, ex-vivo mucoadhesion time, and ex-vivo drug permeation. The pH of the optimized mucoadhesive nicotine buccal film was 7.54; the weight and thickness of the film were 1882.55 mg and 0.180 mm, respectively. The buccal film exhibited 540 folds of folding endurance. The mucoadhesive nicotine buccal film's tensile strength and extensibility were 87.20 N and 23.69 mm, respectively. The optimized film showed a swellingof 188.21%, and the adhesion time was assessed to be 7 h 45 min. It displayed a 0.2354 N mucoadhesive strength. The drug content of the film was found to be 96.13 %. An in-vitro drug release study showed that mucoadhesive nicotine buccal film had a cumulative % drug releaseof 3.34 % at 5 min and 76.55 % at 360 min. It was found that ex-vivo mucoadhesion time was 5 h 55 min. Ex-vivo drug permeation study was done for optimized mucoadhesive nicotine buccal film and lozenge. The flux of 0.0024 mg/cm2/h and 0.0016 mg/cm2/h were observed respectively. In summation, it can be concluded that mucoadhesive nicotine buccal film could be successfully designed and developed in the present studies for buccal drug delivery systems. To prove conclusively the reported clinical benefits of the proposed formulation, an in-vivo bioavailability study of the formulation would be required.

No. of Pages : 45 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/05/2024
(21) Application No.202421038823 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "A METHOD OF MULTIWALLED CARBON NANOTUBES/COPPER VANADATE OXIDE COATING FOR ENERGY STORAGE APPLICATION'

(51) International classification :B82Y30/00, B82Y40/00, C01B32/162, C01B32/158, B01J23/22, B01J23/76
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Present invention claims successive ionic layer adsorption and reaction (SILAR) chemical method for coating of large area multiwalled carbon nanotubes (MWCNT)/copper vanadate oxide (Cu3V2O8) on stainless steel substrate. The deposition of MWCNT/CU3V2O8 coating over stainless steel substrate was carried out using aqueous precursors solutions of MWCNT, copper nitrate trihydrate and ammonium metavanadate at the different SILAR cycles from 10 to 40 cycles. The X-ray diffraction and scanning electron microscopy analyses of MWCNT/Cu3V2O8 electrode showed monoclinic structure with highly porous nonoparticle morphology useful for energy storage application. The maximum specific capacitance of 913 F g1 measured at scan rate of 5 mV s-1 was obtained with 1 M NaClCO4 electrolyte based electrochemical supercapacitor.

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/05/2024
(21) Application No.202421039114 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD AND SYSTEM FOR REAL-TIME CYBERSECURITY RISK ASSESSMENT AND MANAGEMENT

(51) International classification :G06F0021570000, G06F0021550000, G06N0020000000, G06Q0010060000, H04L0067120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT METHOD AND SYSTEM FOR REAL-TIME CYBERSECURITY RISK ASSESSMENT AND MANAGEMENT The method for the development to new kinds of cyber dangers are brought forth by the Internet of Things (IoT). As a result, an evaluation of the IoT cyber security posture is necessary before integrating new IoT devices and services. This article's definition of security posture is an organization's ability to anticipate, stop, and respond to cyber security attacks. Cyber systems use distinct physical systems to assess security threats. The cyber system offers real-time vulnerability information that is integrated into networks and controllers for the purpose of conducting a cyber-assessment. Cyber security management for the Industrial Internet of Things takes into account ongoing risk monitoring. The deployment and configuration of security measures to reduce risk exposure to a manageable level is considered a recommended practice in cyber-risk management. It is crucial to evaluate risk assessments and adjust controls as needed since threats and known vulnerabilities are dynamic, and risk estimations are prone to numerous uncertainties.

FIG.1

No. of Pages : 14 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/05/2024
(21) Application No.202421039168 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ENHANCED FEATURE OPTIMIZATION FOR MULTICLASS INTRUSION DETECTION IN IOT FOG COMPUTING ENVIRONMENTS

(51) International classification	:G06K0009620000, G06F0021550000, G06N0020000000, G06N0020200000, H04L0067120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Enhanced Feature Optimization for Multiclass Intrusion Detection in IoT Fog Computing Environments Abstract: The present invention introduces a method and system for enhancing intrusion detection in IoT fog computing environments. Traditional security measures encounter limitations in decentralized fog computing setups, necessitating advanced approaches to address evolving security challenges. The proposed method, termed Multiclass Intrusion Detection (MCID), integrates behavioral, temporal, and anomaly features to construct a comprehensive feature space. Feature optimization is achieved through Support Vector Machine-Based Backward Feature Elimination (SVM-BFE), ensuring the selection of the most informative features while eliminating redundancy. Subsequently, a Random Forest algorithm is employed for multiclass classification, leveraging ensemble learning to improve classification accuracy across various intrusion types. The efficacy of the MCID model is demonstrated through extensive validation using 4-fold cross-validation, showcasing high precision rates, recall rates, and F-measures. This approach significantly enhances fog computing security, contributing to the robustness and reliability of intrusion detection systems in IoT environments.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :24/05/2024

(21) Application No.202421040473 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : "AN UNDERWATER REMOTELY OPERATED VEHICLE FOR STRUCTURAL HEALTH MONITORING (UROV-SHM).

(51) International classification	:G01M0005000000, A61B0005000000, B63G0008000000, B64D0045000000, G01N0029440000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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8)FERCINENT THOMAS
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(57) Abstract :
ABSTRACT The Underwater Remotely Operated Vehicle for Structural Health Monitoring (UROV-SHM) performs detailed underwater inspections and surveys of structures such as dams, tunnels, ship hulls, and bridge piers. It operates using either rechargeable batteries or can optionally receive power from the surface via a tether, providing flexibility and endurance. The UROV-SHM is equipped with advanced sensors to determine roll, pitch, yaw, and direction, allowing for precise orientation underwater. It features a high-resolution camera with auto iris and low light capabilities, capturing live video footage as the vehicle is remotely operated from the surface. A unique laser-based system illuminates target structures, enabling measurement of anomalies such as cracks in real¬time or through post-processing. The UROV-SHM also includes a dye dispensing mechanism to detect water leakage by observing the spread of dye near potential cracks in structures. Onboard Al and machine learning algorithms process video footage, enhancing quality and enabling object detection of trained targets such as marine species. Live video and sensor data are transmitted to a Ground Control Station (GCS) on the surface for monitoring, real-time display, and storage with timestamps for post¬processing. The UROV-SHM is driven by multiple electric thrusters for agile movement and features a motion controller for precise positioning and inspection. It can operate in position and depth hold modes, providing stable and detailed examinations of underwater structures. The UROV-SHM offers a comprehensive solution for underwater structural health monitoring, combining advanced technologies and intelligent systems for effective and efficient underwater inspections.

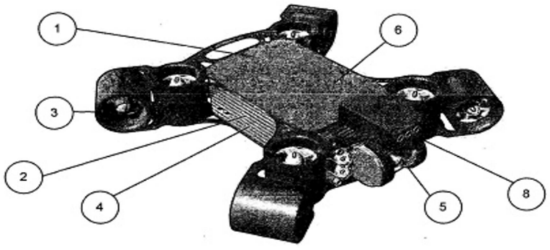

Figure 1 illustrates the UROV-SHM according to the present invention.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/05/2024
(21) Application No.202421037712 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SUPPLY CHAIN OPTIMIZATION MODEL: REVOLUTIONIZING RETAIL EFFICIENCY AND RESPONSIVENESS.

(51) International classification	:G06Q0010080000, G06Q0010060000, G06Q0030020000, G06Q0010040000, H02G0011000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention proposes a comprehensive approach to enhance the efficiency and responsiveness of retail supply chains, particularly in the dynamic Indian market. Recognizing the regulatory and structural hurdles impeding the growth of organized retail, the invention advocates for strategic legislative reforms and industry recognition to foster a conducive environment for retail development. Emphasizing the pivotal role of technology, the proposed model integrates advanced supply chain management tools such as VMI, CPRF, EDI, and RFID to ensure seamless information flow and transparency across channel members. Key recommendations include the adoption of direct manufacturer or regional distributor partnerships to streamline supply chains, centralized warehouses for cost efficiency, and automated inventory management facilitated by technology. Moreover, the model stresses the importance of strategic sourcing, emphasizing frequent communication, joint meetings, and performance appraisal for suppliers. By implementing these strategies, retailers can mitigate logistic challenges, optimize inventory levels, and improve overall supply chain performance, ultimately paving the way for sustainable growth and competitiveness in the retail sector.

No. of Pages : 8 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/05/2024
(21) Application No.202421038113 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MAINTAINING ITEMS' PRICELIST IN ECOMMERCE WEBSITE IS SIMPLER USING PRICES OF COMPONENTS/INGREDIENTS.

(51) International classification	:G06Q0030060000, G06Q0020120000, G06Q0030020000, H04W0028160000, G06Q0020380000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Along with allowing website owner (or sellers) to directly set the item price, if ecommerce website software calculates item price, using prices of ingredients / components, then, for website owner (or sellers), the task of maintaining prices on the ecommerce website will be less time consuming and less complicated.

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/05/2024

(21) Application No.202421040255 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : “PETGOGU: AN INNOVATIVE PET MONITORING AND CARE SYSTEM”

(51) International classification	:A01K0029000000, A61B0005000000, A01K0015020000, B64D0013060000, A61B0005110000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to protect the unique design and functionality of PetGogu. The further invention discloses a comprehensive pet monitoring and care system, encompassing features such as health tracking, activity monitoring, remote communication, and environmental control, aimed at enhancing the well-being and safety of pets while providing convenience and peace of mind to their owners.

No. of Pages : 10 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/05/2024
(21) Application No.202421041635 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ENGINEERED ORGANISM FOR UTILIZING SUCROSE

(51) International classification :C12N1/20, C12N9/10, C12N15/52, C12N15/74
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT ENGINEERED ORGANISM FOR UTILIZING SUCROSE The present disclosure relates to an engineered organism comprising at least one sucrose phosphorylase encoding gene; at least one sucrose permease encoding gene; and at least one phosphoglucomutase encoding gene, such that said engineered organism utilizes sucrose, wherein said engineered organism has = 90% homology to Cupriavidus genus. The present disclosure further relates to a method for carrying out fermentation using the engineered organism in the presence of sucrose, such that sucrose is utilized. [To be published with Figure 1]

No. of Pages : 34 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/05/2024

(21) Application No.202421040894 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : VARYING PISTON STROKE USING SLOTTED CRANKSHAFT MECHANISM FOR A RECIPROCATING PISTON-CYLINDER ARRANGEMENT A LIKE RECIPROCATING PUMP

(51) International classification :F04B49/12, F04B9/00, F16N13/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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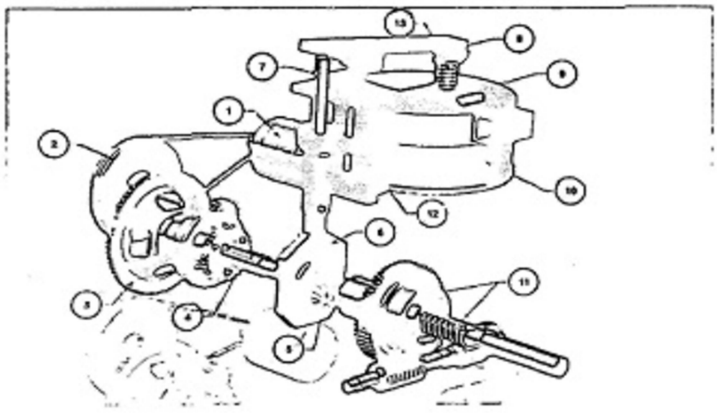
(57) Abstract :
The said invention is proposed the use of slotted crank lever which can vary the stroke of pump to enhance the volumetric efficiency of the single cylinder piston pump. The mechanism is responsible for converting the crank element's rotating motion into the output element's reciprocal output. The slotted crank lever's position determines the output's reciprocation stroke. Because the slotted crank lever is mounted on a slide arrangement that is connected to the worm and worm gear arrangement and spline shaft, its position can be adjusted. Therefore, by changing the position of eccentricity on slotted crank lever, the stroke can be adjusted. By changing the stroke discharge of fluid from pump can be controlled as per our requirement.



No. of Pages : 10 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/05/2024
(21) Application No.202421040956 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEVELOPMENT AND EVALUATION OF HERBAL OINTMENT FROM DIOSPYROS NIGRESCENS LEAVES FOR WOUND HEALING EFFECT

(51) International classification	:A61K36/44, A61K9/06, A61P17/02
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to the method of preparation of herbal ointment from Diospyros nigrescens leaves extract and the evaluation of its wound healing effect. The ointment base was prepared by polyethylene glycol 4000 (30 g) and polyethylene glycol 600 (70 g). The herbal ointment 5% and 10% were prepared by incorporating 5 g and 10 g of extract into 95 g and 90 g of base respectively. The prepared herbal ointment was evaluated for physical appearance, pH, spreadability, acute dermal toxicity and also for wound healing activity. It was observed that 10 % Diospyros nigrescens herbal ointment prepared from Diospyros nigrescens leaves exhibits no toxic symptoms in rats and the wound healing effect of both 5% and 10% Diospyros nigrescens herbal ointment was nearly comparable with the standard drug soframycin.

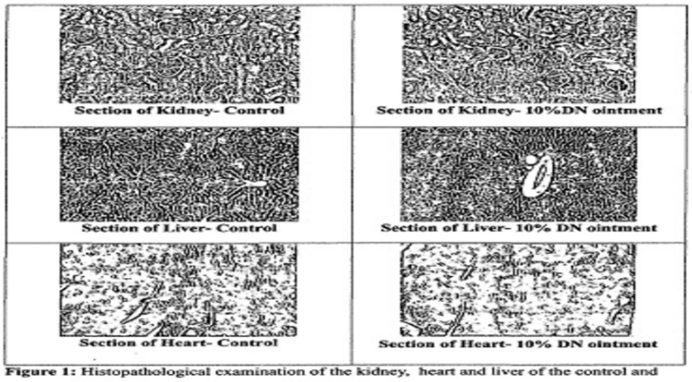

Figure 1: Histopathological examination of the kidney, heart and liver of the control and 10% *Diospyros nigrescens* herbal ointment group

No. of Pages : 22 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/05/2024
(21) Application No.202421040981 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN AI-DRIVEN ENVIRONMENTAL COMPLIANCE AND MONITORING SYSTEM

(51) International classification :G06Q0010060000, G06N0020000000, G06Q0050260000, G06N0003080000, G01N0033000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is an AI-driven environmental compliance and monitoring system (100), comprises a sensor network (102) utilizing IoT-enabled sensors for real-time monitoring of environmental parameters including air quality, water quality, soil contamination, noise levels, and greenhouse gas emissions. The system includes remote sensing capabilities (104) utilizing satellite imagery and drones equipped with advanced sensors for large-scale environmental monitoring including deforestation, land use changes, and ocean pollution. The system also includes machine learning module (106) for anomaly detection and predictive analytics to identify anomalies and forecast potential environmental issues based on historical and real-time data. The system also includes automated compliance (108) reporting functionality for generating compliance reports and recommending corrective actions to regulatory agencies. The system also includes a module for continuous updating of environmental regulations and standards (110) to ensure compliance checks are up-to-date.

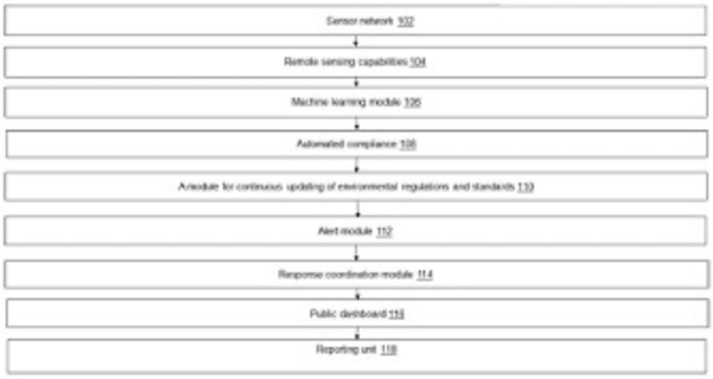

FIG. 1

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/06/2024
(21) Application No.202421042781 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HERBAL FORMULATION FOR RAPID WOUND HEALING

(51) International classification :A61K36/58, A61P31/04, A61P29/00, A61K9/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention shows a way to make an herbal wound healing formulation that is meant to help wounds heal faster and tissues grow back. Neem oil, cow butter, beeswax, and a water-based extract of Soymida fabrifuga bark are all in the mixture. This formulation has many benefits, such as reducing inflammation, and protecting cells from damage. The formulation is made using a fusion method, which lets different amounts of the bark extract be used to precisely measure doses. Preclinical studies show that it works and is safe, showing that it could be a natural wound healing option that focuses on the patient.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/05/2024
(21) Application No.202421040474 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "A MODULAR AUTONOMOUS SURFACE VEHICLE (M-ASV) FOR SURVEY.

(51) International classification :B63B0035000000, C11D0011000000, B60S0001080000, G01S0017870000, C02F0001420000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Modular Autonomous Surface Vehicle (M-ASV) is designed to efficiently carry out surveys of water bodies. It features collapsible hulls for easy transport to survey sites and streamlined launch and de-launch operations. Equipped with a collision avoidance system using visual data acquisition devices, LiDAR, and radar data, as well as Al and ML techniques, the M-ASV can identify and avoid obstacles during missions. The catamaran vessel includes rechargeable batteries and electric motors placed within the two hulls, with a central area for sensor mounting that minimizes disturbance during traversal. The vehicle supports underwater, water surface, and atmospheric data measurement and recording, transmitting real-time data to a Ground Control Station (GCS) for analysis. The M-ASVs controller unit manages path navigation, data collection, and transmission. It offers position hold capabilities, essential for precise data collection in dynamic water environments. The system's software displays the M-ASVs real-time data and health status, including battery condition and trajectory. The vessel Offers flexibility in mission planning and execution, allows for live monitoring of the survey progress and collected data, ensures data safety even in case of communication loss and facilitates adaptation for various survey applications including meteorology, hydrology

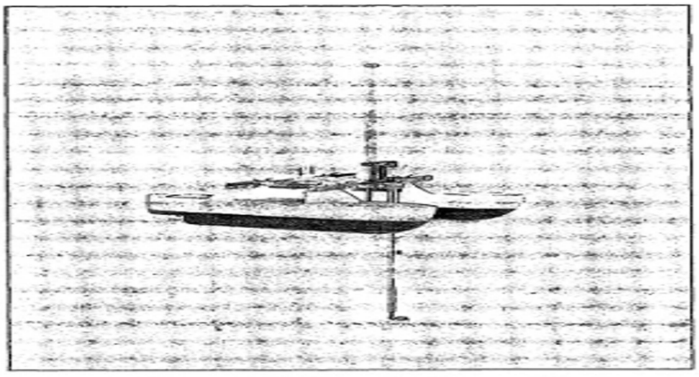

Figure 1 illustrates the M-ASV according to the present invention.

No. of Pages : 28 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/05/2024

(21) Application No.202421040832 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A POLYHERBAL FORMULATION

(51) International classification :A61K9/00, A61K36/81, A61K36/484, A61K36/906
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A polyherbal formulation comprising therapeutically and synergistically effective amounts of hydro-ethanolic extracts of Cuscuta species, Glycyrrhiza glabra, and Zingiber officinalis is disclosed. The hydro-ethanolic extract of Cuscuta reflexa is 35-45 wt.%, Glycyrrhiza glabra is 35-45 wt.%, and Zingiber officinalis is 15-25 wt.%. The extracts are derived from stem of Cuscuta species, root of Glycyrrhiza glabra, and rhizome of Zingiber officinalis through a process involving collection, solvent extraction, heating, concentrating, filtering, spray drying, pulverizing, and sieving. The formulation exhibits therapeutic and synergistic effects and can be formulated as capsules, syrup, spray, or gargles. The polyherbal formulation exhibits immunomodulatory activity and anti-viral properties against viral infections such as SARS-CoV-2 (the virus responsible for COVID-19) and H1N1 influenza virus

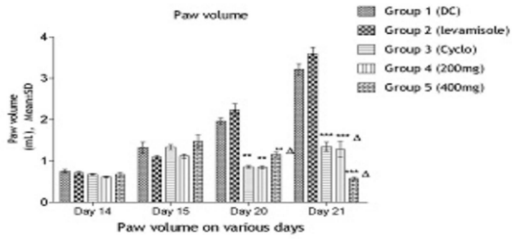

FIG. 1

No. of Pages : 29 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/05/2024

(21) Application No.202421042503 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AI-ENHANCED CHILD BEHAVIOR ANALYSIS DEVICE FOR IMPROVED ASSESSMENT AND INTERVENTION STRATEGIES.

(51) International classification :A61B5/02, G06V40/20, G09B5/08, G06N20/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: AI-Enhanced Child Behavior Analysis Device for Improved Assessment and Intervention Strategies This invention describes an AI-Enhanced Child Behavior Analysis Device that integrates high-resolution cameras, audio recording, biometric and environmental sensors, and a powerful central processing unit (CPU) equipped with advanced artificial intelligence (AI) algorithms. It captures and analyzes verbal and nonverbal cues, providing real-time data and actionable insights into a child's behavior. The touchscreen interface allows for easy interaction, customization, and detailed reporting, while the built-in adjustable stand ensures optimal positioning in various settings. By correlating visual, audio, and sensor data, the device identifies behavioral patterns and potential psychological issues, aiding professionals in developing effective intervention strategies. This invention revolutionizes the assessment and support of child behavior, enhancing educational and therapeutic outcomes

FIGURE – 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/05/2024

(21) Application No.202421041901 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MODELLING OF SOLAR DOME DESALINATION SYSTEM WITH HELIOSTAT ARRAY

(51) International classification :C02F0103080000, F24S0020200000, C02F0001140000, F24S0050200000, F24S0023700000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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6)Yennam Rajesh
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(57) Abstract :
This invention presents a novel solar desalination system that utilizes a solar dome and a strategically positioned heliostat array to achieve efficient water desalination. The system utilizes the various software tools throughout the design and operation process. AutoCAD software creates a precise 3D model of the dome and heliostat arrangement, while NASA Power software provides real-time solar energy data to optimize heliostat positioning for maximized solar capture. MATLAB software calculates solar flux and analyses solar radiation impacting the system. Finally, Microsoft Excel is used to model heat transfer within the dome and calculate water evaporation. A key aspect of this invention is the design of the solar dome, which facilitates natural convection heat transfer. The heliostat array features adjustable mirror positions and tilt angles, allowing for optimal sun tracking throughout the day. The software integration facilitates complete system design, performance modelling, and real-time data analysis. The optimum glass surface temperature of a solar dome desalination system is 133.08oC. Particularly, the system achieves an optimal solar convective energy value of 727 W/m2, which results in the evaporation of 897.31 gm of water at an average dome water temperature of approximately 63.5°C. This innovative solar desalination system offers a promising solution for efficient water desalination with a focus on maximizing solar energy absorption and minimizing heat loss.

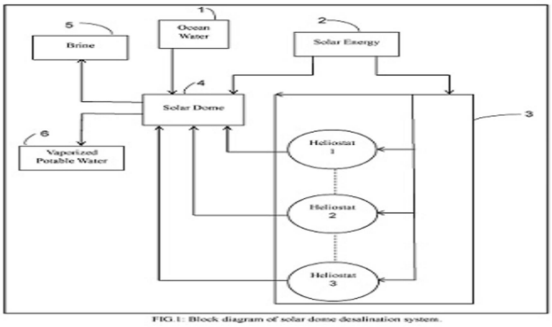

FIG.1: Block diagram of solar dome desalination system.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/06/2024

(21) Application No.202421043358 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : SELF-HEALING CONCRETE FORMULATION: ENHANCING INFRASTRUCTURE DURABILITY

(51) International classification :C04B28/04, C04B28/26, C04B32/02, C04B18/02, C04B28/04, C04B28/26, C04B32/02, C04B18/02

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to a self-healing concrete formulation designed to enhance the durability and longevity of concrete structures by autonomously repairing cracks. The formulation incorporates microcapsules containing healing agents such as sodium silicate, epoxy resin, or bio-based agents, which are evenly distributed throughout the concrete matrix. Upon crack formation, the microcapsules rupture, releasing the healing agent that reacts with moisture and other concrete components to seal the cracks effectively. This self-healing mechanism reduces maintenance costs and extends the service life of concrete structures, making the formulation suitable for a wide range of applications, including buildings, bridges, roads, and dams. The invention offers practical, scalable, and sustainable solutions for improving infrastructure resilience.

Fig. 1 A method for preparing a self-healing concrete formulation

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/06/2024

(21) Application No.202421043381 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A WAVE ENERGY CONVERSION DEVICE

(51) International classification :F03B13/18, F03B13/14
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed is wave energy conversion device (100) designed to efficiently harness the kinetic energy of ocean waves for electricity generation. The device comprises upstanding columnar elements (102) anchored to an ocean surface, each featuring a substrate plinth (102a) and a multiplicity of spaced elongate protrusions (102b). Suspended on the ocean surface are buoyant members (104), each comprising first (104a), second (104b), and third (104c) buoyant segments pivotably coupled to facilitate vertical motion. The buoyant members are received within the spaced elongate protrusions, constrained to move up and down guided by the columnar elements. Advantageously, this configuration allows for effective energy capture from wave motion while minimizing environmental disruption. The invention offers a sustainable solution for renewable energy production, optimizing efficiency while mitigating adverse impacts on aquatic ecosystems

No. of Pages : 46 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043751 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A MEDICATION DISPENSING ROBOT FOR PHARMACIES SYSTEM

(51) International classification :G06Q0010080000, G16H0020100000, G16H0020130000, A61J0007040000, G07F0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Disclosed herein is a medication dispensing robot for pharmacies system (100) comprises a robotic arms and dispensing module (102) configured to accurately count and dispense medications based on prescription orders. The system includes an integrated barcode scanners unit (104) programmed to verify medication orders against prescription labels, detecting discrepancies and alerting pharmacy staff to potential errors. The system also includes a real-time inventory management unit (106) monitoring medication stock levels and automatically replenishing inventory when levels are low. The system also includes a configurable software unit (108) enabling pharmacies to customize dispensing workflows according to their specific needs and preferences. The system also includes a patient-friendly packaging unit (110) to simplify medication management for patients. The system also includes a seamless integration (112) with pharmacy management software for receiving prescription orders and updating medication dispensing records in real-time.

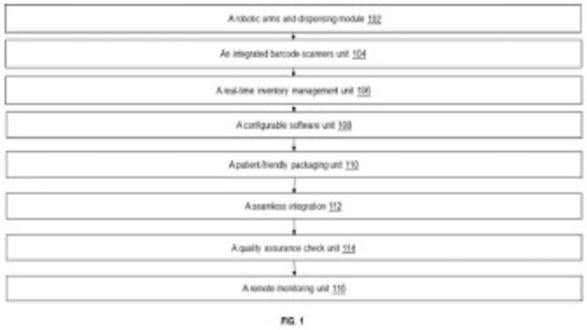

FIG. 1

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043752 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PERSONAL FINANCIAL HEALTH TRACKER SYSTEM

(51) International classification :G06Q0040020000, G06Q0040000000, G06Q0020100000, G06Q0010100000, G06Q0040060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a personal financial health tracker system (100) comprises an expense tracking module (102) configured to allow users to input and categorize their expenses either manually or automatically through bank account integration. The system also includes a budgeting tools module (104) enabling users to set personalized budgets for different expense categories and track their progress in real-time. The system also includes an income management module (106) providing tools for tracking income sources, including salaries, bonuses, investments, and other sources of revenue. The system also includes a debt management module (108) allowing users to input and monitor their outstanding debts, including loans, credit card balances, and mortgages, and offering strategies and calculators to help users manage debt repayment efficiently and reduce interest costs.

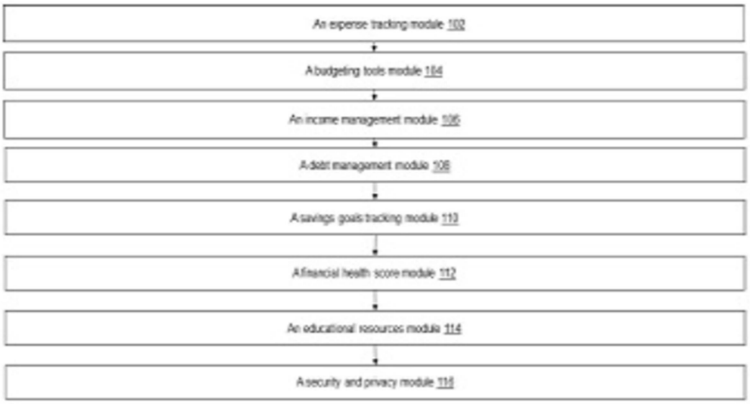

FIG. 1

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043753 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED MEDICATION DISPENSING SYSTEM AND METHOD THEREOF

(51) International classification :G06Q0010080000, G16H0020130000, G16H0020100000, G07F0017000000, A61J0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is an automated medication dispensing system and method thereof that comprises a plurality of robotic arms , a conveyor belt system, integrated barcode scanners. dispensing units adapted to handle various medication types based on identified medication needs, packaging modules configured to create customized medication packages as specified by prescription data, a labeling unit for applying medication information labels to each packaged medication, an inventory management system for tracking medication stock levels and generating alerts for low inventory to facilitate automatic replenishment, a user interface for configuring system settings, monitoring operations, and troubleshooting issues, a processor operatively coupled to all components, configured to Receive prescription data electronically. Control robotic arm movements for medication retrieval. Process scanned barcode data for medication verification. Manage dispensing units and operate packaging modules.

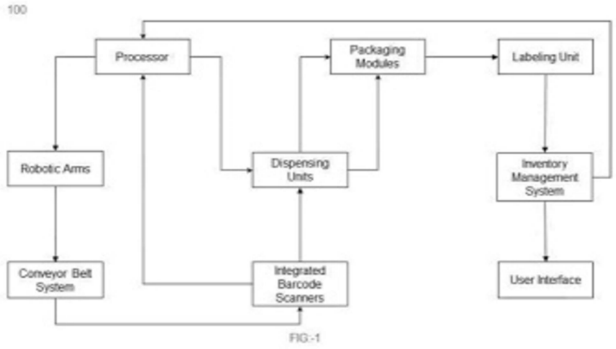

FIG.-1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/06/2024

(21) Application No.202421043175 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ROBOTIC RESTAURANT MANAGEMENT SYSTEM: DATA ANALYSIS, SLAM & VOICE ASSISTANT IMPLEMENTATION

(51) International classification	:B25J0011000000, G06Q0050120000, B25J0009160000, G06N0020000000, G05D0001020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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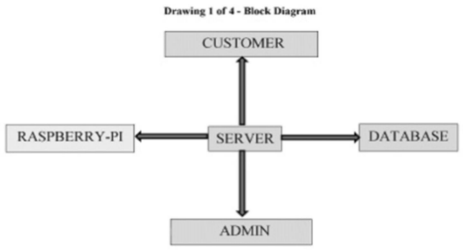
(57) Abstract :
The “Robotic Restaurant Management system: Data Analysis, SLAM & Voice Assistant implementation” prototype addresses on creating a solution for the hospitality industry. We developed the user interface (UI) and data analysis for autonomous robot guided by Localization and Mapping (SLAM) technology, capable of providing various hotel services. We designed a user-friendly interface for guests to interact with the robot, enabling requests and feedback. Additionally, we implement machine learning algorithms to analyze customer feedbacks, giving valuable insights to enhance services. Integration of these technologies with the Robot Operating System (ROS) ensures seamless communication within the system. A hotel service robot performs various useful tasks in the restaurant. Development of systematic user interface that can interact with the customers and provide services accordingly with minimum delays. The robot can deliver the required food items to the customer at respective table and provide payment service on same UI.



No. of Pages : 17 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/06/2024

(21) Application No.202421044116 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : MACHINE LEARNING-DRIVEN SMART PREDICTION FOR LIQUID FLOW SYSTEMS USING SOLAR ENERGY

(51) International classification	:G05B0013020000, G06N0020000000, G06N0003040000, G06N0005000000, G06N0005040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Forecasting the pace at which liquid flows in the process sector is a crucial issue that often requires a profound understanding of mathematics and physics. When dealing with intricate systems lacking this information, the integration of model-based prognostics and Artificial Intelligence (AI) may convert process control systems into intelligent systems. Prior studies have used conventional methods of intelligence, such as artificial neural networks (ANNs), fuzzy logic controllers, and adaptive fuzzy inference systems (ANFIS), to forecast the efficiency of liquid flow processes. Nevertheless, these approaches are constrained by the intricacy of the system, the amount of time required for calculation, and the risk of overfitting. This research introduces three machine learning regression models, namely Random Forest (RF), Decision Tree (DT), and Linear Regression (LR), for the purpose of predicting the flow rate of a process control system. A sophisticated process control system combines artificial intelligence, high-performance computers, advanced analytical techniques, and the industrial Internet of Things to effectively produce high-quality goods. The system utilises sensor networks and intelligent systems that are compatible with each other to monitor various process factors and obtain the most efficient output responses. Enhancing system dependability, minimising maintenance expenses, and achieving desired process outcomes are vital objectives. The paper showcases the use of machine learning models in liquid flow systems, emphasising its advantages in forecasting, efficient calculation, and decision-making. The integration of liquid flow process models with machine learning models improves efficiency and streamlines intricate, nonlinear systems. Modelling liquid flow in the process control sector include the estimate of parameters, the characterization of sensors, the consideration of model uncertainty, and the management of computing load. Different flow sensors are used based on the control process, with hot film anemometer flow sensors being often employed for medium liquid flow rates owing to their high level of accuracy and quick reaction time. Utilising artificial intelligence approaches for parametric optimisation is crucial in order to get the most optimum output variables. This study employs various intelligence approaches, metaheuristic algorithms, and bio-inspired optimisation methods to develop prediction models that are well-suited to experimental configurations. Some of the techniques used include fuzzy logic controllers, feedforward neural networks, and genetic algorithms. This study highlights the capacity of machine learning to transform process control systems by enhancing the accuracy of predictions and the efficiency of the system.

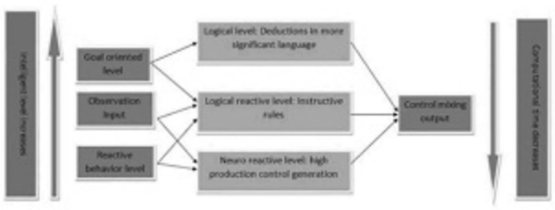

Fig 1: Intelligent Control Level in Process Control System

No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043754 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A MEDICATION ADHERENCE GAMIFICATION PLATFORM SYSTEM

(51) International classification :G06Q0030020000, G16H0020100000, G06Q0020400000, G16H0020600000, G16H0080000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a medication adherence gamification platform system (100) comprises an interactive games and challenges module (102) offering a variety of interactive games and challenges within the platform designed to incentivize and encourage medication adherence among users. The system also includes a personalized goal setting unit (104) allowing users to set personalized medication adherence goals within the platform and track their progress towards these goals. The system also includes a social connectivity unit (106) enabling users to connect with peers, friends, or family members for social support and accountability. The system also includes reward system integration unit (108) implementing a reward system that offers virtual rewards, badges, or points to users for adhering to their medication regimens. The system also includes a reminders and notifications unit (110) sending personalized reminders and notifications to users to prompt them to take their medications on time.

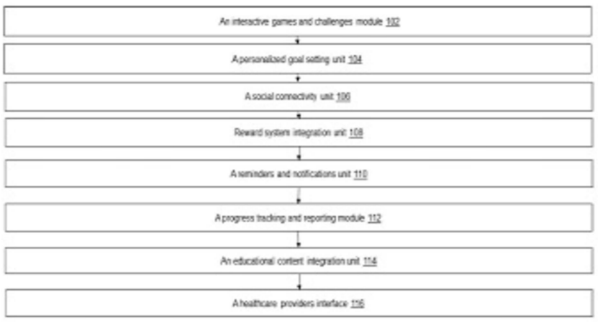

FIG. 1

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043755 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN IMMERSIVE VIRTUAL ANTHROPOLOGY FIELDWORK SIMULATION PLATFORM SYSTEM

(51) International classification :G06F0003010000, G06Q0010060000, G06Q0010100000, G09B0009000000, G06T0015000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is an immersive virtual anthropology fieldwork simulation platform system (100) comprises a virtual reality (VR) field sites (102) allowing users to explore accurately recreated virtual field site. The system includes an augmented reality (AR) unit (104) configured to provide additional information and interactive elements when users explore physical environments. The system also includes an AI-powered virtual inhabitant unit (106) featuring AI-driven virtual inhabitants who exhibit realistic behaviours, social interactions, and cultural practices. The system also includes a cultural artifacts unit (108) allowing users to examine and interact with detailed 3D models of cultural artifacts, tools, and structures. The system also includes a dynamic environmental simulation unit (110) changing environmental conditions, such as weather, seasons, and ecological changes. The system also includes a multidisciplinary integration unit (112) integrates data from various disciplines, such as archaeology, linguistics, sociology, and environmental science.

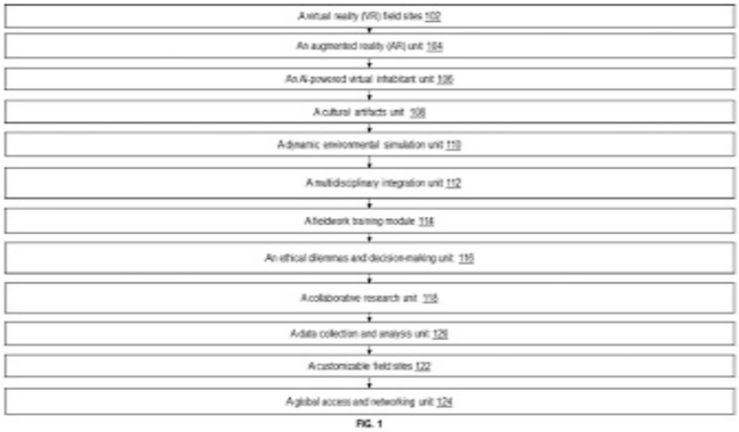

FIG. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043756 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PHARMACY MEDICATION FLAVOURING SYSTEM AND METHOD THEREOF

(51) International classification :G16H0020100000, G16H0010600000, A23L0027200000, G16H0020130000, A23L0002560000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a pharmacy medication flavouring system and method thereof (100) that comprises a flavor selection unit (102), allowing customization based on patient preferences. A dedicated mixing station (106) equipped with precision measuring tools and mixing devices ensures accurate and homogenous flavor incorporation. Stringent quality control measures (108) guarantee the safety and efficacy of flavored medications using pharmaceutical-grade flavoring agents. Clear labeling and proper packaging (110) maintain medication stability. Educational materials (112) promote the benefits of medication flavoring. This system addresses medication non-adherence, particularly in children and individuals with taste sensitivities, ultimately leading to improved patient health outcomes.

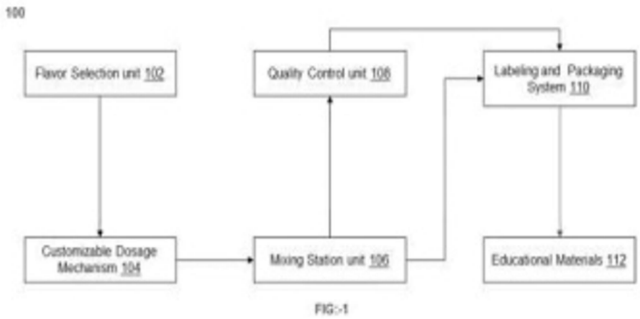

FIG:-1

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/06/2024

(21) Application No.202421044128 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : INTEGRATED SAFETY ALERT SYSTEM: BLIND SPOT DETECTION AND ACCIDENT ALERT IN BIKE

(51) International classification :G08G0001160000, G08G0001010000, B60Q0009000000, B60W0030080000, B60Q0005000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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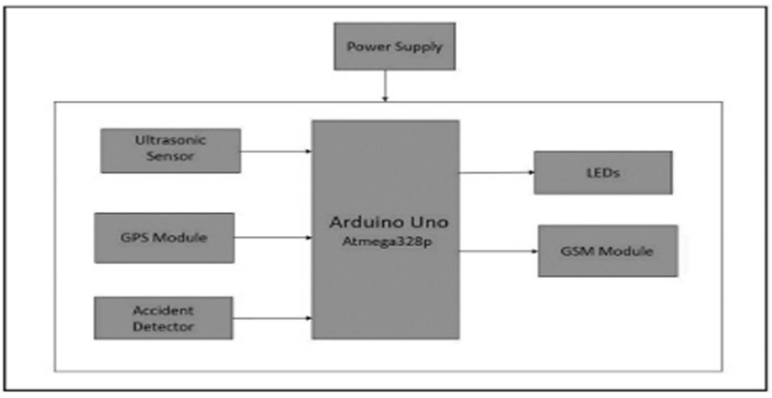
(57) Abstract :
As urbanization and traffic congestion continue to rise, ensuring the safety of bikers on the roads has become a paramount concern. This project introduces an innovative Integrated Safety Alert System designed to enhance the safety of bikers by addressing two critical aspects: Blind Spot Detection and Accident Alert. An Integrated Safety Alert System(ISAS) is a set of advanced safety technologies that aim to enhance the safety of vehicles and assist drivers in avoiding accidents. Blind Spot Detection (BSD) for two wheelers and Accident Alert are two crucial features of an ISAS. BSD helps drivers identify objects or vehicles outside their peripheral vision or blind spots using sensors. By using accident alert system when accident is detected system sends the location to mobile to avoid medical issue .In short, Accident alert technology to detect and notify emergency services in the event of an accident. These features can significantly reduce the risk of accidents and injuries, making an ISAS an essential component for modern-day vehicles. The Integrated Safety Alert System aims to provide bikers with an additional layer of protection, enhancing situational awareness and responsiveness on the road. By seamlessly integrating Blind Spot Detection and Accident Alert functionalities, this system offers a comprehensive safety solution for bikers, contributing to the overall goal of reducing motorcycle accidents and fatalities. The proposed system not only prioritizes the well-being of individual bikers but also aligns with broader efforts to create a safer and more sustainable transportation environment.

Drawing 1 of 4: Block diagram of Integrated Safety Alert System: Blind Spot detection and Accident Alert in bike



No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2024
(21) Application No.202421044141 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PEER-TO-PEER BOOK BORROWING PLATFORM

(51) International classification :G06Q0040020000, G06Q0050200000, A47B0041000000, B42C0015000000, G06Q0010100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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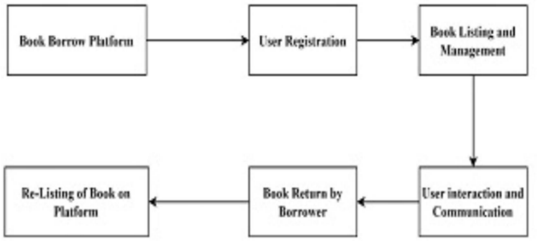
(57) Abstract :
It is a peer-to-peer book borrowing platform developed for our college community. This platform facilitates the seamless exchange of physical printed books among students, fostering a collaborative reading culture. Students can effortlessly list their available books on the platform with the aid of an integrated book database, eliminating the need for manual input of book details such as authors and ISBN. Once listed, these books become accessible to other students who can then message the owners expressing their interest in borrowing. Upon mutual agreement, borrowers and lenders can arrange to meet in person for book exchanges. The platform encourages face-to-face interactions, creating opportunities for students to connect over shared interests in literature. When the borrower finishes reading a book, they can arrange another meeting with the lender to return it. This feature ensures that the lending process remains dynamic and accessible to all students. In summary, it offers a user-friendly and efficient solution for students to share their books within the college community. This platform helps students to get expensive books easily and it also encourages book sharing culture among college students. This project aims to facilitate affordable access to expensive textbooks and literary works, it not only reduces financial burdens on students but also contributes to a more eco-friendly and cost-effective approach to education.

Drawing 1of 3: Algorithm / Work flow of Peer to Peer Book Borrowing Platform



No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/05/2024
(21) Application No.202421042504 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM FOR WILDLIFE CORRIDOR MONITORING AND MAPPING USING EXPLAINABLE ARTIFICIAL INTELLIGENCE (XAI) FOR BIODIVERSITY CONSERVATION

(51) International classification :A01K1/00, A01K29/00, G08B21/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: This invention describes an explainable AI system for wildlife corridor mapping that integrates machine learning and explainable artificial intelligence (XAI) techniques for biodiversity conservation. The system analyzes environmental factors such as topography, vegetation, water bodies, animal movements, and human activity to identify potential wildlife corridors. Unlike traditional AI models, this system provides human-understandable explanations for its predictions, enhancing trust and facilitating iterative model improvements. By employing feature importance weighting, it quantifies the significance of each factor in its decisions, ensuring fairness and transparency. The system supports informed decision-making by conservationists and land managers, enabling them to grasp the AI's logic and refine the model as needed. This novel approach balances accuracy with explainability, promoting effective and sustainable conservation practices. The integration of XAI principles in wildlife conservation marks a significant advancement, ensuring that critical wildlife corridors are identified accurately and fairly, thereby supporting biodiversity and ecosystem health.

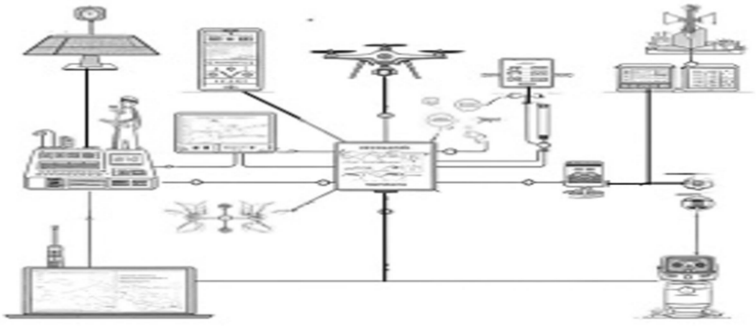

FIGURE – 1

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044582 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART DESIGN STRUCTURES FOR MULTISTOREY BUILDINGS TO PREVENT THE COLLAPSE OF THE NATURAL DISASTERS

(51) International classification	:E04H0009020000, A61B0005145000, E04H0009140000, G01M0005000000, A61B0005020500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The design of multistorey buildings to withstand natural disasters is crucial for safeguarding lives and property. This study explores innovative smart design structures that enhance the resilience of high-rise buildings against seismic events, hurricanes, and floods. By integrating advanced materials, energy-absorbing devices, and real-time monitoring systems, the proposed designs aim to prevent structural collapse during extreme conditions. Key features include adaptive foundations, dampers, and intelligent building skins that respond dynamically to environmental stresses. The incorporation of IoT-based sensors allows for continuous health monitoring and predictive maintenance, ensuring structural integrity over time. Additionally, the use of sustainable construction practices and materials enhances the environmental compatibility of these buildings. This comprehensive approach not only improves safety but also promotes sustainability, offering a robust solution for modern urban architecture in disaster-prone areas.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/06/2024
(21) Application No.202421044596 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NOVEL DYE FOR THE IDENTIFICATION OF BIOFILM AND STAINING METHOD THEREOF

(51) International classification :C12Q1/04, G01N1/30, C09B17/02, C09B11/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
NOVEL DYE FOR THE IDENTIFICATION OF BIOFILM AND STAINING METHOD THEREOF The present invention discloses a novel dye comprising safranine and crystal violet for optimized staining and identification of the biofilms. The novel dye comprises 2 mg/L to 10 mg/L of each of the safranine and crystal violet in 1:1 ratio. The invention also discloses a method of fixing a biofilm, and a staining method for a biofilm, using the novel dye. Fig. 1

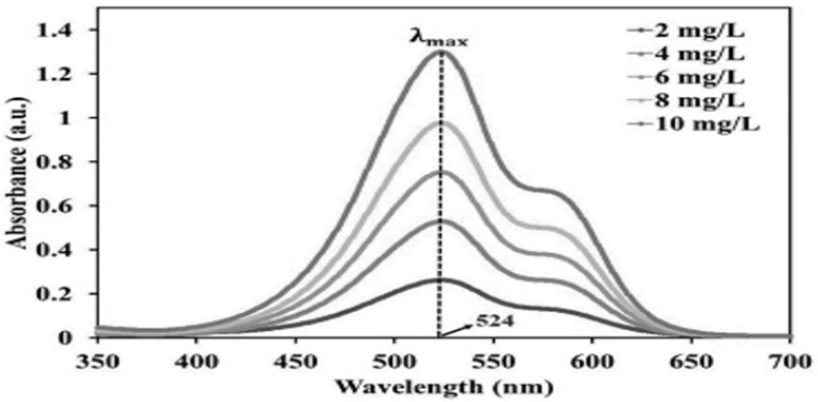

FIGURE 1

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024

(21) Application No.202421044620 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN AI-ENHANCED PERSONALIZED PHARMACOKINETICS PLATFORM (AIPP) SYSTEM

(51) International classification	:A61B0005000000, A61B0005024000, G01N0033500000, G16H0020100000, G16H0010600000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is an AI-Enhanced Personalized Pharmacokinetics Platform (AIPP) System (100) comprises a personalized drug metabolism profiling module (102) configured to analyze genetic, phenotypic, and metabolic data to create a personalized drug metabolism profile for each patient. The system includes an AI-powered predictive modelling module (104) employing advanced AI algorithms to predict the absorption, distribution, metabolism, and excretion (ADME) of different drugs in individual patients based on their unique biological data. The system also includes a real-time monitoring and feedback module (106) integrated with wearable devices and IoT sensors to monitor patients' physiological parameters in real time, providing continuous feedback on drug levels and therapeutic responses. The system also includes a dynamic dosage adjustment module (108) configured to dynamically adjust drug dosages based on real-time data and predictive models.

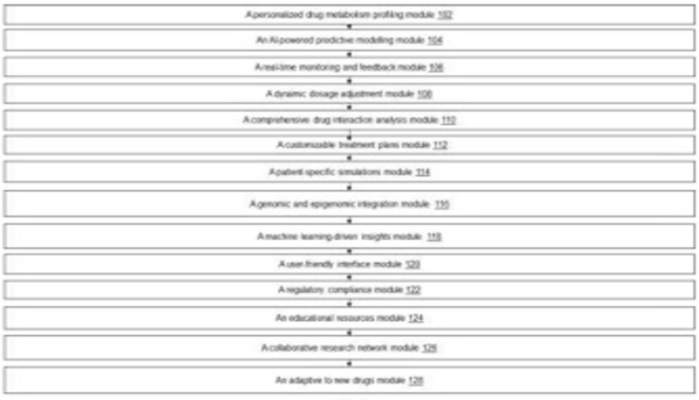

FIG. 1

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/06/2024

(21) Application No.202421043382 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : HAND DRAWING TO GENERATIVE AI IMAGES USING NEURAL CELLULAR AUTOMATA

(51) International classification :G06T0011000000, G06T0011200000, G06N0003040000, G06N0020000000, G06T0011600000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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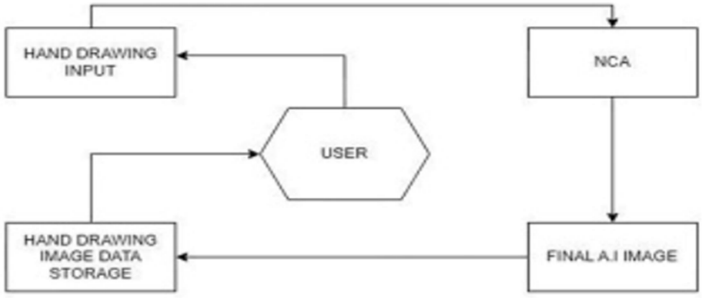
(57) Abstract :
The "Hand Drawing to Generative AI Images using Neural Cellular Automata" project presents an innovative fusion of traditional hand-drawn art and advanced artificial intelligence techniques. This research focuses on harnessing the capabilities of Neural Cellular Automata (NCA) to transform hand-drawn sketches and drawings into intricate and dynamic generative AI images. The NCA model analyzes the input drawings, capturing patterns, shapes, and textures, and employs iterative processes to generate new images that preserve the unique artistic style and essence of the original creations. This approach offers a novel solution for artists, designers, and creators to automate the generation of complex and visually appealing digital artworks, opening up new avenues for artistic exploration, creativity, and application in various domains such as digital art creation, graphic design, entertainment, and media production. The project aims to revolutionize the way artists interact with and leverage AI technologies, bridging the gap between traditional art forms and modern computational methods to inspire new forms of artistic expression and visual storytelling.



DFD LEVEL 0

FIGURE 1:- UPLOADING OF DRAWING & GENERATIVE A.I IMAGE

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/06/2024
(21) Application No.202421043430 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SULFUR COMPOSITION

(51) International classification :C08L71/02, C08L41/00, C08L81/00, C08L21/00, C08K3/06, C08L7/00, C08K3/18
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention introduces a sulfur composition designed to enhance dispersibility and quality of the rubber product and the rubber composition. Comprising finely ground sulfur, magnesium carbonate, and ethylene glycol polymer, the composition is meticulously formulated to achieve optimal dispersion. The resulting product demonstrates superior dispersibility within rubber matrices, minimizing defects such as blisters and black spots in rubber products. This innovation represents a significant advancement in rubber processing, improving the performance and durability of rubber goods.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/06/2024
(21) Application No.202421043656 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "A DENTAL GEL FORMULATION AND PREPARATION METHOD THEREOF"

(51) International classification :A61Q11/00, B82Y30/00, B82Y5/00, A61K8/02, A61K6/15, A61K6/75, A61K47/10, A61K8/66
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT "A DENTAL GEL FORMULATION AND PREPARATION METHOD THEREOF" The present invention relates to a dental gel formulation for the treatment of periodontitis. The dental gel formulation comprising banana peel pectin with bromelain doped hydroxyapatite (HAp) nanoparticles. The invention further describes the method of preparation of dental gel formulation.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043748 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HISTORICAL DOCUMENT DIGITIZATION SYSTEM AND METHOD THEREOF

(51) International classification :G06F0040284000, G06F0040300000, G06Q0050060000, G10L0015180000, G06F0040580000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a Historical Document Digitization System (100) which comprises a microcontroller (102) associated with a processing unit (104). The system (100) also includes the processing unit (104) connected with a storage assembly (106). The system (100) also includes the storage assembly (106) associated with communication network (108) which further connected with an optical character recognition (OCR) module (110), a natural language processing (NLP) module (112), a geographical information system (GIS) module (114), a network analysis module (116), a predictive modeling module (118), a translation module (120), an image analysis module (122), a narrative reconstruction module (124). Further microcontroller (102) includes the optical character recognition (OCR) module (110) connected with the communication network (108). The Microcontroller (102) also includes the natural language processing (NLP) module (112) connected with the communication network (108) and the optical character recognition (OCR) module (110).

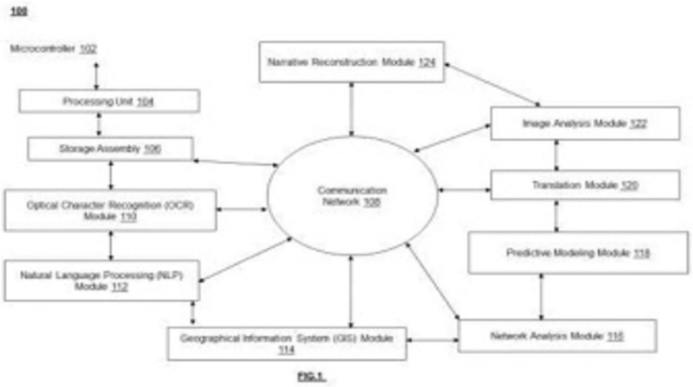

FIG 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043757 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A MEDICATION REMINDER LAMP SYSTEM

(51) International classification :F21S0006000000, A61J0007040000, H04W0004800000, G06F0003010000, H04L0012280000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a medication reminder lamp system (100) comprises a lamp unit (102) configured to serve as a functional nightstand or desk lamp. The system includes a visual reminder display (104) incorporating an LED panel or projection system to alert users when it is time to take their medications by displaying text, symbols, or animations related to medication reminders. The system also includes adjustable lighting unit (106) that provide ambient lighting. The system also includes a connectivity module (108) configured to connect to a smartphone application via Bluetooth or Wi-Fi, enabling the synchronization of medication reminders with the user's medication schedule. The system also includes a mobile application (110) configured to allow users to set personalized medication reminders specifying the time and frequency of the reminders. The system also includes integration unit (112) with home automation systems allowing users to control medication reminders.
Disclosed herein is a medication reminder lamp system (100) comprises a lamp unit (102) configured to serve as a functional nightstand or desk lamp. The system includes a visual reminder display (104) incorporating an LED panel or projection system to alert users when it is time to take their medications by displaying text, symbols, or animations related to medication reminders. The system also includes adjustable lighting unit (106) that provide ambient lighting. The system also includes a connectivity module (108) configured to connect to a smartphone application via Bluetooth or Wi-Fi, enabling the synchronization of medication reminders with the user's medication schedule. The system also includes a mobile application (110) configured to allow users to set personalized medication reminders specifying the time and frequency of the reminders. The system also includes integration unit (112) with home automation systems allowing users to control medication reminders.

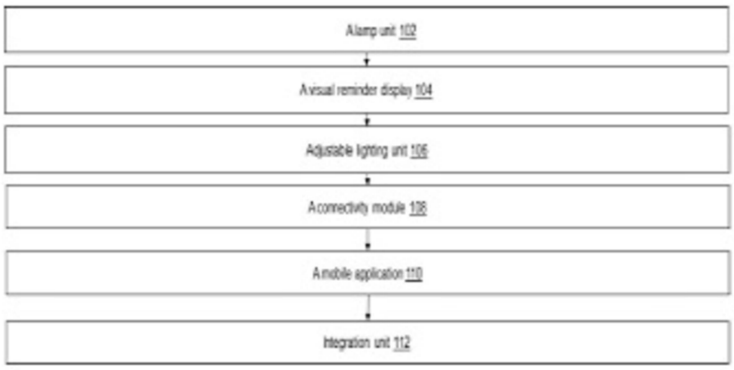

FIG. 1

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043758 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MEDICATION DELIVERY TEMPERATURE TRACKING SYSTEM AND METHOD THEREOF

(51) International classification	:G16H0040670000, H04W0004800000, G06F0001200000, A61B0005000000, A61B0005010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a medication delivery temperature tracking system and method thereof (100) that comprises a plurality of temperature sensors (104) embedded within packaging or containers of medications, said sensors configured to continuously monitor temperature of the medications and provide real-time data, a wireless communication module (102) integrated with the packaging or containers, adapted to transmit the real-time temperature data to a centralized monitoring system (106), a data processing unit (108) within the centralized monitoring system 106, configured to receive the real-time temperature data from the wireless communication module (102), compare the received temperature data with predefined temperature thresholds for the medications, generate alerts when the temperature data deviates from the predefined temperature thresholds, a user interface (110) associated with the centralized monitoring system (106), configured to display the real-time temperature data for the medications, provide access to historical temperature data for the medications.

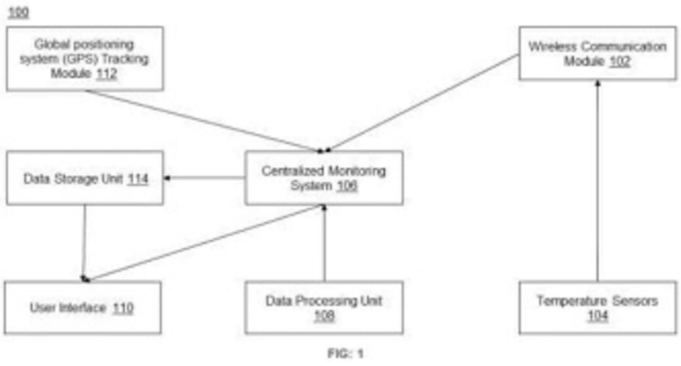

FIG: 1

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043759 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TRANSFORMER HEALTH SURVEILLANCE & PRODUCTIVE LIFE EXPECTANCY

(51) International classification :G16Y10/35, G16Y40/10, G05B23/02, H02J13/00, G08C17/02, G01R31/62, H04W4/38
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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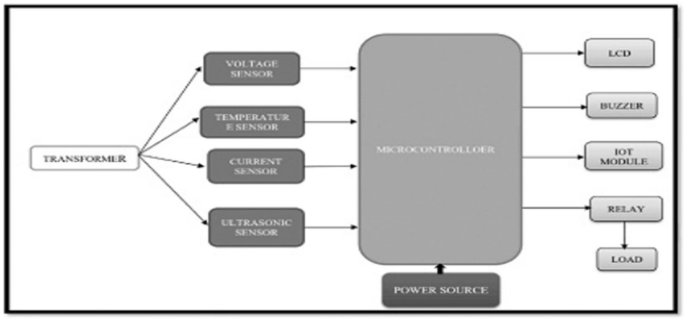
(57) Abstract :
A recent huge interest in machine-machine communication is known as the Internet of Things (IOT), to allow the possibility for autonomous devices to use Internet for exchanging the data. This work presents design and execution of real time monitoring and fault detection of transformer and record key operation indictors of a dispersion transformer oil and encompassing temperatures. They have to look at it continuously by using this project it can minimize working efforts and improve accuracy, stability, efficiency in this project, sensors are used to sense the main parameters of equipment such as temperature and oil level this sensed data is sent to microcontroller and this controller checks parameter limits which further send to the. IOT web server Adafruit software using Wi-Fi module of these data makes sure the right information is in hand to the operator and operator can make useful decisions before any catastrophic failure on basis of that data of parameters. Distribution companies have a strong competition among them to provide reliable power at a low cost. As per reports, maintenance as well as replacement of transformers is found to be an expensive exercise for all companies. Keeping this factor in mind, IoT based distribution transformer monitoring system is developed in this work to monitor health conditions of distribution transformers on regular intervals. Health index is determined on the basis of change in voltage, temperature variations and load ability, which are measured using sensors. Arduino has been selected as the processor for the sensed data while. Thing Speak has been selected as the IoT platform. This low cost system can be installed in transformer at any location to get monitored remotely, which not only determines health condition but also is helpful in predicting its life span as well.

Drawing 1of 2: Proposed Block Diagram of Transformer Health Surveillance & Productive Life Expectancy



No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044621 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN AI-ENHANCED REAL-TIME GLOBAL ENVIRONMENTAL MONITORING AND PREDICTION SYSTEM

(51) International classification	:G06F0009540000, G01W0001100000, H04L0067120000, G08B0031000000, H04L0041147000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is an AI-enhanced real-time global environmental monitoring and prediction system (100) comprises a global real-time monitoring unit (102) configured to integrate data from satellites, drones, and ground-based IoT sensors to monitor environmental parameters. The system includes an AI-powered predictive analytics unit (104) utilizing advanced AI algorithms to analyze historical and real-time data to predict environmental changes and natural disasters with high accuracy. The system also includes a dynamic environmental model unit (106) featuring customizable models that simulate various environmental processes and interactions for detailed insights into local and global environmental systems. The system also includes a climate change tracking unit (108) equipped with tools for tracking and analyzing climate change indicators.

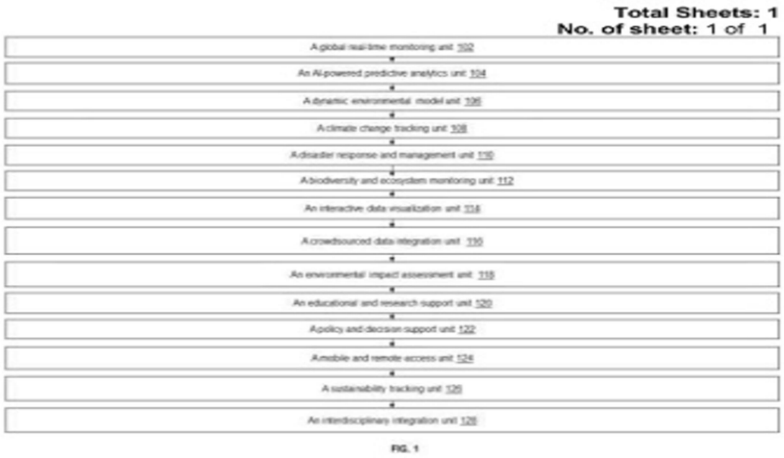

FIG. 1

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044622 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN EDUCATIONAL PROGRAM PLANNING AND EVALUATION SYSTEM

(51) International classification	:G06Q0010060000, G06Q0010100000, G06N0005020000, G06F0009500000, G06Q0010040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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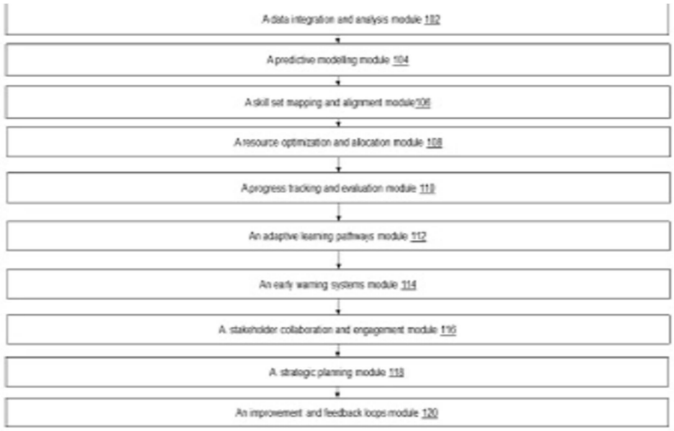
(57) Abstract :
Disclosed herein is an educational program planning and evaluation system (100) comprises a data integration and analysis module (102) configured to integrate data from various sources. The system includes a predictive modelling module (104) configured to employ predictive modelling techniques to forecast future demand for educational initiatives and activities based on historical data trends. The system also includes a skill set mapping and alignment module (106) configured to facilitate the mapping of educational initiatives to specific skill sets or learning outcomes defined by institutional goals or accreditation standards. The system also includes a resource optimization and allocation module (108) configured to optimize resource allocation by identifying areas of need and prioritizing initiatives based on predicted demand and available resources. The system also includes a progress tracking and evaluation module (110) configured to track the progress of educational programs in real-time.



No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044623 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A CULTURAL HERITAGE INFORMATIVE SYSTEM

(51) International classification	:H04W0004029000, H04W0004020000, G06Q0020320000, H04W0004021000, A47G0033000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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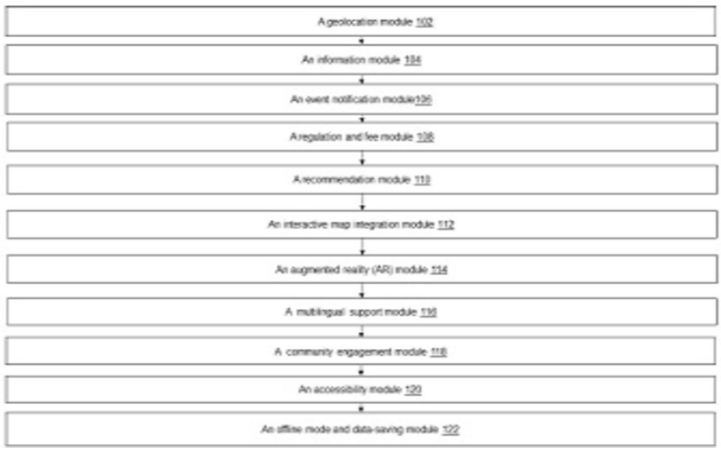
(57) Abstract :
Disclosed herein is a cultural heritage informative system (100) comprises a geolocation module (102) configured to detect the geographic location of a user and generate a pop-up message on the user's mobile device or nearby display when the user is in the vicinity of a religious place or historical site. The system includes an information module (104) configured to provide contextually relevant information in response to the pop-up message, including the significance, historical background, architectural features, and cultural importance of the religious place or historical site. The system also includes an event notification module (106) configured to deliver real-time notifications about special occasions, ceremonies, cultural events, festivals, exhibitions, and guided tours occurring at the religious place or historical site. The system also includes a regulation and fee module (108) configured to display details regarding entry fees, visiting hours, rules, and regulations applicable to the religious place or historical site.



No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2024

(21) Application No.202421044147 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : RF-BASED INTELLIGENT TOLL COLLECTION AND ROAD SAFETY MONITORING SYSTEM

(51) International classification	:G07B0015060000, G07C0005080000, G07C0005000000, E01F0015040000, G06Q0030020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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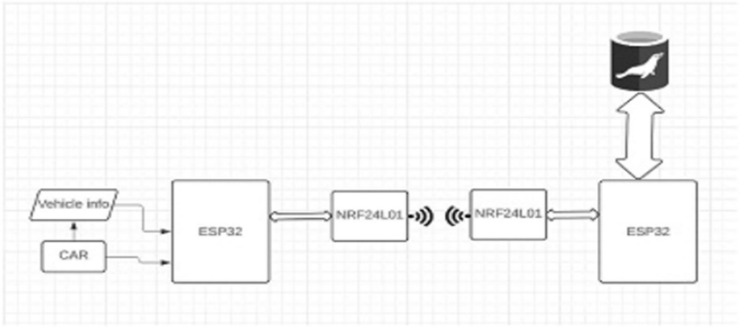
(57) Abstract :
The RF-Based Toll Collection and Road Safety Monitoring System employs Radio Frequency (RF) technology to streamline toll collection, capturing vehicle numbers as they pass through RF receiver areas for fast and convenient toll processing. This data is securely uploaded to the cloud for storage, analysis, and sharing with road authorities. Additionally, the system integrates advanced features to monitor vehicle speed and seatbelt engagement status in real-time, providing valuable insights into driving behaviors and compliance with road safety regulations. The system's primary objective is to enhance road safety by providing road authorities with actionable insights and real-time monitoring capabilities. By analyzing the collected data, road authorities can identify and address unsafe driving behaviors effectively, promoting safer driving habits and reducing the incidence of road accidents. With its cost-effective, scalable design, the RF-Based Toll Collection and Road Safety Monitoring System sets a new standard for intelligent transportation systems, combining toll collection efficiency with road safety monitoring to improve traffic flow and safety on highways.

Drawing 1 of 4: Block diagram of RF-Based Intelligent Toll Collection and Road Safety Monitoring System



No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2024
(21) Application No.202421044214 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTIVE QUALITY CONTROL SYSTEM IN MANUFACTURING PROCESSES UTILIZING AI ALGORITHMS

(51) International classification	:G06N0020000000, G06F0016230000, G05B0013020000, G06Q0010060000, H04M0003510000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An adaptive quality control system for manufacturing processes utilizes AI algorithms to enhance product quality in real-time. Traditional quality control methods often struggle to adapt to varying production conditions, leading to increased waste and variability in product quality. The present invention integrates AI algorithms, including machine learning models, to continuously monitor and adjust manufacturing parameters based on real-time data from sensor networks. The system predicts potential quality deviations and automatically adjusts production parameters to maintain consistent quality levels. By leveraging AI-driven adaptive control mechanisms, the system reduces defects, improves production yield, and optimizes resource usage. This patent discloses a scalable solution applicable to diverse manufacturing environments, ensuring higher efficiency and quality outcomes. Accompanied Drawing [FIGS. 1-2]

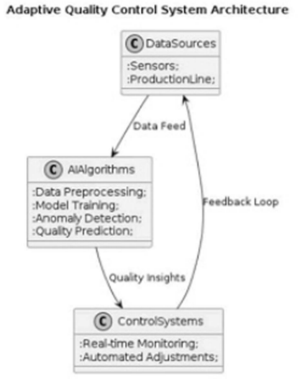

Fig. 1

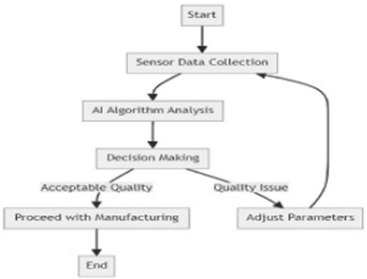

Fig. 2

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2024
(21) Application No.202421044399 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLIGENT MARATHI LANGUAGE LEARNING PLATFORM WITH ADAPTIVE FEEDBACK

(51) International classification	:G09B0019060000, G09B0007000000, G09B0005060000, G09B0007020000, G09B0019040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides a smart Marathi Language Learning Portal using the latest Artificial intelligence (AI) along with Machine Learning (ML) techniques to provide a personalized and adaptive learning approach. The platform was created to circumvent the constraints of traditional language-learning methods and features a responsive and customizable environment that immediately reacts to the personal progress and needs of the learner. The adaptive learning engine in this software evaluates user performance, adjusting the difficulty of exercises each user gets for a personalized learning experience. One of the central features of the platform is their sophisticated speech recognition technology which provides real-time feedback on pronunciation, allowing users to practice proper speech. The platform embeds contextual and cultural aspects in its curriculum, providing exercises that depict situations people might encounter and cultural idiosyncrasies unique to Marathi-speaking geography. It helps in the retention of the language and in cultural sensitivity as well. It is the most user-friendly and flexible courses are designed and made available on this platform that caters to all age group ranging from students to professionals to language lovers. Detailed reports let educators closely monitor progress, make informed choices to better enhance learning strategies. Quizzes, Games, and Practice Exercised make the learning process interactive and fun. Social Learning Support with Collab feature to help the community feel the joined hands including discussion forum, group exercise. This platform is cloud-based and it makes it scalable, reliable, and cost-effective. By leveraging state of the art AI & ML technologies and complementing it with culturally contextual and hyper-personalized learning, this groundbreaking approach to Marathi language education is poised to drive the next generation of language proficiency and Marathi-love!.

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/06/2024
(21) Application No.202421044423 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "NANO-ENHANCED HYDROPHOBIC COATING WITH ZNO/TIO2 NANOPARTICLES FOR PRESERVING HISTORICAL BUILDING MATERIALS"

(51) International classification :B82Y30/00, B82Y40/00, C01G9/02, C01G23/047, B82Y30/00, B82Y40/00, C01G9/02, C01G23/047
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a novel hydrophobic coating comprising a nanocomposite for the preservation and protection of historical building materials, particularly bricks and sandstone used in ancient monuments. The hydrophobic coating is designed to mitigate the detrimental effects of atmospheric pollution, climatic factors, and urbanization on historical sites, thereby ensuring their longevity and structural integrity. The hydrophobic coating is developed using a commercial product, SILRES® BS-290, which is a solvent-less silicone concentrate based on a mixture of silane and siloxane products. Additionally, zinc oxide (ZnO) and titanium dioxide (TiO2) nanoparticles are incorporated into the SILRES® BS-290 to enhance its protective properties.The method of preparation involves dispersing ZnO and TiO2 nanoparticles in SILRES® BS-290 in varying concentrations (2%, 3%, and 4%) through rigorous stirring and ultrasonication. The resulting hydrophobic coating is applied to prismatic sandstone and brick specimens obtained from historical monuments such as the Laxman temple in Sirpur, Chhattisgarh. Characterization techniques including X-ray diffraction (XRD), ultraviolet-visible spectroscopy (UV-Vis), and field emission scanning electron microscopy (FE-SEM) are employed to analyze the structural and optical properties of the hydrophobic coating. The coating's effectiveness in reducing water absorption and capillary water absorption, as well as its water vapor permeability, is evaluated through experimental studies.The experimental results demonstrate that the hydrophobic coating effectively reduces water absorption, capillary water absorption, and water vapor permeability of the treated sandstone and brick specimens. Furthermore, the incorporation of ZnO and TiO2 nanoparticles enhances the coating's protective capabilities against environmental pollutants and climatic factors. In conclusion, the developed hydrophobic coating comprising SILRES® BS-290 and ZnO/TiO2 nanoparticles presents a promising solution for the preservation and conservation of historical building materials. Its high penetrating power, environmental stability, and protection against pollutants make it an effective choice for safeguarding ancient monuments and heritage sites.

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/06/2024
(21) Application No.202421044478 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MACHINE LEARNING APPROACHES FOR RAINFALL PREDICTION AND CROP HEALTH MANAGEMENT IN INTELLIGENT AGRICULTURE

(51) International classification :G06N0020000000, G06N0003040000, G06Q0050020000, G06N0003080000, G01N0033000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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10)Dr.Dhanusha.C
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(57) Abstract :
The invention relates to a system and method for intelligent agriculture that utilizes machine learning techniques to predict rainfall and manage crop health. By integrating data from environmental sensors, meteorological sources, and high-resolution imagery, the system delivers precise, real-time forecasts and actionable insights for farmers. The system employs neural networks and other machine learning models to generate accurate rainfall predictions and assess crop conditions, including detecting diseases, nutrient deficiencies, and pest infestations. A user-friendly interface offers tailored recommendations for irrigation, fertilization, and pest control, enabling farmers to optimize resource usage and enhance crop yield and sustainability.

Fig. 1 System for predicting rainfall and managing crop health in intelligent agriculture

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043749 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A MULTILINGUAL AI-POWERED CONVERSATIONAL PARTNER AND LANGUAGE LEARNING ASSISTANT SYSTEM

(51) International classification	:G09B0019060000, G06Q0050200000, G06F0040300000, G10L0015180000, G06F0040400000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a multilingual AI-powered conversational partner and language learning assistant system (100) comprises a real-time conversational AI module (102) configured to engage users in natural, flowing conversations by adapting to different linguistic levels. The system includes a multilingual support module (104) enabling seamless switching between multiple languages, including less commonly taught languages. The system also includes a contextual understanding module (106) incorporating contextual analysis to enhance interactions by suggesting relevant vocabulary and phrases based on the conversation topic. The system also includes a personalized learning path module (108) analyzing user data, including strengths, weaknesses, and learning styles, to create customized learning paths with targeted exercises, vocabulary lists, and grammar practice.

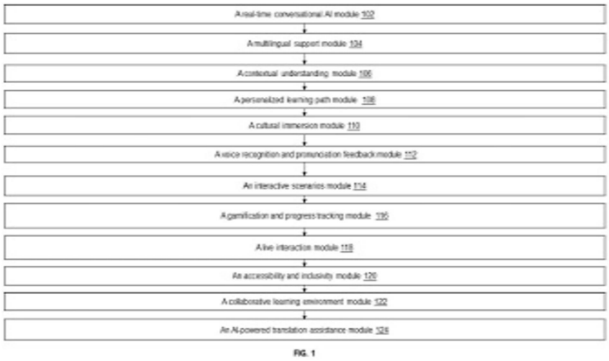

FIG. 1

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043750 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SMART INHALER WITH INTEGRATED ENVIRONMENTAL SENSORS (SIES) SYSTEM

(51) International classification :A61J1/14, A61J1/18, A61M15/00, G08B21/24, G16H20/13, G16H40/67
(86) International Application No:NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a smart inhaler with integrated environmental sensors (SIES) system (100) comprise a smart inhaler technology unit (102) equipped with sensors to track inhaler usage, including date, time, and dosage, providing real-time feedback on inhaler technique and treatment adherence. The system includes an environmental sensing unit (104) integrated sensors monitor air quality, pollen levels, temperature, and humidity, alerting users to potential triggers in their environment. The system also includes a data analytics and alerts unit (106) analyze usage and environmental data to predict exacerbations, sending personalized alerts and reminders to users and caregivers. The system also includes mobile app (108) connects to a mobile app displaying inhaler data, environmental readings, and health insights, offering educational content and symptom logging.

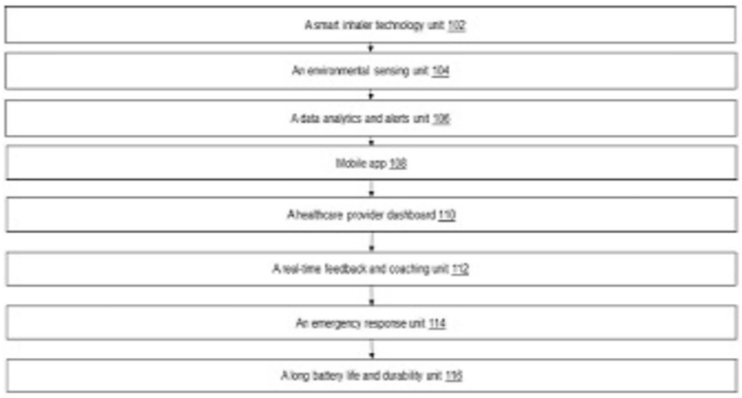

FIG. 1

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/06/2024

(21) Application No.202421044954 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : PRECISION MEASUREMENT OPTICAL FIBER SENSOR: ADVANCED SENSING TECHNIQUES

(51) International classification	:G01B0011160000, G01L0001240000, G01D0005260000, G01D0005353000, G01K0011320000
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :

The present invention discloses an advanced optical fiber sensor system designed for high-precision measurement of physical parameters such as temperature, pressure, strain, and chemical composition. The system employs high-purity silica optical fibers with doped materials to enhance sensitivity and incorporates multiple Bragg gratings for precise sensing. A sophisticated signal processing unit, utilizing advanced algorithms and machine learning, filters noise and dynamically calibrates the sensor for consistent accuracy. Additionally, the sensor system can be configured in a distributed network for real-time monitoring over large areas and includes embodiments with integrated photonic chips for multi-parameter sensing and wireless communication modules for remote monitoring. This invention addresses the limitations of traditional optical fiber sensors by offering enhanced performance, reliability, and versatility in various industrial, environmental, and scientific applications.

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/06/2024
(21) Application No.202421045017 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEVELOPMENT OF POLYMERIC MICELLAR DRUG DELIVERY SYSTEM FOR THE TREATMENT OF COLON DISORDERS

(51) International classification :B82Y5/00, A61K31/136, A61P29/00, A61K9/70, A61K9/1273
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a novel drug delivery system involving Mesalamine-loaded polymeric micelles for the treatment of inflammatory bowel disease (IBD). Mesalamine, renowned for its anti-inflammatory properties, targets colonic inflammation. The invention involves the preparation of these micelles using Pluronic F127 and Pluronic F68 polymers. Compatibility studies assure the absence of interactions between Mesalamine and polymers. Characterization indicates uniform particle size distribution, high entrapment and loading efficiencies, and sustained drug release over 48 hours. Scanning Electron Microscopy (SEM) and Transmission Electron Microscopy (TEM) confirm the micelles' nano-spherical morphology. Furthermore, in vitro studies demonstrate controlled drug release kinetics. This invention signifies a promising avenue for targeted drug delivery in IBD treatment, offering enhanced therapeutic efficacy and reduced dosing frequency.

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/06/2024
(21) Application No.202421044481 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SMART DUSTBIN SOLUTION FOR EFFICIENT WASTE COLLECTION AND MONITORING

(51) International classification	:G06Q0010080000, G06Q0010060000, G06Q0010000000, B65F0001140000, H04L0067306000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
This invention describes a revolutionary Smart Dustbin Solution for Efficient Waste Collection and Monitoring, leveraging Arduino microcontroller technology and advanced sensors. Key features include automated waste recognition, segregation capabilities, and water recycling mechanisms, enhancing efficiency and promoting recycling efforts. The system's self-cleaning functionality and remote monitoring capabilities optimize maintenance and resource allocation, ensuring continuous operation and reducing environmental impact. User-friendly interfaces facilitate convenient interaction and feedback, promoting responsible waste disposal behavior among users. Advantages include streamlined waste management processes, reduced manual labor, and improved hygiene and sanitation. Additionally, the system's energy-efficient components and potential integration of renewable energy sources contribute to sustainability efforts, while community engagement initiatives foster awareness and participation in sustainable practices. In summary, the Smart Dustbin Solution offers a comprehensive and innovative approach to waste management, promising cleaner, healthier environments and a more sustainable future.

No. of Pages : 23 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/06/2024

(21) Application No.202421044528 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : POLLINATION APPARATUS

(51) International classification :A01H1/02, B64C39/02, F16M11/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to pollination apparatus utilizing a drone for aerial transportation. The apparatus includes a drone equipped with at least one pollen tank designed to store pollen for pollination purposes. A pollen tube vertically connected to the pollen tank facilitates the transfer of pollen. A telescopic mechanism, comprising cylinders of varying cross-section attached downstream of the pollen tank. A rack and pinion mechanism control the telescopic mechanism's linear movement, allowing for the extension and retraction of the apparatus. A base disk affixed downstream of the telescopic assembly houses a two-axis gimbal mechanism, enabling precise and stable positioning of a nozzle sprayer. This innovative apparatus revolutionizes pollination practices by providing efficient aerial distribution of pollen, enhancing agricultural productivity, and promoting sustainable farming methods.

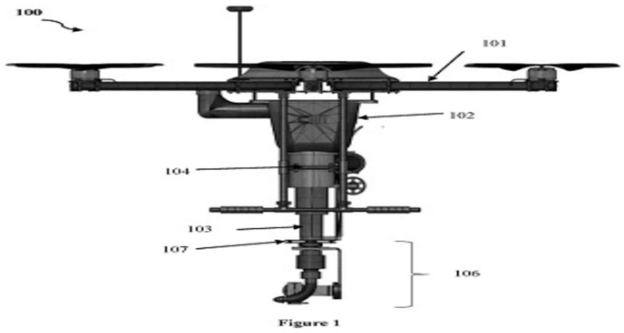

Figure 1

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/06/2024

(21) Application No.202421044529 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EXTRUDED PROFILE WITH BACK CLEAT CLIPS FOR MOUNTING OF SOLAR MODULES

(51) International classification	:H02S0020000000, H02S0020230000, F24S0030000000, F24S0025350000, B23P0019000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Extruded profile with back cleat clip (100) for solar modules (301) mounting is consisting of main frame (101) supporting and holding solar module (301) and; back cleat clips (201) assembled with main frame (101). Solar module gripping profile (1011) of main frame (101) is configured to support and grip solar modules by its elastic deformation followed by application of sealants. Main frame locking profile (1012) of main frame (101) is configured for mechanically assembling long and short main frames (101) and for increasing stiffness of main frame (101). Back cleat clip fixing profile (1013) of main frame (101) is configured for mechanically assembling and griping back cleat clips (201) at required location by press fitting followed by plastically deforming back cleat clip fixing profile (1013). Cross-section dimension of back cleat clips (201) is varied without changing designed thickness of main frame (101) resulting into overall reduction in weight. FIG. 2

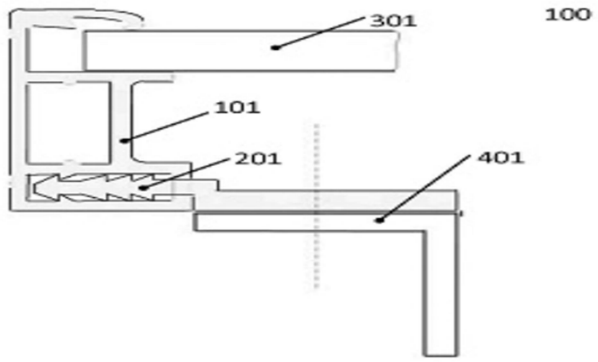

FIG. 2

No. of Pages : 30 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044624 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN INTEGRATED MODULAR ROBOTICS LEARNING SYSTEM WITH PORTABLE PROGRAMMING BACKPACK

(51) International classification	:G06Q0010100000, G09B0005020000, G06F0003048600, G09B0019000000, H04L0067120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Integrated Modular Robotics Learning System with Portable Programming Backpack (100) is designed for hands-on STEM education. It features a modular design with magnetic connectors and a user-friendly drag-and-drop programming interface (102) accessible via computer or tablet. The versatile sensors and actuators unit (104) enables interactive learning through various sensors and actuators, facilitating environmental responses. The system offers engaging activities (106) like maze navigation and object detection, promoting hands-on learning. Comprehensive online resources and curriculum (108) align with STEM standards, while the community and collaboration unit (110) fosters idea sharing and mentorship. The inclusivity and accessibility unit (112) ensures the system is accessible to diverse students. The portable programming interface (114) includes a built-in tablet or mini-computer for on-the-go programming. Wireless connectivity (116) allows remote control of the ModuBot. Augmented reality (AR) (118) overlays virtual programming blocks onto the physical environment. Interactive learning modules (120) support offline exploration, and the data logging and analysis unit (122) enables environmental data collection and analysis. The collaborative coding unit (124) promotes teamwork and problem-solving.

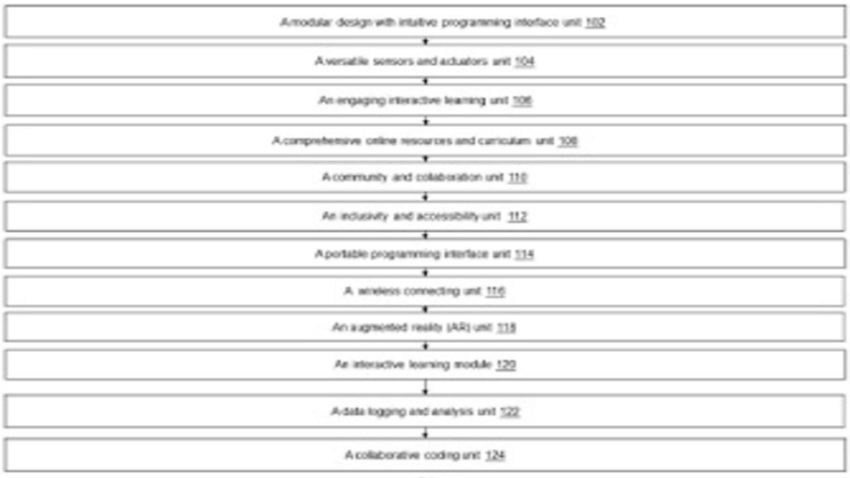

FIG. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044625 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLIGENT HINDI LANGUAGE PROOFREADING AND PLAGIARISM DETECTION SYSTEM

(51) International classification	:G06F0040300000, G06N0020000000, H02J0007000000, G06F0040216000, A24F0040500000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is an intelligent Hindi language proofreading and plagiarism detection system (100). The system (100) includes a microcontroller (102) associated with a processing unit (104). The system (100) also includes the processing unit (104) connected with a data storage module (106). The system (100) also includes the data storage module (106) connected with the processing unit (104) and communication network (108), the communication network (108) further connected with a natural language processing (NLP) module (110), machine learning (ML) module (112), plagiarism detection module (114), semantic analysis module (116), author profiling module (118), smart book analysis module (120). Further the microcontroller (102) includes a natural language processing (NLP) module (110). The Microcontroller (102) also includes a machine learning (ML) module (112). The Microcontroller (102) also includes a plagiarism detection module (114). The Microcontroller (102) also includes a semantic analysis module (116). The Microcontroller (102) also includes an author profiling module (118).

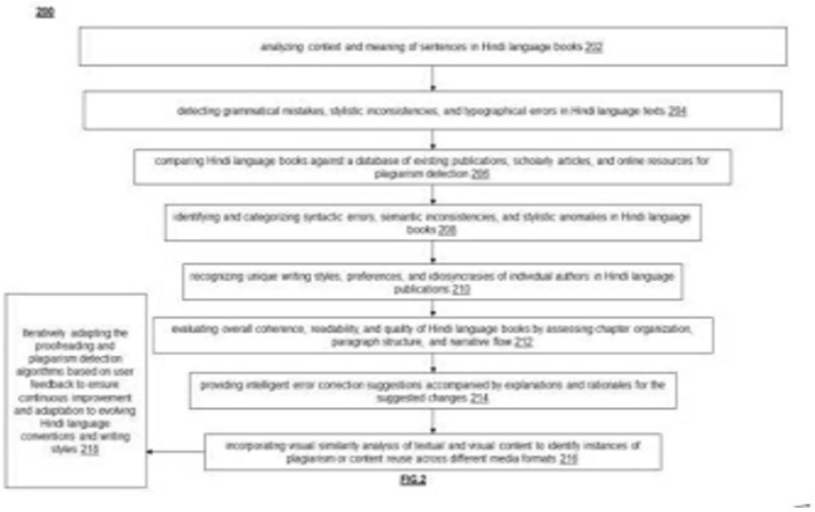

FIG 2

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044626 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN INTERACTIVE LITERATURE ANALYSIS TOOL (ILAT) SYSTEM

(51) International classification	:G06F0040169000, G06F0040300000, G06Q0030020000, G09B0019000000, G06T0011200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Interactive Literature Analysis Tool (ILAT) system (100) is a comprehensive platform designed for in-depth literary analysis. It features an automated text summarization module (102) that creates concise summaries of literary works. The character and theme analysis module (104) uses advanced NLP algorithms to analyze characters and themes. Users can highlight and annotate passages using the interactive annotation unit (106) to facilitate collaborative discussions. The contextual insights module (108) provides background information, historical context, and critical commentary. Comparative analysis unit (110) enables theme, character, and narrative technique comparisons across texts. Visualizations and data analytics unit (112) offers interactive tools like word clouds and sentiment analysis charts. The personalized reading experience module (114) tailors recommendations based on user preferences. The gamification module (116) engages users with badges and quizzes. Accessibility and inclusivity module (118) supports diverse learning needs with customizable settings. Integration with educational curriculum unit (120) connects with educational standards and systems. The community engagement platform unit (122) promotes online discussions and collaborations.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024

(21) Application No.202421043770 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TRAPEZOIDAL CONTROL OF BLDC MOTOR USING HALL EFFECT SENSOR AND FUZZY LOGIC PRECISION

(51) International classification	:H02P6/16, H02P23/00, G06N7/02, G05B13/02
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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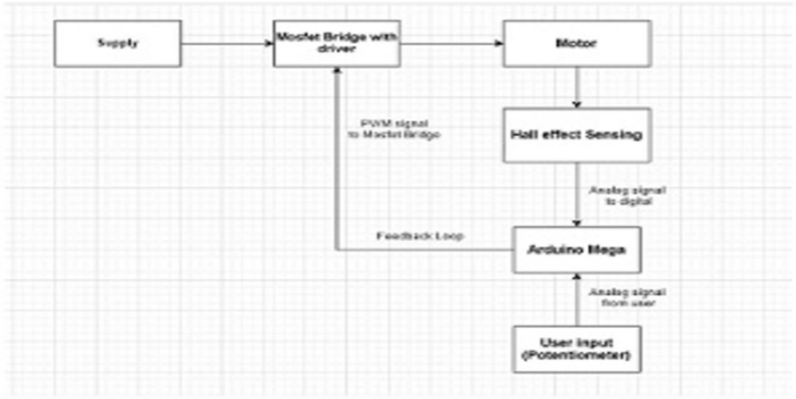
(57) Abstract :
Brushless DC (BLDC) motors offer high efficiency, reliability, and compact design, making them prevalent in various industrial and consumer applications. However, achieving precise control over their speed and torque remains an ongoing challenge. This project proposes a hybrid control strategy that merges the well-established trapezoidal commutation technique with the adaptive capabilities of fuzzy logic control. Hall effect sensors provide accurate rotor position information, ensuring timely and efficient commutation of the motor phases. Fuzzy logic, on the other hand, is introduced to refine the current control within the trapezoidal framework. By incorporating fuzzy logic rules based on motor parameters and operating conditions, the system can potentially achieve superior performance compared to conventional methods. This may translate to improved torque control, reduced torque ripple, and enhanced overall efficiency of the BLDC motor drive. The project will delve into the design and implementation of this hybrid control system, potentially through simulations or a hardware prototype. The performance of the proposed approach will be evaluated through various metrics, such as rise time, settling time, steady-state error, and torque ripple reduction, to assess its effectiveness in achieving precise and efficient BLDC motor control.

Drawing 1 of 2: Proposed Block Diagram



No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024

(21) Application No.202421043801 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN AND DEVELOPMENT OF AGRICOPTER: REVOLUTIONIZING SEED SOWING AND PESTICIDE SPRAYING

(51) International classification :A01M0007000000, B64C0039020000, B64D0001180000, G06Q0050020000, G06Q0010060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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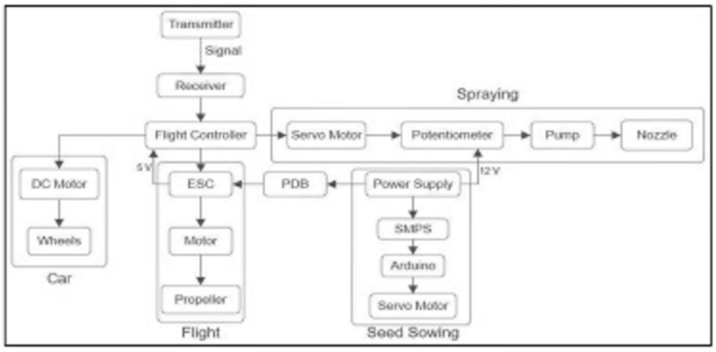
(57) Abstract :
The integration of advanced drone technology into modern agricultural practices has revolutionized farming operations, offering new avenues for efficient and sustainable crop management. Drones equipped with cutting-edge sensors and imaging technology have emerged as indispensable tools, empowering farmers with data-driven insights to optimize decision- making, enhance productivity, and mitigate costs. Equipped with sophisticated sensors and imaging capabilities drones offer farmers invaluable insights, empowering informed decision- making, resulting in more productivity and reduce operational expenses. Agricopter in the same way is prepared to be used for spraying pesticides and sowing crops all over the targeted area. The purpose is to reduce labor work by completing the task within a short time and reducing pesticide usage by spraying equal quantities on each crop. Driven by GPS navigation, precision is assured regardless of field shape or crop type. The Agricopter can precisely track the field of any shape and spray pesticide on any crop.

Fig. 1 of 4 - Block Diagram



No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043847 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN AND DEVELOPMENT OF PROCESSING AUTOMATION

(51) International classification :G06Q0010100000, C08J0003200000, H04L0065403800, H04W0004120000, H04L0051224000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The modern business landscape is marred by increasing complexity and the limitations of manual processes. These traditional methods, whether in managing product listings, inventory, orders, invoices, or reports, often result in errors, delays, and a lack of agility. These challenges are further compounded by the absence of automated alerts and reminders, leaving businesses vulnerable to stock-outs, regulatory penalties, and missed deadlines. Addressing these multifaceted challenges necessitates a paradigm shift, acknowledging the limitations of the current business landscape and bridging the gap between traditional methods and the technological advancements available. This project aims to deliver a transformative solution that bridges the gap between traditional methods and advanced technological capabilities, empowering organizations to navigate the complexities of the modern business landscape more effectively and position themselves for sustainable growth and success in an increasingly competitive and dynamic environment.

No. of Pages : 20 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/06/2024

(21) Application No.202421045125 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A POLYHERBAL ANTIFUNGAL GEL FORMULATION AND PREPARATION METHOD THEREOF

(51) International classification :A61K36/19, A61K36/53, A61K36/75, A61K9/06, A61P31/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
"A POLYHERBAL ANTIFUNGAL GEL FORMULATION AND PREPARATION METHOD THEREOF" ABSTRACT The present invention relates to a polyherbal antifungal gel formulation for mycosis. The polyherbal antifungal gel comprises extracts of Justicia Adhatoda, Aegle Marmelos, and Ocimum Basilicum along with pharmaceutically inert excipients. The invention further provides method of preparation of a polyherbal antifungal gel for mycosis.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/06/2024
(21) Application No.202421045183 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : STUDIES ON DESIGNING AND PRACTICAL APPLICATION OF GLUCOSE OXIDASE BIOSENSOR USING ASPERGILLUS NIGER F-C405-2

(51) International classification	:A61B0005145000, A61B0005000000, C12Q0001000000, G01N0033660000, G01N0027414000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A biosensor is a device that detects and combines a biological component analyzed with a physicochemical detector component. In the present work, we have designed a glucose biosensor using an immobilized glucose oxidase enzyme on cellulose acetate produced by Aspergillus nigerF-C405-2. This glucose oxidase (GO) has shown thermal stability at 600C for 120 minutes. Glucose oxidase was immobilized on pyrrole-cellulose acetate (Py-CA) film over Indium tin oxide (ITO). Platinum and silver-silver chlorides are used as reference electrodes and are suitable for estimating blood sugar with a commercial glucometer. The biosensor prepared was optimized and calibrated against standard glucose solutions of variable concentration (0.5 to 6 mg/ml) with a change in electric current measured in ampere. The amount of glucose in the patient's blood was estimated using our designed biosensor and diagnosed for diabetes. Our instrumental results were correlated with those measured using a commercial glucometer. No significant deviation was observed.

No. of Pages : 20 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/06/2024

(21) Application No.202421045195 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : NEXT-GENERATION WEARABLE BIOSENSOR FOR CONTINUOUS HEALTH MONITORING

(51) International classification	:A61B0005000000, A61B0005024000, A61B0005020500, A61B0005110000, G16H0040670000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

The invention relates to a system and method for continuous health monitoring by integrating multiple sensors, including ECG, PPG, temperature, and accelerometer, into a compact and ergonomic design. Advanced signal processing algorithms enable real-time data analysis, facilitating early detection of health anomalies. Efficient power management, seamless wireless connectivity, and optional machine learning integration further enhance its capabilities, empowering users to proactively manage their health with personalized insights and adaptable configurations. This biosensor represents a significant advancement in wearable health monitoring technology, promising comprehensive and user-centric solutions for enhanced well-being.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/06/2024

(21) Application No.202421045248 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "HERBAL TOPICAL CREAM FORMULATION AND PREPARATION METHOD THEREOF"

(51) International classification	:A61K36/48, A61K9/06, A61P31/04, A61Q19/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT "HERBAL TOPICAL CREAM FORMULATION AND PREPARATION METHOD THEREOF" The present invention relates to a pharmaceutical composition, particularly to a herbal topical cream formulation exhibiting potent antimicrobial properties. The herbal cream comprises of bark extract of Ougeinia oojeinensis, as an active ingredient. The invention also includes thickener, stabilizing agent, emollient, surfactant, pH adjuster, preservative and solvent. The invention further describes the method of preparation of herbal topical cream.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/06/2024

(21) Application No.202421044531 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : EFFICIENT PARALLEL PROCESSING ALGORITHM FOR BIG DATA ANALYTICS

(51) International classification :G06F0016230000, G16H0010600000, H04L0067100000, G06F0016220000, H04L0067100100

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
One way that large-scale data analysis tasks can be handled more effectively and in an orderly fashion. Parallel algorithms have so far relied on the fact that all processors operate without stop. When this condition is unmet, e.g., titans of data such as the Internet rush into storage centers so fast that its one representative processor needs too much work from the others and they do not just lose synchronization with it. This makes parallel processing difficult indeed -even hopeless. There is a dynamic load balancing mechanism built into the algorithm of this invention; work will be reassigned from time to time between processor even as task performance data are continuously monitored. The specification brings forward a cascading failure avoidance policy; it guarantees complete forwards extendable scalability for sending performance data to peers. The usual communication model, however, overlooks the fact that most necessary controls require only a small amount of additional data transfer over a very short distance and that with high priority. The algorithm incorporates robust capabilities for preprocessing data. It can handle any data type so long as it's in a structured format or as an array; uses these to bring all inputs into forms from which subsequent parallel processing becomes possible. History can justifiably be said to commence with the 1968 book by the Rockefeller University lab party of Siegfried von Bakerstein. Now, the algorithm uses a scalable architecture capable of expanding stepwise to take in ever-increasing data, and it provides support for integrating more resources while maintaining consistent performance levels. Using it, a variety of applications can be visualized--ranging from finance to health care, telecommunications, and retailing--all designed to bring real-time analytics, better diagnosis, data management efficacy, or for customers who prefer an experience which is truly their own. Its performance evaluations, compared to the traditional methods, show a significant improvement in both processing speed and resource utilization. Years after it was proposed, Internet pioneers established that the time has come for IPv6 however an operative business-world version would take several more years to emerge. In conclusion, the disclosed algorithm is a giant step toward the end of big data processing; in return, it opens new dimensions of potential enhancement and scalability for complex data analyses in a variety of industries.

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/06/2024
(21) Application No.202421044550 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : POSSIBLE DRUGS AGAINST METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) FROM LEAF EXTRACT OF BUTEA MONOSPERMA (LAM.) TAUB

(51) International classification :A61K36/48, A61P31/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Possible drugs against methicillin-resistant Staphylococcus aureus (MRSA) from leaf extract of Butea monosperma (Lam.) Taub ABSTRACT Multi-drug resistance in microorganisms is a serious global health issue. The resistance of drug in bacteria is dramatically rising in the current pandemic situation due to the overuse of antibiotics. Among various drug resistance bacteria, methicillin-resistant Staphylococcus aureus (MRSA) is very harmful and threat to the public health. The present study reports some possible drug candidates from Butea monosperma (Lam.) Taub against MRSA. Preliminary, medicinal plant extract have been used for the antimicrobial activity against MRSA. After positive observation bioactive compounds of the plant extract have been analysed using GC-MS. The bioactive compounds from plant are used as ligand for the interaction with an important target protein (STK) of MRSA with the help of molecular docking by Autodock program. Based on docking of ligand and protein; binding energy, hydrogen bonds, involvement of amino acids have been recorded. The result significantly confirms that some biomolecules of B. monosperma found as drug, as they qualify the necessary standard like gastrointestinal absorption (HIA) and brain penetration (BBB) using Swiss ADME predictor. These compounds are (1) N-[5-(3-Hydroxy-2-methylpropenyl)-1,3,4,5-tetrahydrobenzo[cd]indol-3-yl]-N-methylacetamide; (2) 5-Methoxy-3,7-dihydroxyflavanone; (3) Stannane, tetraethyl- and (4) Dibutyl phthalate. The study concluded that the leaf extract of B. monosperma contains a number of bioactive compounds that show anti-microbial activity against MRSA, studied compounds interact with cell wall synthesising protein of MRSA and these are perfectly noted as drug which further need to investigate by pharmaceutics for development of medicine for society.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044627 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SOCIAL TREND TRACKER (STT) SYSTEM

(51) International classification :G06Q0050000000, G06F0040300000, G06N0020000000, G06Q0030020000, G06F0021620000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Social Trend Tracker (STT) system (100) is a sophisticated platform designed to analyze and track social trends. It features a semantic analysis module (102) that uses advanced NLP and contextual understanding to interpret sentiments and meanings in social media posts and discussions. The dynamic trend heatmaps generator unit (104) creates visual heatmaps showing the intensity and geographical spread of trends. The community detection and segmentation unit (106) identifies distinct social network communities based on shared interests and values. The temporal analysis and trend prediction engine (108) monitors trend evolution, pinpointing key moments and predicting future developments. The cross-platform integration module (110) aggregates data from various social media platforms, news sources, and forums for a comprehensive trend overview. Emphasizing privacy, the ethical and privacy-first design unit (112) ensures robust anonymization and regulatory compliance. The interactive dashboard with real-time updates unit (114) offers customizable, real-time trend exploration and visualization. Collaborative research (116) and machine learning-based trend classification (118) units enhance interdisciplinary analysis and trend detection. The sentiment-based trend analysis unit (120) provides insights into public perceptions and attitudes.

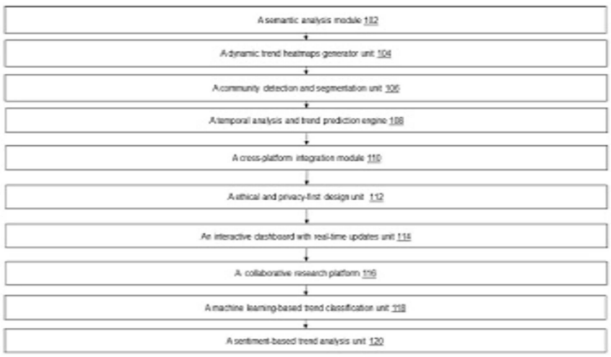

FIG. 1

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044647 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLIGENT HINDI LANGUAGE TRANSLATION AND COMPREHENSION SYSTEM

(51) International classification	:G06F0040580000, G06F0003010000, G06F0040205000, A61B0005000000, A61B0005020500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is an intelligent Hindi language translation and comprehension system (100) comprising a microcontroller (102) associated with a processing unit (104). The system also includes the processing unit (104) connected with a data storage module (106) configured to store multilingual data. The system also includes the data storage module (106) connected with the processing unit (104) and communication network (108). The communication network (108) further connected with a multimodal translation engine (110), language comprehension assessment module (112), adaptive learning module (114), real-time language proficiency prediction module (116), interactive translation feedback mechanism (118), cross-cultural communication forum (120), personalized translation preferences module (122), ethical AI module (124), gamification module (126), user feedback analysis module (128), multilingual virtual assistant interface (130).

FIG 2

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044648 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A GEOSPATIAL HEALTH ALERT SYSTEM (GHAS)

(51) International classification	:G16H0050300000, G16H0010600000, G16H0050200000, G06N0020000000, G16H0050700000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a geospatial health alert system (100) comprises a geospatial data integration module (102) configured to integrate geospatial data from various sources to provide a comprehensive understanding of local health determinants. The system includes a user profile and health history analysis module (104) configured to analyze demographic information, health parameters, and medical history input by users to create personalized health profiles. The system includes a machine learning-based health risk prediction module (106) configured to employ machine learning algorithms to predict potential health risks for users based on geographic location and health profiles. The system includes a real-time health alerts and notifications module (108) configured to generate real-time health alerts and notifications to users when entering geographic areas associated with heightened health risks. The system includes a personalized health recommendations and resources module (110) configured to provide personalized health recommendations and resources in response to health alerts.

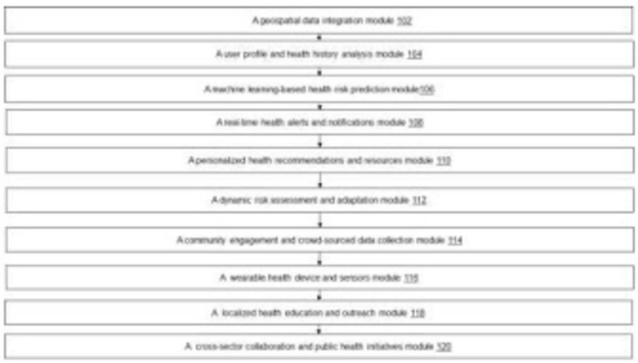

FIG. 1

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043858 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A POP-UP INDICATOR WITH SWITCH

(51) International classification :G01L13/06, G01R19/00, G01L19/08, G01L9/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT TITLE: POP-UP INDICATOR WITH SWITCH Disclosed herein is a pop-up indicator with switch (10B) which combines the functionalities of an indicator as well as a switch in one single unit. The existing standard pop-up indicator is used only for singular pressure indicator or differential pressure indicator. The present invention of a pop-up indicator with switch (10B) is used as a main sensing device for detecting the changes with the provision of switch Contact for PCB (13) as one of the embodiments. The movement of ring magnet and the cylindrical magnet inside the said switch is used for developing or for releasing contact which can be taken for control circuit. Figure 1

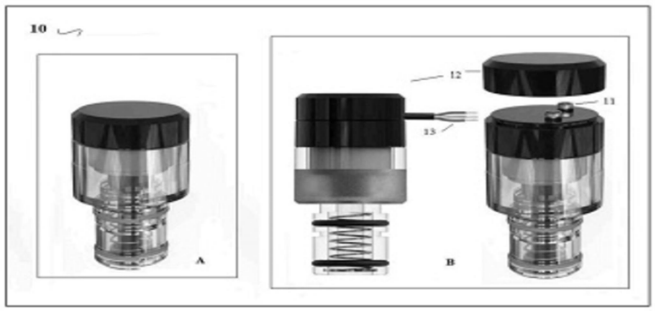

Figure 1

No. of Pages : 8 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043866 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A BLOCKCHAIN-IOT-AI INTEGRATED BLOOD TRACING SYSTEM (BIATS)

(51) International classification	:H04W0004800000, H04L0067120000, A61B0005145000, G06K0019070000, G06N0020200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Disclosed herein is a blockchain-IOT-AI integrated blood tracing system (100) a plurality of blood container (102). The system (100) comprising a sensor assembly (104) equipped with a plurality of sensors to collect data from the surrounding environment. The system (100) comprising a controller module (106) configured to process and manage data locally. The system (100) comprising a communication network (108) configured to facilitate high-speed data transfer. The system (100) comprising a blockchain ledger (110) configured to store blood type, collection time, transportation history, and other information related to the blood containers (102). The system (100) comprising an internet of things (IOT) gateway (112) operable to perform data filtering, and standardization, and perform data encryption, and compression. The system (100) comprising a data analytics module (114) configured to implement a plurality of artificial intelligence (AI) algorithms. The system (100) comprising at least one user device (116).

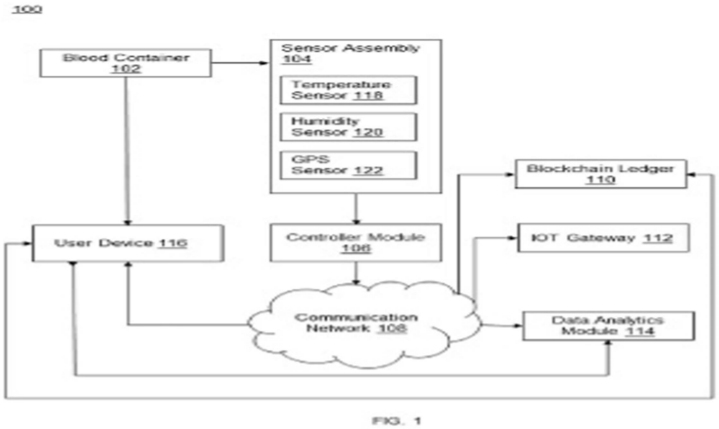

FIG. 1

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043871 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN AND OPTIMIZATION OF SCHEDULING SCHEMES FOR CLOUD COMPUTING

(51) International classification	:G06F0009500000, G06N0020000000, G06Q0010060000, H04L0067100000, G06F0009480000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT D?SIGN AND OPTIMIZATION OF SCH?DULING SCH?M?S FOR CLOUD COMPUTING [600] Our invention “D?SIGN AND OPTIMIZATION OF SCH?DULING SCH?M?S FOR CLOUD COMPUTING” Cloud computing has revolutionized the way computing resources are managed and utilized. Efficient scheduling of tasks and resources is crucial for optimizing performance, resource utilization, and cost-effectiveness in cloud environments. This paper presents a comprehensive analysis of the design and optimization of scheduling schemes for cloud computing. Through a thorough review of existing literature and empirical analysis, various scheduling strategies, algorithms, and optimization techniques are evaluated. Key challenges such as scalability, security, and privacy concerns are identified, and future research directions are proposed, including the integration of machine learning, addressing security issues, and optimization for emerging technologies. The findings of this study contribute to advancing knowledge in cloud computing scheduling and provide insights for improving the efficiency and effectiveness of scheduling schemes in cloud environments.

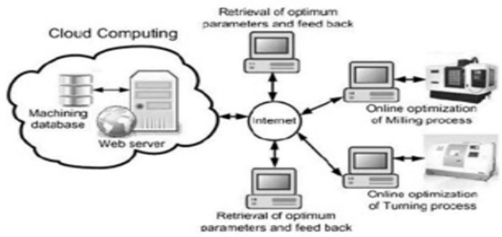

Fig 1: Structure of cloud computing-based optimization

No. of Pages : 10 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/06/2024

(21) Application No.202421045335 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : AN OPTIMIZING FLEXIBLE MANUFACTURING SYSTEMS USING EDAS METHOD BASED ON SHANNON'S ENTROPY

(51) International classification :G05B0019418000, G06Q0010060000, B64F0005100000, G06Q0010040000, A43B0003000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is an optimizing flexible manufacturing systems using EDAS method based on Shannon's entropy (100) comprises a data collection module (102) configured to gather data pertaining to various parameters of the flexible manufacturing system. The system includes a computation unit (104) programmed to apply Shannon's entropy theory to assess the uncertainty and information content associated with the collected data. The system also includes an optimization module (106) equipped with the EDAS method to evaluate the performance of the flexible manufacturing system based on the calculated entropy values and distance from the average solution. The system also includes a decision-making unit (108) responsible for generating optimization recommendations and decisions aimed at improving the efficiency, adaptability, and overall performance of the flexible manufacturing system.

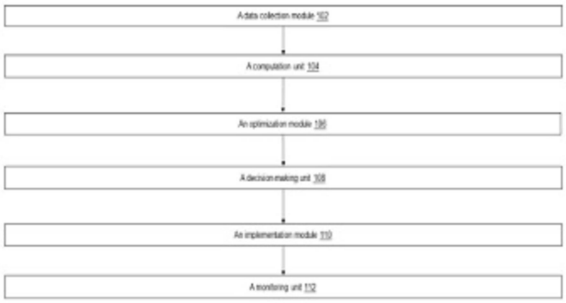

FIG. 1

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/06/2024

(21) Application No.202421045340 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED ROBOTICS FOR AUTOMATIC MATERIAL HANDLING AND SORTING IN WAREHOUSE

(51) International classification	:G06N0020000000, B25J0009160000, A61B0005000000, G06N0003000000, G06N0007000000
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :

ARTIFICIAL INTELLIGENCE BASED ROBOTICS FOR AUTOMATIC MATERIAL HANDLING AND SORTING IN WAREHOUSE Abstract The present disclosure pertains to a system for automatic material handling and sorting in a warehouse is disclosed. Said system integrates a sensing unit (102) to detect the physical characteristics of materials. Said system employs a robotic manipulator (104) equipped with an end effector, operatively coupled to the sensing unit, for precise material grasping. An artificial intelligence (AI) module (106) processes the detected data to control the robotic manipulator, utilizing advanced machine learning algorithms for material identification, categorization, and determination of handling strategies. A material transfer conveyor (108) facilitates efficient transport of materials, while a storage memory (110), accessible by the AI module, stores sorting criteria and destinations, optimizing the warehouse's sorting and handling processes.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/06/2024
(21) Application No.202421045476 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOML STOCK PREDICTION: A RULE BASED MODEL TO PREDICT THE BULL AND BEARISH MARKETS OF DIFFERENT SECTORS

(51) International classification	:G06Q0040040000, G06Q0030020000, G06N0003040000, G06Q0010040000, G06N0003080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT In Stock Market Prediction, the main aim to predict the Sector Wise Model Selection to Forecast Based on Bullish & Bearish Condition of Share Market explores the development and implementation of a comprehensive framework for stock price prediction using ARIMA, SARIMA, and LSTM models. Multiple process of attempts to forecast future stock market behaviour, but due to its complexity, accurate predictions remain challenging. Machine learning techniques which have proven effective in this domain. The primary aim is to forecast stock prices by analysing historical data, identifying trends, and evaluating model performance using various statistical and machine learning approaches. The study incorporates data from selected stocks over different time periods, applying logarithmic transformations and splitting data into training and validation sets to enhance model accuracy. Additionally, the project examines bullish and bearish trends separately to provide more granular insights. Performance metrics such as RMSE, MAPE, and MSLE are used to evaluate and compare model predictions. The results demonstrate the potential of these models in capturing stock price movements and highlight areas for further refinement and integration of more advanced techniques.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/06/2024
(21) Application No.202421045715 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A DEVICE FOR LOWER BODY EXOSKELETON

(51) International classification :A61H0001020000, A61H0003000000, B25J0017020000, F16H0025200000, B25J0009100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A device (100) for lower body exoskeleton comprising a hip joint (102), a knee joint (104) and an ankle joint (106) assemblies is disclosed to improve compliance for lower body for paraplegic personal. The hip joint (102) assembly is constructed to provide motion in all three planes, via active or passive compliance. The knee joint (104) assembly enables the fundamental bending, straightening motions and rotational motion of the knee. The device is provided with plurality of secondary actuators (SEA) (200a) at the knee joint (104) by a four-bar mechanism connecting a tibia and a femur bones to provide the required range of motions. The ankle joint (106) assembly enables two degrees of freedom. The device is provided with plurality of SEA (200b) at the ankle joint (106) by a screw mechanism converting the rotary motion of the motor into a linear motion for dorsi/planter flexion.

No. of Pages : 29 No. of Claims : 24

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/06/2024
(21) Application No.202421045896 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A REAL TIME HEALTH MONITORING AND DISEASE PREDICTION SYSTEM

(51) International classification	:G16H0050200000, G16H0050300000, G06N0020000000, G16H0050700000, G16H0040670000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a real-time health monitoring and disease prediction system leveraging machine learning techniques. This system integrates data collection from both sensors and manual inputs, preprocesses the collected data to enhance its quality, and selects significant features for analysis. Employing decision trees, clustering, and classification systems, the machine learning engine predicts health risks and potential diseases based on the analyzed data. An interactive user interface allows for personalized input and displays real-time health status and predictions. Historical health data stored in a database enables continuous improvement of prediction accuracy. Additionally, an alert system notifies users and healthcare providers of potential health risks. The system architecture, built on the Django Model-View-Controller framework, ensures efficient data handling and user interactions. Overall, this comprehensive framework enhances proactive healthcare management by providing timely and accurate health status monitoring and disease prediction.

No. of Pages : 21 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/06/2024

(21) Application No.202421046068 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : “MICROFLUIDIC CAPILLARY DEVICE FOR FACILE PREPARATION OF LIPOSOMES”

(51) International classification :A61K0009127000, B01L0003000000, F04B0043120000, G06F0013400000, C12M0001000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to the microfluidic mixing device for creating liposomes of uniform size and reproducibility, comprising of a submersible pump (1), inlet 1 PVP pipe (2), inlet 2 PVP bifurcating pipe (3), surgical 4-way connector (5), 26 Gauge needle (4) and collecting glass capillary (6), outlet pipe (7), peristaltic pump (8) and liposome collecting chamber. The lipid ethanol solution through inlet 1 PVP pipe (2) is passed to 26-gauge needle (4) from which it is further passed to collecting glass capillary (6). The buffer solution through inlet 2 PVP bifurcating pipe (3) is passed to collecting glass capillary (6) with surgical 4-way connector (5). Mixing of microfluid of lipid ethanol solution and buffer solution occurs in the collecting glass capillary (6) due to the pumping action of the peristaltic pump (7) to form uniform liposomes. Refer Fig 1

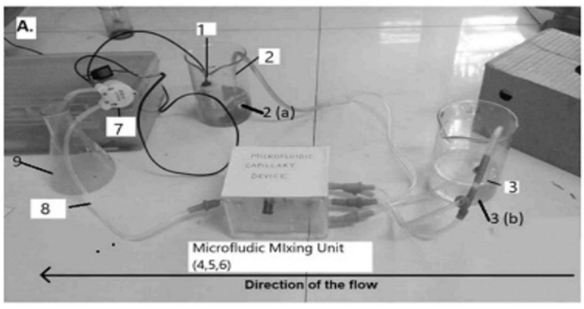

Figure 1: Overview of the microfluidic capillary device

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/06/2024
(21) Application No.202421044562 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN INTELLIGENT EV CHARGING STATION ROUTE PLANNER

(51) International classification :G06Q50/06, G01C21/34, B60L53/62, B60L53/63, B60L55/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an intelligent EV charging Station route planner. The game-based electric vehicle (EV) charging system and approach intended to maximize grid efficiency while limiting charging strategy optimization. The idea creates a grid model employing game theory concepts in response to the difficulty posed by the erratic driving habits of electric vehicle users. The technique attempts to reduce abrupt peak demands on the grid, which can put stress on the infrastructure, by carefully planning EV charging schedules. Furthermore, the strain is further mitigated by reducing the dependence on conventional grid power through the integration of charging stations with solar panels. By using a game theory method, grid operators and EV users can maximize their benefits by allocating priorities to charging and discharging. This innovative approach enhances EV charging while simultaneously supporting sustainability and grid stability.

No. of Pages : 6 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/06/2024
(21) Application No.202421044571 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BIG DATA ANALYTICS FOR SOCIO-ECONOMIC TREND ANALYSIS

(51) International classification	:G06N0020000000, G06Q0030020000, G06Q0010060000, G06Q0050000000, G06N0005040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The invention provides a system and method for socio-economic trend analysis utilizing big data analytics. The system collects data from diverse sources, including social media, financial databases, government reports, and sensor networks, and processes this data using advanced techniques such as machine learning, natural language processing, and statistical analysis. The processed data is analyzed to identify and understand socio-economic trends, correlations, and anomalies. The system includes robust visualization tools to present insights in an intuitive manner, enabling informed decision-making. Additional embodiments feature real-time monitoring and alerting capabilities, as well as predictive modeling for forecasting future socio-economic trends.

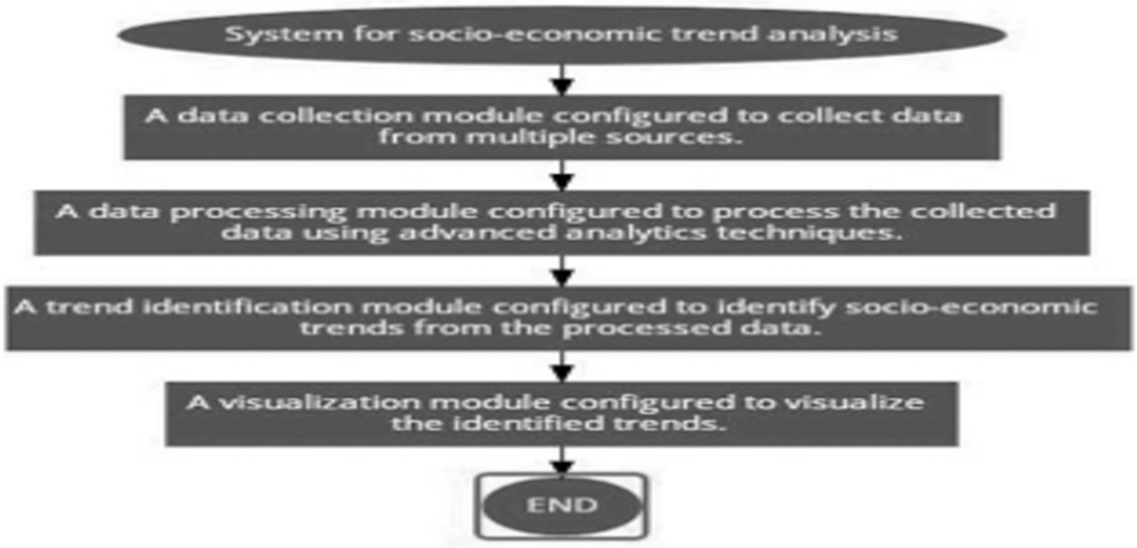

Fig. 1 System for socio-economic trend analysis

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/06/2024
(21) Application No.202421046630 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : “MOUTH DISSOLVING FILM FORMULATION OF LIQUORICE EXTRACT”

(51) International classification	:A61K36/48, A61K47/26, A61K47/38, A61K47/10, A61K9/70
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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3)Mehreen Rizwanakhter Patel
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(57) Abstract :
The present invention relates to a mouth dissolving film formulation and process for its preparation thereof, applied for the prevention or treatment of dry cough and sore throat in pediatrics and geriatrics. The mouth dissolving film formulation comprising liquorice extract, ginger juice, honey and other excipients thereof. The film formulation prepared through this method is stable, cost effective, environmentally friendly, and ease to handle.

No. of Pages : 22 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/06/2024
(21) Application No.202421047658 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SWASTHYA SAHAYAK: WHATSAPP CHATBOT POWERED BY CHATGPT FOR MEDICAL ADVICE IN INDIAN REGIONAL LANGUAGE

(51) International classification :G10L0015260000, G10L0015220000, G06N0020000000, H04L0051020000, G06F0040300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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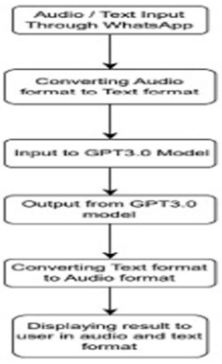
(57) Abstract :
Effective communication, essential in every conversation, is paramount in the medical field, where understanding the patient's concerns must take priority over language barriers. Therefore, the proposed model is a ChatGPT powered WhatsApp chatbot for medical advice in Indian regional languages. This process is broken down into five stages namely Input through WhatsApp, Transcribe, Fine Tuning Data, Input to ChatGPT, Sending ChatGPT results to User. In the beginning the chatbot asks the user to select their preferred language through text or voice inputs in the system. The Transcriber is then responsible for converting the speech into text using the Google's SpeechtoText API. The Training Dataset is prepared in conversational format where each message will have a role, content and optional name removing the unnecessary characters and applying the language specific preprocessing steps. The Fine- tuning data further does the parameter adjustment, batch size optimization, language refinement and Testing. GPT3 model is trained on Training Dataset first and then input from transcriber is further given to GPT3.0 model to get the expected results by understanding the complexity, richness of language of the question asked by the user and attempts to provide answers according to the medical dataset.

Drawing 1 of 2: System Architecture of WhatsApp Chatbot Powered by ChatGPT for Medical Advice in Indian Regional Language



No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024

(21) Application No.202421044649 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN AI-GUIDED PATHOPHYSIOLOGY DIAGNOSTIC AND TREATMENT PLATFORM (AIPDT) SYSTEM

(51) International classification	:G16H0050500000, G16H0050200000, G16H0050300000, G16H0050700000, A61B0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is an AI-guided pathophysiology diagnostic and treatment platform (AIPDT) system (100) comprises an integrated multi-omics analysis module (102) configured to combine genomics, proteomics, metabolomics, and transcriptomics data to provide a comprehensive assessment of disease mechanisms. The system includes an AI-driven diagnostic algorithms module (104) employing advanced AI algorithms to analyze clinical data, imaging, and multi-omics datasets. The system also includes a dynamic disease modelling module (106) configured to generate dynamic models of disease progression based on patient-specific data. The system also includes a personalized treatment optimization module (108) utilizing AI and machine learning to recommend personalized treatment plans tailored to individual patient pathophysiological profiles. The system also includes a predictive pathophysiology insights module (110) predicting disease progression under various scenarios. The system also includes a real-time monitoring and adjustment module (112) integrated with wearable devices and remote monitoring tools.

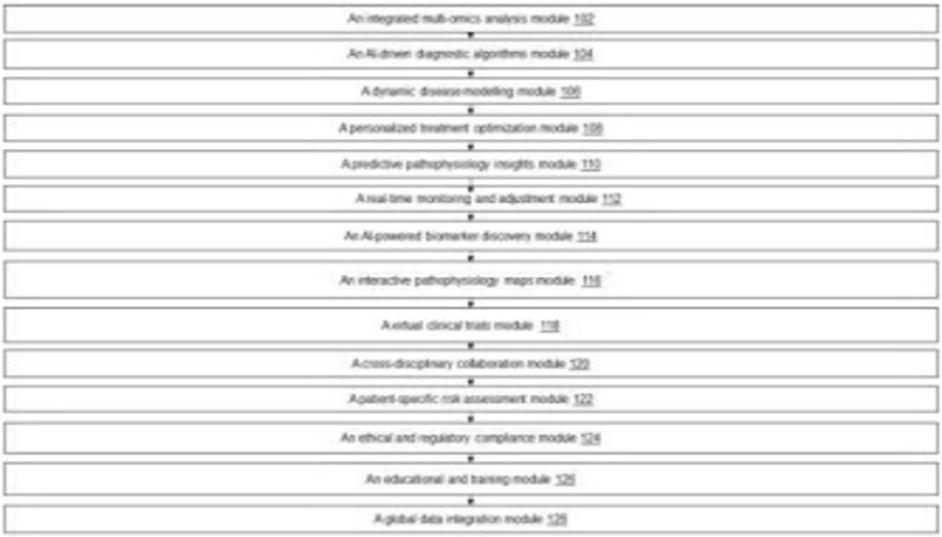

FIG. 1

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024
(21) Application No.202421044650 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SMART PATHOPHYSIOLOGY-INFORMED DRUG DELIVERY SYSTEM (SPIDDS)

(51) International classification	:A61B0005000000, G16H0050300000, G16H0010600000, G16H0050700000, G16H0050200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a smart pathophysiology-informed drug delivery system (SPIDDS) (100) comprises a real-time pathophysiological monitoring module (102) configured to continuously monitor key physiological and biochemical parameters relevant to a patient's disease. The system includes an adaptive drug delivery module (104) configured to adjust the timing, dosage, and combination of medications based on real-time data to match the patient's current physiological needs. The system also includes an AI-driven predictive analytics module (106) employing AI algorithms to analyse collected data and predict upcoming changes in the patient's condition. The system also includes a personalized treatment algorithms module (108) utilizing machine learning models trained on large datasets to develop personalized treatment algorithms that consider the patient's unique pathophysiological profile, medical history, and genetic information. The system also includes a multi-drug management module (110) configured to manage and administer multiple medications simultaneously.

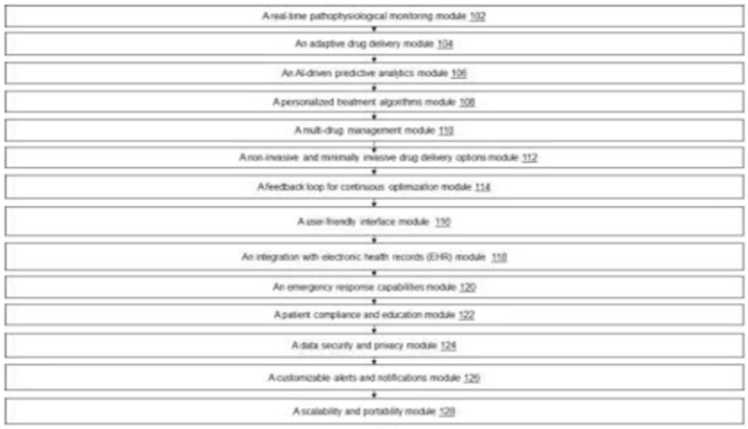

FIG. 1

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/06/2024

(21) Application No.202421044814 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : ROBOTIC PROCESS AUTOMATION FRAMEWORK FOR EFFICIENT BUSINESS PROCESS MANAGEMENT

(51) International classification	:G06Q0010060000, A61P0001000000, G06F0008200000, G06F0009445000, C12Q0001684400
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

Abstract The invention discloses an advanced Robotic Process Automation (RPA) framework designed for efficient business process management. The framework includes an RPA orchestrator, bot designer, bot engine, AI and ML modules, an integration layer, a security module, and reporting and analytics tools. This comprehensive solution offers scalability, flexibility, and intelligent automation capabilities, ensuring seamless integration with existing BPM systems and enhancing overall operational efficiency.

No. of Pages : 8 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/06/2024
(21) Application No.202421047913 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NON-EXPERT-USER DRIVEN, REAL-TIME, MULTIPLE DISCONNECTED DATABASES QUERYING AND FORECASTING SYSTEM.

(51) International classification	:G06N0020000000, G06F0016245200, G06F0016245500, G06F0016242000, G06Q0010100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention introduces a non-expert-user driven, real-time, multiple disconnected databases querying and forecasting system. This system enables users to interact with databases using natural language rather than technical query languages like SQL. The system includes an input device (e.g., microphone, keyboard, etc.) and a natural language text parser. The text parser analyzes user input to identify the relevant database tables, columns, and intended query operations. This information is translated into an appropriate SQL query, which is then executed against one or more databases. The query results are passed to a visualization display for presentation in a user-friendly format, such as tables or graphs. Crucially, this system eliminates the need for users to have any prior knowledge of database structures or query languages. It also facilitates complex queries across multiple, potentially disparate databases. Additionally, the invention extends this natural language interface to integrate with machine learning-based forecasting. Users can specify a data quantity and a desired time horizon through natural language. The system again parses this input, identifies the relevant data, and constructs a suitable dataset. A machine learning forecaster aggregates the data and selects an appropriate machine learning model. After training and inference, the results are visualized for the user. This invention significantly simplifies data extraction and analysis for non-technical users. It has the potential to streamline information retrieval and promote data-driven decision-making across a wide range of applications.

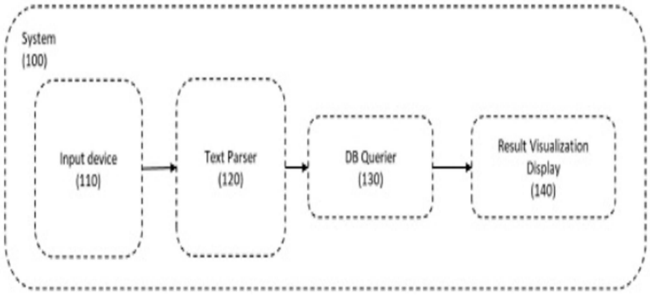

Figure 1

No. of Pages : 22 No. of Claims : 17

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043873 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEVICE AND METHOD FOR EXTRACTING MUSIC PRESENT IN A DIGITAL CONTENT

(51) International classification :H04N0021845000, H04L0065600000, G06T0003400000, H04L0067020000, G06Q0030060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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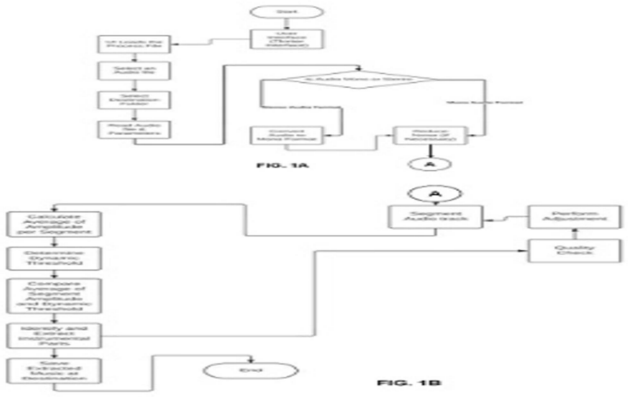
(57) Abstract :
ABSTRACT DEVICE AND METHOD FOR EXTRACTING MUSIC PRESENT IN A DIGITAL CONTENT A computing device (200) to extract music present in a digital content is disclosed. The computing device is a server or a smartphone. The computing device (200) includes a processor (210) configured to receive the digital content, identify at least one segment in the received digital content having a presence of a music therein by extracting one or more attributes from the digital content, trim the at least one identified segment having the presence of the music, and present the at least one trimmed segment as the music present in the digital content. FIGs. 1A-1B is the reference figure.



No. of Pages : 38 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043877 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A CHATBOT SYSTEM FOR EASY ACCESS TO HEALTHCARE INFORMATION

(51) International classification	:G16H0010600000, G06N0020000000, H04L0051020000, G06F0003048200, G16H0080000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a chatbot system (100) for easy access to healthcare information comprising a plurality of user device (102) having a camera module (104) and an input module (106). The system (100) comprising a communication module (108) configured to facilitate bi-lateral high speed data transfer. The system (100) comprising a location tracking module (110) configured to track the live or current location of a user. The system (100) comprising a conversational chatbot platform (112) further comprising a natural language processing module, a medical database (116), a machine learning engine (118), an intelligent assistant module (120), a symptom assessment module (122), and a personalized health recommendations module (124). The system (100) comprising a healthcare center interface (126) configured to upload patient medical history and medication records and real-time doctor availability schedule to the medical database (116) and enable direct doctor-patient connect via a video call.

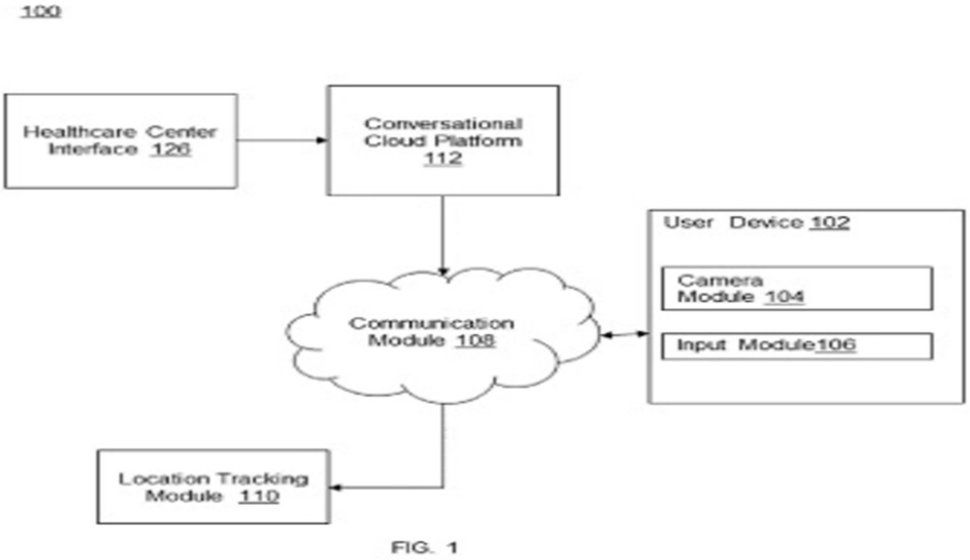

FIG. 1

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421043906 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ENERGY GENERATION BY USING SOUND

(51) International classification :H02N2/18, H04R17/00, H02J7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The law of conservation of energy states that energy can be neither created nor be destroyed but it can be converted from one form to another form of energy. Environmental pollution is a major problem facing by all countries around the world. Rapid growth on the industrial and urban side has concluded in vast quantities of potentially harmful waste being related to the environment. The sound is form of mechanical energy. It can be converted into electrical energy through many approaches including heating by using diaphragm and through using piezoelectric material. Some noises cannot be restricted such noises at market. Traffic, railway stations, industries etc. When sound vibration is on diaphragm then strain and stressed so that converted in electrical energy and piezoelectric is made of crystalline structure material which direct convert mechanical to electrical energy. The major area to focus is how we can enhance the performance of electricity formed by conversion of sound energy.

No. of Pages : 15 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024

(21) Application No.202421044069 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADVANCED FRUIT QUALITY ASSESSMENT USING THERMAL AND VISUAL CAMERAS FOR ADULTERATION DETECTION

(51) International classification	:G06T0007000000, A61B0005000000, H04N0005330000, A61B0005145000, G01N0031220000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The proposed invention introduces a novel device and system for enhancing fruit quality assessment. This system integrates an AMG8833 thermal camera and a USB visual camera within a Raspberry Pi framework to address the critical issue of fruit adulteration. By capturing thermal images, the system detects heat anomalies that suggest internal adulteration. Simultaneously, it employs image processing techniques for visual inspection to identify external surface adulterations. The combined results provide a comprehensive analysis, enabling the classification of fruits as either normal or adulterated based on predetermined thresholds. This invention significantly advances the field of food quality monitoring, demonstrating promising results and offering valuable insights for future improvements and applications in related areas.

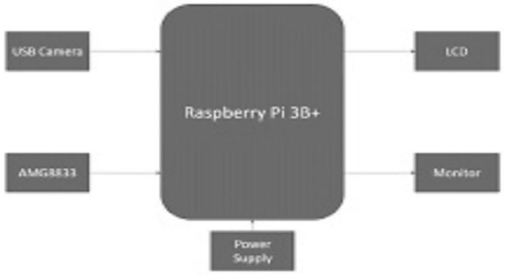

Fig.1: Block diagram of *'Raw-Food Quality Tester: RFT-24'*

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024

(21) Application No.202421044075 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : COMBINING ALGAE CULTIVATION WITH SAP FOR CO2 CAPTURE AND BIOFERTILIZER PROCESS THEREOF

(51) International classification :C12N1/12, A01G33/00, C05G3/00, C05G1/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Combining Algae Cultivation with SAP for CO2 Capture and Biofertilizer Process Thereof involves pre-treating seaweed (101) to create Seaweed Alkali Product (SAP) (102). Seaweed is harvested (101(a)) and washed (101(b)) before undergoing mechanical crushing and alkali treatment (102 (a), (b)) to release valuable biomolecules. SAP is then diluted, filtered (102 (c), (d)), and used as growth medium for cultivating microalgae (103). Second stage focuses on microalgae cultivation and carbon capture (103). Microalgae strains are introduced into SAP medium (103(a)) along with nutrients (103 (b)) and CO2-enriched gas supply (103 (d)). The SAP enhances CO2 uptake by microalgae through conversion to bioavailable bicarbonate (104 (a)). Harvested microalgae biomass is used for biofertilizer production (105(c)) or further processed to extract amino acids (106). The remaining seaweed solids can be converted into activated carbon for additional CO2 capture (109). Finally, captured CO2 can be released from spent capture media through regeneration processes (111).

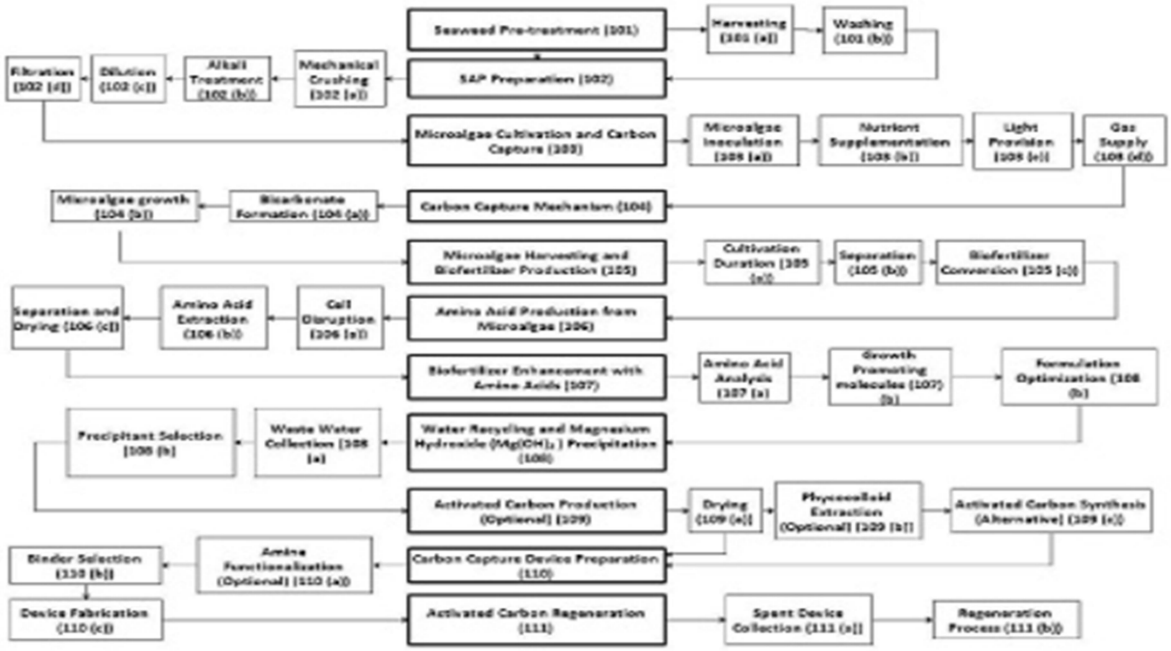

Fig 1: Flowchart

No. of Pages : 36 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421044081 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A DIGITAL DEVICE TO INTERFACE WITH SAP HANA

(51) International classification	:G06F0021620000, G11C0007220000, G06F0021310000, G06F0016250000, G06F0009445000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention relates to a digital device designed to interface seamlessly with SAP High-performance Analytic Appliances (HANA), providing an intuitive and user-friendly platform for real-time data access and analysis. It features customizable dashboards, advanced data visualization tools, and robust connectivity through appropriate communication protocols and APIs. The device ensures strong security with authentication, data encryption, and role-based access control, while optimizing performance via efficient data models, indexing strategies, and caching mechanisms. Designed for scalability and compatibility, it supports growing data volumes, increasing user demands, and integration with various devices, operating systems, and enterprise systems, enhancing overall usability and decision-making capabilities.

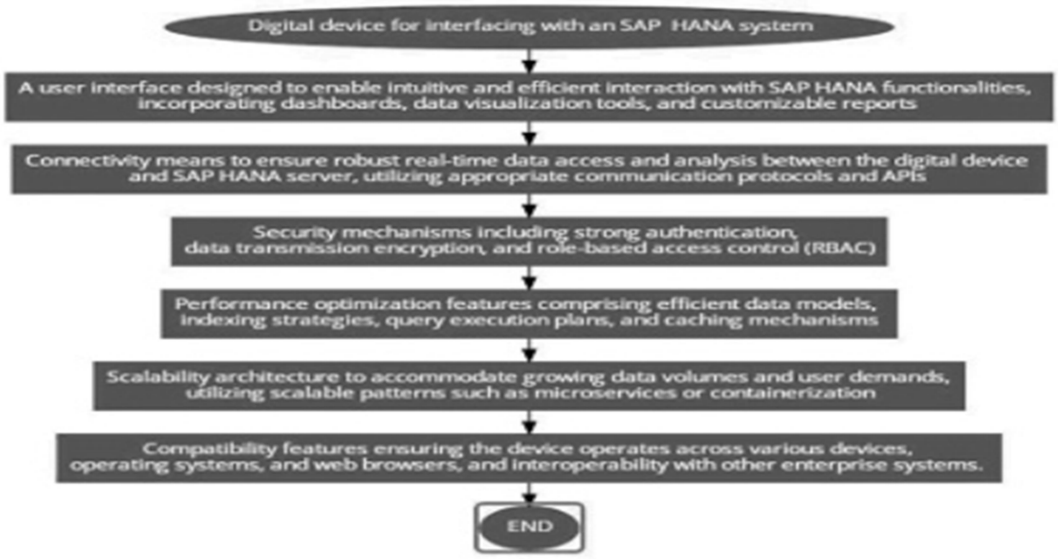

Fig. 1 Digital device for interfacing with an SAP High-performance Analytic Appliance (HANA)

No. of Pages : 16 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2024
(21) Application No.202421044084 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : GENERATIVE ARTIFICIAL INTELLIGENCE DEVICE FOR SAP HANA DATA MANAGEMENT

(51) International classification	:G06N0003080000, G06N0003040000, G06Q0030020000, G06Q0010060000, G16H0050200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention relates to a system and method for enhancing data management within SAP HANA environments through the utilization of generative artificial intelligence (AI) techniques. By employing advanced AI models like Generative Adversarial Networks (GANs) or Variational Autoencoders (VAEs), the invention generates synthetic data that closely resembles real SAP HANA datasets, capturing intricate patterns and structures for more accurate analysis and decision-making. Seamless integration within the SAP HANA environment, rigorous testing, and ongoing refinement ensure the accuracy, reliability, and security of the generated synthetic data, empowering organizations to leverage their SAP HANA data effectively for informed decision-making and strategic insights.

Fig. 1 System for managing SAP HANA data using generative AI

No. of Pages : 18 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/05/2024
(21) Application No.202427041892 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NOVEL CROP NUTRITION COMPOSITION

(51) International classification	:A01N 59/02, C05D 9/02, C05G 5/10, C05G 5/27
(31) Priority Document No	:202221063214
(32) Priority Date	:04/11/2022
(33) Name of priority country	:----------
(86) International Application No Filing Date	:PCT/IN2023/051024 :06/11/2023
(87) International Publication No	:WO 2024/095295
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention particularly relates to a crop nutrient and fortification composition comprising elemental Sulphur in the range of 1% to 90% by weight of the total composition; at least one trace nutrient selected from Selenium and Vanadium in its elemental form or its salts, complexes or derivatives thereof wherein the elemental content of Selenium or Vanadium in the composition is in the range of 0.001% to 10% by weight of the total composition; and at least one non-ionic or anionic surfactant; wherein the composition comprises particles in the size range of 0.1micron to 30 microns and wherein the composition is in the form of water dispersible granule or aqueous suspension. The present invention also relates to process of preparation of the crop nutrient and fortification composition. The invention furthermore relates to a method for enhancing nutrient uptake or improving the plant health and yield by treating a plant, plant propagation material, locus or parts thereof, a seed, seedling or surrounding soil with the crop nutrient and fortification composition.

No. of Pages : 84 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/06/2024
(21) Application No.202421047660 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTEGRATED TEMPERATURE SENSING SYSTEM FOR REAL-TIME LEAF DISEASE DETECTION AND CROP MANAGEMENT IN AGRICULTURE

(51) International classification	:G06Q0050020000, A61B0005000000, G16H0040670000, A01G0007000000, G01N0033000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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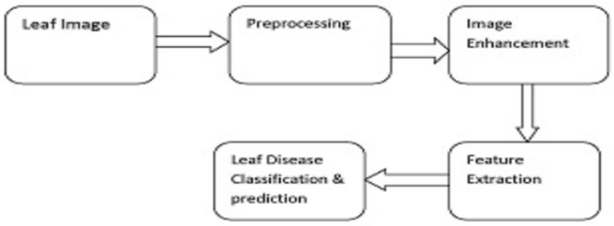
(57) Abstract :
The integration of a temperature sensor into a laptop platform is used for real-time monitoring of environmental conditions in agricultural settings. The integrated temperature sensing system for leaf disease detection and crop management in agriculture comprises a laptop platform equipped with a temperature sensor. Leaf diseases create major challenges to agricultural productivity worldwide, affecting crop yield and its quality. Timely detection and effective management of these diseases are crucial for minimizing crop losses and ensuring food security. Traditional methods of disease diagnosis often rely on manual inspection, which can be physical, time-consuming, and prone to human error. By analyzing temperature data, the system can detect early signs of leaf diseases, facilitating proactive intervention and optimized crop management practices. The implementation of algorithms or methodologies for processing temperature data is to provide actionable insights for crop health management. The use of temperature data is used to detect and analyze patterns indicative of leaf diseases in plants. This system enables real-time monitoring of environmental conditions, particularly temperature variations, in agricultural settings. The system empowers farmers with data-driven insights for decision-making, leading to improved productivity and sustainability in agriculture. Through advanced data analysis techniques, including pattern recognition and anomaly detection, the system offers early detection of diseases and stress factors affecting plants.

Drawing 1 of 2 : Existing System for Real-Time Leaf Disease Detection and Crop Management in Agriculture



No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/06/2024

(21) Application No.202421047665 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MACHINE LEARNING TOOL FOR PREDICTING CONCRETE STRENGTH

(51) International classification	:G06N0020000000, G06K0009620000, G06F0030200000, G06N0020200000, G06N0020100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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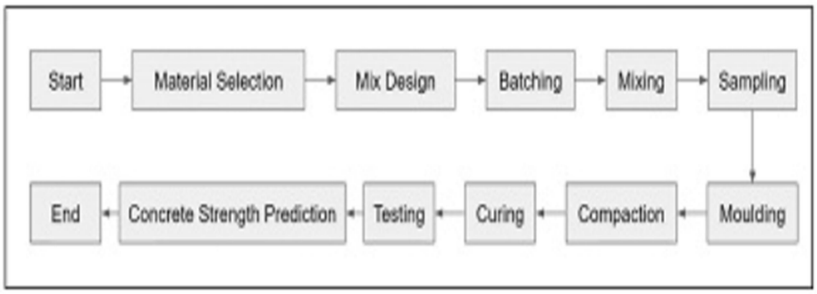
(57) Abstract :
"Concrete Strength Prediction using Machine Learning" aims to accurately predict concrete compressive strength through the utilization of various machine learning algorithms. The project employs a dataset that includes vital components of concrete mixtures like cement, blast furnace slag, fly ash, water, superplasticizer, coarse aggregate, fine aggregate, age, and, most importantly, concrete compressive strength. The primary goal is to predict concrete compressive strength based on the composition of these mixtures. To achieve this, multiple machine learning algorithms, such as linear regression, decision trees, random forests, and support vector regression, are employed and subsequently compared to identify the best-performing algorithm, along with feature engineering and parameter tuning to enhance model accuracy. Ultimately, this research seeks to offer valuable insights into the application of machine learning for predicting concrete compressive strength, thereby assisting civil engineers and stakeholders in optimizing concrete mixtures for safer and more robust construction projects. The resulting predictive models contribute to advancements in materials science and the development of safer and more sustainable infrastructures.

Drawing 1 of 2: Block Diagram of Existing Process



No. of Pages : 12 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/05/2024
(21) Application No.202424040945 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PROCESS FOR PRODUCING WALL PUTTY ADMIXTURE FROM INDUSTRIAL WASTES & BY-PRODUCTS

(51) International classification	:C04B18/14, C04B18/24, C0418/08, C04B28/00
(31) Priority Document No	:63/563,219
(32) Priority Date	:08/03/2024
(33) Name of priority country	:----------
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
The present invention relates to a process for making a wall putty, comprising mineral wastes and by-products with alkali activation system. The wall putty comprises at least 50% by weight wastes and/or by-products such as fly ash, pond ash, alone or in combination with each other. Fly ash is used as it is produced by the respective industry, while dry pond ash is either sieved or ground to less than 0.15 mm size. To the raw material, 0.0 to 2.0% by weight additives can be added such as methyl hydroxyethyl celluloses, polycarboxylate polymer, dispersible polymer powder, alone or in combination. Additionally, 0.5 to 15% by weight sodium silicate, sodium carbonate, alone or in combination with each other are added to the raw material. To the mixture, 0.0 to 5.0% by weight pigment can be added. Moreover, finely grade sand or fine aggregates can be added between 0.0 to 60.0% by weight to the raw material to adjust the mechanical properties of the wall putty.

No. of Pages : 16 No. of Claims : 19

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2024

(21) Application No.202424044323 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SHOE UPPER AND SHOE HAVING THE SAME

(51) International classification	:A43B23/26, A43B23/02
(31) Priority Document No	:202322813747.6
(32) Priority Date	:17/10/2023
(33) Name of priority country	:----------
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
ABSTRACT SHOE UPPER AND SHOE HAVING THE SAME Embodiments of the present application provides a shoe upper and a shoe having the same, characterized in that the shoe upper comprises a shoe upper having a vamp toe portion and a vamp side portion that are connected to each other, wherein the inner surface of the vamp side portion is provided with a position limiting component; a tongue having a first portion and a second portion that are oppositely disposed, wherein the first portion of the tongue is affixed to the vamp toe portion; an elastic band configured to connect the second portion of the tongue with the vamp side portion, wherein at least part of the elastic band is located between the position limiting component and the inner surface of the vamp side portion, and the second portion of the tongue is in limiting mating with the position limiting component under the action of the elastic band. According to the technical scheme of the embodiments of the present application, the tongue can be prevented from dropping after the user takes off the shoe, so that a sufficient distance can be kept between the tongue and the insole. This avoids obstructing the insertion of the foot due to interference between the tongue and the foot when the user puts on the shoe. The insertion does not require any manual operation, thus effectively improving the efficiency of putting on the shoe by the user and improving the user's experience. Figure 1.

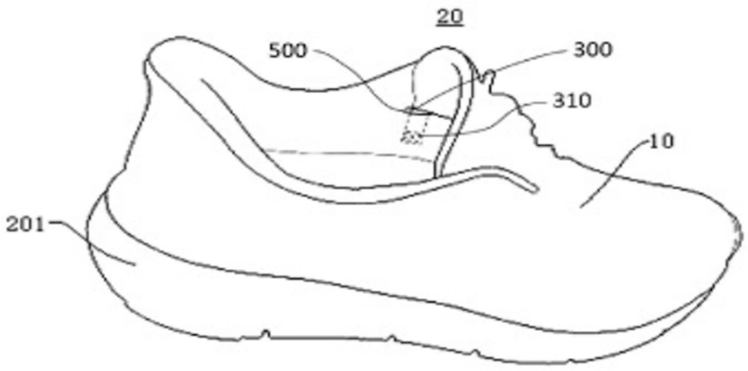

FIG. 1

No. of Pages : 30 No. of Claims : 19

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/06/2024
(21) Application No.202421046212 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "ORAL DISINTEGRATING FILM COMPOSITION OF WITHANIA SOMNIFERA EXTRACT FOR THE TREATMENT OF ANXIETY"

(51) International classification :A61K36/48, A61K9/70, A6147/38, A61K47/26, A61K47/12, A61K47/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
Orally disintegrating films are formulations that when placed inside the oral cavity, disintegrate rapidly facilitating drug release. They are beneficial over conventional dosage forms to enable quick drug release, increase patient compliance and protect drugs from first pass metabolism. Withania Somnifera, also known as Ashwagandha, is known to help with mood regulation, insomnia and anxiety. Films were prepared by solvent casting method using HPMC E5 polymer as film forming agent, croscarmellose sodium as super-disintegrant, propylene glycol as plasticizer, citric acid as saliva stimulating agent and aspartame as sweetener. Box-Behnken design was used for optimization of formulation. The films prepared were characterized for disintegration time, film forming capacity, pH, folding endurance, thickness, mouth dissolution time, tensile strength, weight variation, content uniformity and drug release. The effect of varying concentrations of film forming agent, plasticizer and super-disintegrant were studied. All batches displayed satisfactory results for drug content and percentage of drug released. Maximum drug release was observed for batch F13 which was 95.19±3.22% and disintegration time was found to be 33.51±2.84 seconds. The findings suggested that an effective formulation of Withania Somnifera extract can be prepared for the treatment of anxiety.

No. of Pages : 22 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/06/2024

(21) Application No.202421046213 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "A HYDROGEL PATCH COMPRISING CURCUMIN AND PIPERINE"

(51) International classification :A61L15/20, A61K31/12, A61K31/4525, A61K47/10, A61K47/36, A61K47/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a hydrogel patch comprising curcumin and piperine. The invention further relates to a method for fabrication of the hydrogel patch and a method of wound healing by applying the hydrogel patch over the wound.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/06/2024
(21) Application No.202421046220 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "ROSIGLITAZONE LOADED LIPONIOSOMAL FORMULATION WITH EXTENDED HALF-LIFE"

(51) International classification :A61P3/06, A61K9/127, A61K9/1272, A61K31/44, A61K31/427
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a hybrid formulation of liposome and niosomes in the form of liponiosomes loaded with drug rosiglitazone having extended half-life. In the said formulation, cholesterol is used as the membrane stabilizer, span 60 as non-ionic surfactant, phosphatidylcholine as the lipid and tween 80 as an edge activator. The use of edge activator in the said formulation assists in enhancing membrane flexibility and drug permeability. The rosiglitazone loaded liponiosomal formulation is prepared by adopting the reverse ethanol injection method.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/05/2024
(21) Application No.202427041893 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NOVEL CROP NUTRITION COMPOSITION

(51) International classification	:A01N 59/02, C05D 9/02, C05G 5/10, C05G 5/27
(31) Priority Document No	:202221063210
(32) Priority Date	:04/11/2022
(33) Name of priority country	:----------
(86) International Application No Filing Date	:PCT/IN2023/051023 :06/11/2023
(87) International Publication No	:WO 2024/095294
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention particularly relates to a crop nutrition and fortification composition comprising elemental sulphur in the range of 1% to 90% by weight of the total composition; one or more of zinc in the form of water insoluble salts, complex or derivative thereof wherein the content of elemental zinc in the composition is in the range of 0.1% to 50% by weight of the total composition; elemental selenium or its salts, complexes, derivatives or mixture thereof wherein the elemental selenium content is in the range of 0.001% to 10% by weight of the total composition; and at least one surfactant in the range of 0.1% to 40% w/w of the total composition; wherein the composition has particles in the size range of 0.1 micron to 30 microns and wherein the composition is in the form of granules or aqueous suspension. The present invention also relates to process of preparation of the crop nutrition and fortification composition. The invention further relates to a method of enhancing nutrient uptake and improving the plant health and yield by treating a plant, plant propagation material, locus or parts thereof, a seed, seedling or surrounding soil with the crop nutrition and fortification composition.

No. of Pages : 88 No. of Claims : 23

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/06/2024
(21) Application No.202427043057 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MULTICISTRON EXPRESSION VECTOR FOR COVID-19 VACCINE

(51) International classification	:A61K 39/215, A61P 31/14, C07K 14/005, C12N 7/00, C12N 15/50
(31) Priority Document No	:202121056210
(32) Priority Date	:03/12/2021
(33) Name of priority country	:----------
(86) International Application No Filing Date	:PCT/IB2022/061742 :03/12/2022
(87) International Publication No	:WO 2023/100159
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention provides an expression vector comprises gene of interest encode more than one structural protein to enhance immune responses against Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and its variants. Further, the present invention the expression vector comprises spike protein of SARS-CoV-2 and one or more structural protein selected from membrane protein, envelope protein and nucleocapsid protein of SARS-CoV-2. The expression vector expressed mRNA capable to encode more than one structural protein to provide immune response against SARS-CoV-2 virus.

No. of Pages : 41 No. of Claims : 33

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/03/2023
(21) Application No.202341018754 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CAVI-DIGESTOR: A PLUG AND PLAY MOBILE SYSTEM FORINTENSIFIED BIOGAS GENERATION

(51) International classification :C12M1/04, C12M1/10, C02F11/04, B01J3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: “CAVI-DIGESTOR: A PLUG AND PLAY MOBILE SYSTEM FOR INTENSIFIED BIOGAS GENERATION” 7. ABSTRACT The present invention discloses a retrofittable hydrodynamic cavitation device used in biogas generation. The device comprises a stator assembly, a rotor assembly grooved with multiple indentations, and a rotating shaft installed in the stator. The cavitation device of dimensions rotor length (a), rotor outer diameter (b), shaft length (c), indentation pitch (d), indentation diameter (e), drive fixing arrangement (f), inner space of drive and cavitator (g), shaft outer diameter (h), indentation depth (i), gap between stator and rotor (j), number of indentations (n). The rotating hydrodynamic cavitation technology efficiently generates cavitation bubbles that collapse and release a huge amount of energy in biomass, breaking the long fibrous structure of the biomass into small fragments and increasing the surface area. This makes the lignin in the biomass more suitable for subsequent bacterial decomposition, resulting in higher yields of biogas during the anaerobic digestion process. The device is designed to reduce agro waste and stubble burning and generate energy from them. The figure referring to the abstract is Fig.1.

No. of Pages : 24 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2023
(21) Application No.202341036584 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM FOR PROVIDING A NETWORKING PLATFORM FOR USER INTERACTION AND A METHOD THEREOF

(51) International classification	:G06Q0010100000, G06Q0020360000, G06Q0020100000, H05K0007200000, H04L0067500000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A SYSTEM FOR PROVIDING A NETWORKING PLATFORM FOR USER INTERACTION AND A METHOD THEREOF The present invention relates to a system (100) and a method (300) for providing a networking platform for B2B interaction between one or more users. The system (100) integrates a processor (201) and a memory (202) that stores instructions to execute various tasks. The system (100) receives various types of content from the one or more users. Further, the system (100) analyzes one or more user profiles associated with the one or more users to determine the relevancy of the received content based on a user input. By identifying one or more relevant profiles, the platform ensures that content is shared with appropriate users, fostering collaboration and co-creation. The co-created content is then provided to the one or more relevant users, enhancing engagement and knowledge sharing. Overall, the system (100) enables efficient and personalized content delivery, enhancing effective collaboration and co-creation of ideas, product and innovation. (To be published with Figure 2)

No. of Pages : 45 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2023
(21) Application No.202341036585 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A METHOD FOR PROVIDING CONTENT TO A USER AND A SYSTEM THEREOF

(51) International classification	:G06Q0030020000, H04N0021450000, C07D0307620000, C07C0059255000, C07C0229120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A METHOD FOR PROVIDING CONTENT TO A USER AND A SYSTEM THEREOF The present invention relates to a system and a method for providing content to users based on their preferences, and interests. It involves the creation of user profiles based on input data reflecting user intent, preferences, and interests. These profiles are segmented and analyzed using machine learning techniques to identify relevant users for specific content. The method encompasses various forms of content, including posts, polls, promotions, advertisements, and inquiries, which are tailored to match the preferences of targeted user groups. Furthermore, the invention incorporates data analytics to generate insights from user interactions and engagement metrics, facilitating informed decision-making. Feedback mechanisms are integrated to refine content recommendations, ensuring continual improvement in user experience. Overall, the method enables efficient and personalized content delivery, enhancing user satisfaction and engagement across diverse platforms. [To be published with Fig. 2]

No. of Pages : 48 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2023
(21) Application No.202341036586 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR GENERATING PERSONALIZED USER FEED

(51) International classification :B25J0009160000, G06F0003060000, H04W0012080000, G01S0005020000, G01S0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SYSTEM AND METHOD FOR GENERATING PERSONALIZED USER FEED The present invention discloses a method and a system that provides personalized user feed to a user. The method comprises creating a personalized user feed by first establishing a user profile derived from inputs reflecting user intent, preferences, and interests. Further, the method extracts keywords, topics, and themes from the user profile to discern user preferences by utilizing natural language processing (NLP) techniques. Further, the method generates a personalized feed by aggregating content from various sources, considering a weighted topic distribution, user preferences, and intent. The aggregated content is ranked and prioritized based on user preferences, content recency, and user sentiment. The personalized user feed is then provided to the user on the platform, ensuring a tailored and relevant content experience. The disclosed method and system leverage advanced NLP techniques and dynamic content ranking to enhance user engagement and satisfaction by delivering highly personalized content. (To be published with Fig. 3)

No. of Pages : 41 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/05/2023
(21) Application No.202341036621 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DENSE MEDIA CYCLONE FOR COAL BENEFICIATION WITH HIGHER SEPARATION EFFICIENCY AND LOWER MISPLACEMENTS

(51) International classification :B04C5/02, B04C5/08, B04C5/30
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT DENSE MEDIA CYCLONE FOR COAL BENEFICIATION WITH HIGHER SEPARATION EFFICIENCY AND LOWER MISPLACEMENTS The present invention relates to dense media cyclone (DMC) for coal beneficiation with higher separation efficiency and lower misplacements. Dense Media Cyclones are used to filter mined and crushed coal by separating the lighter Carbon-dominated particles from the heavier ash-dominated ones. The complexity of fluid flow inside the cyclone makes it very difficult to design and operate cyclones that are free of process imperfections (called Separation Efficiency or Ep) that result in misplacements, i.e. coal and ash dominated particles going in the reverse directions. Here a new cyclone has been designed with operating parameters that result in significant improvement in Separation Efficiency and reduction in misplacements. This is done by reduction of inlet flow velocity coupled with increase of cyclone dimensions maintaining similarity of shape except for the vortex finder where the increase is damped to a specific level. Highly accurate simulations using Computational Fluid Dynamics and Monte-Carlo techniques, themselves validated against experiment as well as operating cyclones, have been used for this design and later its verification.
Figure of abstract: FIG. 1

No. of Pages : 36 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/06/2023
(21) Application No.202341040133 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR MONITORING BRAIN HEALTH OF A SUBJECT

(51) International classification	:A61B0005000000, A61B0005160000, G16H0040670000, G16H0050300000, A61M0021000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed is a system (200) and a method (1300) for monitoring brain health of a subject. The system (200) comprising a functional near infrared spectroscopy (fNIRS) sensor (102a), at least one in-ear electroencephalographic (EEG) device (104), and at least one processor (202). The at least one processor (202) is configured to receive fNIRS signal (304) and EEG signal (302) from the fNIRS sensor (102a) and the EEG device (104) respectively. The at least one processor (202) is configured to compute a brain health index (BHI) value corresponding to each of the EEG signal (302) and the fNIRS signal (304). The at least one processor (202) is configured to determine a state of the brain health based on comparing mean BHI value corresponding to each of the EEG signal (302) and the fNIRS signal (304) with a predefined threshold value.

No. of Pages : 41 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2023
(21) Application No.202341042869 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MECHANICAL ENERGY AMPLIFIER

(51) International classification :F03G7/10, F03G3/08, F16H1/20, F16H3/72, F03G7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Title: MECHANICAL ENERGY AMPLIFIER 7. ABSTRACT The present invention relates to mechanical energy amplifier system (Fig. 1) is intended to deliver a comprehensive mechanical energy amplifier, placing specific emphasis on amalgamating the energy fusion modules (Fig. 2) with revectoring mechanical energy unit (Fig. 4) and a gear drive energy transfer module (Fig. 3). The energy fusion module (Fig. 2) comprises a bevel gear (4), flywheels (2), and an alternator (10) arranged in a specific sequence in series on the same main shaft (3), with the revectoring mechanical energy unit (Fig. 4) operating in parallel. By linking two arrays of energy fusion modules (Fig. 2) with revectoring mechanical energy unit (Fig. 4) in parallel at both extremities of the gear drive Energy Transfer Module (Fig. 3), a potent mechanical energy amplifier system (Fig. 1) with the ability to generate electrical power can be established. The operational principle of the mechanical energy amplifier system (Fig. 1) is based on transforming rotational energy into electrical energy. The mechanical energy amplifier's core system generates electricity with an alternator (10), flywheel (2) electric motor (1) and revectoring mechanical energy unit (Fig. 4). Figure associated with Abstract is Fig. 1.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2023
(21) Application No.202341044892 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM FOR AUTOMATIC SCREENING, PREDICTION AND DETECTION OF GLAUCOMA AND A METHOD THEREOF

(51) International classification :A61P0027060000, B07B0001420000, B07C0005360000, B07B0001280000, G06N0005040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT “A System for Automatic Screening, Prediction and Detection of Glaucoma and a Method thereof” Present invention discloses a system for automatic screening, prediction and detection of glaucoma and a method thereof. The invention provides an automatic Computer aided detection (CADe) system and method that uses deep learning to generate a Gaze exploration index for detection of glaucoma. The detection of visual field loss in glaucoma patients while performing different day-to-day activities is done using exploratory eye gaze data. The system incorporates an eye-tracking system to identify eye movements of patients while performing different activities depicted as visual exploration tasks. The components of the system are data acquisition, feature analysis and clinical validation, model creation, explainability of the model and features, visualization, and the screening index. The CADe system is cost effective, portable and reliable that enables professionals at primary health care facilities to detect glaucoma early on resulting in timely medical interventions. Figure 1

No. of Pages : 89 No. of Claims : 29

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2023

(21) Application No.202341045435 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD TO CLEAN SOLAR PANELS

(51) International classification :H02S0020230000, F24S0025000000, C11D0011000000, F24S0040200000, H02J0007350000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Title: System and Method to Clean Solar Panels A system and method to clean solar panels with the aid of drones is disclosed. The images of solar panels are captured by at least one of the drones, wherein panels that require cleaning is identified, wherein multiple drones are sequentially dispatched to clean said solar panels. FIG.1

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/08/2023
(21) Application No.202341052422 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IMPROVED ARCHITECTURE OF REDOX FLOW BATTERY CELLS USING THIN, TEXTURED BIPOLAR PLATES AND THICK ELECTRODES

(51) International classification	:H01M8/02, H01M8/0202, H01M8/18
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
IMPROVED ARCHITECTURE OF REDOX FLOW BATTERY CELLS USING THIN, TEXTURED BIPOLAR PLATES AND THICK ELECTRODES The present invention relates to redox flow battery cells to address high pressure losses caused when electrolyte having high viscosity flows through large porous electrodes, and non-uniform compression of electrodes when large cells are used in high-power battery stack. The redox flow battery cell comprises thin, textured bipolar plates with alternating convex-concave dimples, and thick electrodes with uniform compression. The present invention enables development of lightweight, easy to manufacture, efficient, and high-power battery stack.

No. of Pages : 21 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/09/2023
(21) Application No.202341062278 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HERBAL MOUTHWASH FOR ORAL HYGIENE

(51) International classification	:A61K0036482000, A61K0036480000, A61K0036185000, A61K0036670000, A61Q0011000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
TITLE: HERBAL MOUTHWASH FOR ORAL HYGIENE APPLICANT: S. KAMALENDERAN ABSTRACT The present invention discloses a polyherbal mouthwash formulation for relieving periodontal problem. The polyherbal mouthwash formulation of the present invention comprises of therapeutically effective amount of characterized combination of dried and powdered root of Indigofera aspalathoides, bark of Prosopis juliflora, fruit of Terminalia chebula, Asphaltum punjabianum,bark of Quercus infectoria, leaves of Cassia senna, root of Alpinia galanga, fruit of Piper nigrum, fruit of Piper longum, root of Anacyclus pyrethrum, flower buds of Syzygium aromaticum, Halite, Alum and Sodium chloride. The present invention also discloses a polyherbal mouthwash formulation prepared by mixing therapeutically effective amount of characterized combination of dried and powdered root of Indigofera aspalathoides, bark of Prosopis juliflora, fruit of Terminalia chebula, Asphaltum punjabianum, bark of Quercus infectoria, leaves of Cassia senna, root of Alpinia galanga, fruit of Piper nigrum, fruit of Piper longum, root of Anacyclus pyrethrum, flower buds of Syzygium aromaticum, Halite, Alum and Sodium chloride.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/10/2023

(21) Application No.202341067341 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A METHOD FOR ISOLATING GLYCYRRHIZIC ACID (GLA) FROM GLYCYRRHIZA GLABRA

(51) International classification	:A61K0036484000, A61K0008978900, A61P0043000000, C07D0493040000, A61K0036380000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A method to extract GLA from Glycyrrhiza glabra Linn. Rhizomes using microwave separation is provided. The obtained extract GLA from Glycyrrhiza glabra Linn. Rhizomes does not use harsh solvents and have high purity levels.

No. of Pages : 8 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/11/2023
(21) Application No.202341075496 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART ENERGY HARVESTING HANDLEBAR GRIP SLEEVE FOR A BICYCLE WITH TACTILE TURN INDICATOR AND ROAD QUALITY RECORDER

(51) International classification	:H02N0002180000, B62K0021260000, G01C0021340000, G01C0021360000, H01L0041113000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
[001] The invention is proposed for the benefit of cyclists, which can help them with easy route planning with an energy-efficient device with energy harvesting technology embedded in a cycle handlebar grip sleeve or riding gloves or possibly several other places on cycle or cyclist. [002] The device will give an advanced tactile stimulus for turn indication based on the input from the map application at a precise time such that it is at a predetermined distance before the turn through a piezoelectric tactile actuator. The strength of the stimuli is modulated by the road quality. This is achieved by a novel way in which the piezoelectric energy harvesting device is being used for a dual purpose. Firstly, to generate electric current to charge the cells in the tactile module and secondly, to provide input about the road quality. [003] The road quality input is also used for two purposes. Firstly, for decision how strong the tactile stimuli should be and also as a data for map application to plan a route through better roads.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/11/2023
(21) Application No.202341077375 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FIRE EMERGENCE AND AUTOMATION SYSTEM USING ARDUINO

(51) International classification :A62C3/00, A62C3/0214, G08B13/19, G08B17/10, G08B17/117
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The titled invention "Fire Emergence And Automation System Using Arduino" disclosed the rapid 'development of Internet of Things (loT) technology has brought numerous advancements in various fields, including home automation and safety. This report presents a comprehensive overview of a fire emergence detection and automation system that utilizes flame and gas sensors integrated into an IoT framework. The objective of this system is to detect potential fire hazards in residential environments and take immediate automated actions to mitigate risks and ensure occupant safety. The proposed system comprises of flame and gas sensors strategically placed within the residential premises, interconnected with a central control unit through a wireless network. These sensors continuously monitor the surrounding environment for any signs of fire or hazardous gas emissions. In the event of detecting flames or high levels of gas concentration, the sensors trigger an alert to the central control unit, which initiates a series of predefined actions to combat the emergency situation. The central control unit«acts as the core processing unit for the entire system. It receives data from the flame and gas sensors, analyzes it in realtime, and determines the severity of the detected hazard. Based on the severity level. the control unit triggers appropriate actions such as activating fire suppression systems; alerting emergency services, and notifying the home owners. To enable efficient automation and seamless integration with other smart home devices, the central control unit leverages loT'technologies. It can communicate with other loTenabled devices such as smart thermostats, door locks, and lighting systems. In case of a fire emergency. the system can automatically turn off electrical appliances, unlock doors for easy evacuation, and illuminate escape routes for better visibility. The implementation 9f this system significantly enhances home safety by minimizing response time during fire emergencies. By leveraging flame and gas sensors in conjunction with IoT technologies, the system provides early fire detection and proactive mitigation measures, reducing the risk of property damage and potential harm to occupants. Furthermore, the system incorporates a mobile application that allows homeowners to remotely monitor their property‘s safety status. receive realtime alerts, and control various aspects of their smart home system. The application provides an intuitive user interface. enabling users to view sensor readings, historical data, and manage system settings.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/12/2023
(21) Application No.202341081748 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INDUSTRIAL GAS DETECTION ENSURING SAFETY & SECURITY-USING IOT

(51) International classification :G01N0033000000, H04L0067120000, A61B0005000000, H04W0004900000, G08B0021020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The titled invention" Industrial gas detection ensuring safety 8. security—using loT" is an loT—driven industrial gas detection system that integrates cutting—edge sensors, wireless connectivity, and cloud-based analytics for real-time monitoring of gas levels and safety' hazards. This innovation enables remote monitoring, early warning alerts, and predictive maintenance, enhancing safety in industrial environments. Its user-friendly interface and adaptability cater to diverse industrial needs, setting a new standard for gas detection technology. The M02 gas sensor continuously monitors the gas levels in the industrial environment. Sensor Output to ESP8266: Data from the gas sensor is sent to the ESP8266 module via analog or digital pins, depending on the sensor's interface. Data Processing on ESP8266: TheA ESP8266 processes the incoming data, possibly converting analog signals to digltal values, and checks whether the gas levels exceed the predetermined margin set by the government. Threshold Comparison: The ESP8266 module compares the'sensor data with the predefined government margin rate to determine 'rf it exceeds the allowed gas levels. 5. Alert Generation: If the gas levels surpass the defined threshold, the ESP8266 triggers an alert and prepares a message to be sent.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/12/2023

(21) Application No.202341081757 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FOOTBOARD AVOIDANCE SYSTEM FOR TRANSPORT VEHICLE

(51) International classification :G06F0009500000, H04L0065650000, C22C0038040000, F16K0024060000, F42B0003103000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The titled invention of Footboard Avoidance System for Transport Vehicle discloses is a ground-breaking safety innovation designed to lower the number of accidents and injuries brought on by footboards and other obstacles.The revolutionary effect on transportation safety that the Footboard Avoidan'ce System has is the result of the joint efforts of its constituent parts. A consistent power supply is ensured by the Voltage Regulator [04], which minimizes changes, while the Transformer [06] streamlines conversion of energy and improves system functionality. The LCD Display makes it possible to get real-time data [05], which improves awareness of footboard dangers. Beyond fundamental safety, the system is anticipatory in that it allows the motor [02] to react quickly to threats that are controlled by the entire system.0bje'ct detection by the Load Cell [03] causes the relay [01] to react. This proactive strategy represents a move in the direction of protection; By integrating preventive and response, a new age in transport safety is defined by the coordinated functioning of these elements. led by the Micro Controller [07] and backed by a reliable Power Source [08].

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/12/2023
(21) Application No.202341088044 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WEARABLE SEMI-AUTOMATIC MICRONEEDLE BASED INSULIN DELIVERY SMART MICROSYSTEM

(51) International classification :A61M5/142, A61M5/20, G16H20/17, A61M37/00, A61M5/172, A61M5/168, A61B5/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The idea of the proposed utility model is an insulin delivery monitoring system which includes insulin delivery microneedle patch, controller to perform the operations and application to monitor the insulin delivery. A method of insulin delivery device includes automatic and manual mode with trigger of alarm for lows or highs.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/12/2023
(21) Application No.202341090126 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PROCESS OF PREPARATION OF FEROJELLY, A FERULIC ACID JELLY WITH ENHANCED BIOAVAILABILITY OF FERULIC ACID AND PRODUCT THEREOF

(51) International classification :A23L21/10, A23L7/10, A61K31/215, A23L29/20, A23L29/256, A23L29/30, A23L27/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: A PROCESS OF PREPARATION OF FEROJELLY, A FERULIC ACID JELLY WITH ENHANCED BIOAVAILABILITY OF FERULIC ACID AND PRODUCT THEREOF APPLICANT: MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH APPLICATION NUMBER: 202341090126 DATED: 30/12/2023 ABSTRACT The present invention discloses a process of preparation of FEROJELLY, a ferulic acid jelly with enhanced bioavailability of ferulic acid. The process of the present invention comprises of following steps; a. extracting mixture of dried and pulverized foxtail millet bran and rice bran with ethanol using soxhlet apparatus and filtering to obtain filtrate followed by evaporating the filtrate to form ferulic acid extract; b. adding soaked china grass to boiling water with continuous stirring followed by adding sugar, vanilla stem extract and the ferulic acid extract and stirring and boiling to form a suspension; c. filling the suspensions into containers and sealing followed by cooling and storing in ambient temperature to form a FEROJELLY. The present invention also discloses a FEROJELLY, a ferulic acid jelly with enhanced bioavailability of ferulic acid prepared by the process as described above.

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/01/2024
(21) Application No.202441000038 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PRESSURE COOKER WHISTLE COUNTER AND NOTIFICATION SYSTEM USING IOT

(51) International classification :G10K0005000000, A63B0071060000, G11B0027340000, G02B0027000000, H04J0003160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The aim of the product is used to keep track of the whistle count of the pressure cooker and notify the user by displaying the count on a device & through their mobile phones with the use of microcontroller. It helps The user by displaying the number of cooker whistles, leads to avoid over cook of food and wastage of gas.

No. of Pages : 9 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/01/2024

(21) Application No.202441000041 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART GARAGE DOOR

(51) International classification :E06B0003480000, G07C0009000000, E05F0015770000, E05F0015668000, E05D0013000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The titled invention Smart Garage Door disclose Normal Garage Doors are too heavy to lift using man power ,at times the vehicles also damaged So we have came with the concept of Smart garage doors ‘Smart garage doors usually come with a built-in safety sensor, so if anyone is underneath the door while it’s going down, they won‘t get hurt because the door detects it and immediately starts going up. Smart Garage is one such dévice which will make the life of the user easy. It will also ensure the safety. These systems are used to open the door when a Object comes near to the entrance of the door and closes after it moves away from the door or after entering into the door. It can also be further taken through Wl-FI access to ensure the safety purpose.

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/01/2024

(21) Application No.202441000048 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MULTI-UTILITY MECHATRONIC BOT: A VERSATILE SOLUTION FOR DIVERSE INDUSTRIES AND MEDICAL FIELD

(51) International classification	:G16H0040670000, G06Q0010060000, E02D0029000000, C07K0014195000, E02D0029045000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The titled invention focuses on autonombus navigation, enabling the bot to maneuver through different terrains, including complex and uneven sufiaces. This capability is particularly useful in industries like mining, construction, and rescue missions, where access to challenging environments is required The design includes the ability of the bot to climb staircases, providing a solution for transporting heavy loads between different floors and addressing a common logistical challenge faced by businesses. The invention is to develop a multi-utility mechatronic bot that can adapt to various situations, provide essential functionalities, and enhance efficiency, safety, and productivity in a wide range of industries and potentially healthcare applications.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/01/2024

(21) Application No.202441000050 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED DOSSETTE BOX USING IOT

(51) International classification :A61J0007040000, G16H0020100000, B23B0029160000, G16H0020130000, G07F0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An automated dosette box is a tool created to help people with complex drug regimens better manage and adhere to their medications. A container with compartments known as a "dosette box" is used to store medications in accordance with a patient‘s recommended regimen. The automated dosette box uses technology to automatically dispense drugs at the right intervals, doing away with the necessity for human sorting and dosing. The gadget can also keep track of how much medication is being taken and provide warnings when it's time to refill a prescription or dosages are missed. By lowering prescription mistakes and hospital admissions because of non-adherence, this device has the potential to enhance patient outcomes and save healthcare expenditures.

No. of Pages : 10 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/02/2024
(21) Application No.202441007692 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EXTRACTION AND CHARACTERIZATION OF ESSENTIAL OIL FROM SALVIA TEUCANTHA.

(51) International classification	:A61K0036537000, A61K0036530000, C11B0009020000, A61Q0013000000, A23L0027100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Mexican bush sage (or) Velvet sage which holds the scientific name Salvia leucantha is an herbaceous perennial plant in Lamiaceae family. It is used for decorating the borders or mass planting and It's also used as a traditional medicine. It is known for its properties which protect the body against inflammation, bacterial infections, viral infections and oxidative stress. Essential oils are the substances that are concentrated extracts of plants. Essential oils are predominantly used in Aromatherapy. Aromatherapy is sometimes known as essential oil therapy, where the fragrance (or) aroma of the essential oil is used in treatment of various conditions such as to improve mood and to improve the sense of relaxation. Inhaling the aromas from the essential oils may stimulate a specific part of the brain known as the limbic system which plays a major role in behavior, sense of smell and emotions. It is used to promote both physical and mental health. Salvia [eucantha has fragrant leaves and flowers which seems to be velvety in appearance. It's a disease resistant plant. The arial parts of Salvia leucantha consists ofa specified percentage of essential oil. Thus, in this analysis, A bunch of flowers of Salvia leucanlha were collected from Kotagiri, Ooty. They were ground to fine particles afier shade drying for a week and then they are subjected to steam distillation to obtain the essential oil. The oil phase was extracted from the immiscible liquids i. e The heterogenous solution. The chemical composition of the essential oil was identified by GC -MS like the compounds such as volatile compounds and the compound that 15 present: In a high amount Characterization of the oil was carried Iout by performing various assays such as antibacterial assay and anti- oxidant assay. The level olf toxicity of the oil was also determined. The obtained essential oil is then further formulated to pharmaceutical products.

No. of Pages : 7 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/02/2024
(21) Application No.202441007979 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ISOLATION OF PESTICIDE TOLERANT MICROBES FROM CONTAMINATED SOIL

(51) International classification :C05F0011080000, C05G0003800000, B09C0001100000, C12N0001200000, C12Q0001689000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
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(57) Abstract :
Pesticides play a major role to meet the agricultural demands in both developing and developed countries. It helps in the crop yield improvement. This can't be restricted due to rising agricultural demands. The major environmental concern arised when the pesticides started accumulated in the soil ecosystem and it can be absorbed by plants. This not only affect the agriculture but the humans and animals who are benefited by the agricultural products. The residues of pesticides were washed off by the water resources also had a adverse effect in the aquatic ecosystem. Microbes and soil microflora (bacteria, fungi, algae, protozoa) are the most important biological agents in removing the waste materials and enable their recycling in the environment. Some species of microorganisms can both tolerate and degrade pesticides and may even promote plant growth. The sample was collected from pesticide contaminated soil. It was then serial diluted and the microorganisms were isolated by plating method. The tolerance rate of the microbes against the pesticide was observed using well diffusion method. These tolerant microbes were separately grown in a LB broth and the type of the microbe is identified. The morphological characteristics were observed by physical and biochemical examination. The DNA was isolated and the sequence is analysed through 16S rRNA sequencing. keywords : Pesticides, Soil microflora, Well diffusion method, Morphological characteristics, 16s rRNA sequencing

No. of Pages : 5 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/02/2024
(21) Application No.202441008957 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A POWER TRANSFERRING SYSTEM AND A METHOD THEREOF

(51) International classification :B60L53/14, B60L53/16, B60L53/18, B64C39/02, B64U101/00, B64U50/30, H02J7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein a power transferring system comprising a flying drone designed for the efficient transfer of electric power from available sources to either stationary or mobile receiving units. The flying drone (100) is equipped with essential components, including an extension power cable (102), a connecting port (104), and a transferring plug (106), enhancing its versatility. This power transferring drone system is adept at harnessing electricity from accessible sources like the power grid or generators. Engaging via a power port (202) of a power source (200), the flying drone (100) optionally employs a supporting drone (126) to maintain an optimal cable height. The receiver port (208) facilitates the utilization of the collected power, providing adaptability across various applications. A method of operation has been disclosed thereof.

No. of Pages : 23 No. of Claims : 17

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/02/2024
(21) Application No.202441010012 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HEALTH KIOSK SYSTEM AND METHOD FOR MANAGING HEALTH OF USERS

(51) International classification :A61B5/00, A61B5/318, G06N20/00, G16H50/20, G16H10/60, G16H40/67, A61B5/0205
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT HEALTH KIOSK SYSTEM AND METHOD FOR MANAGING HEALTH OF USERS The present invention discloses a health kiosk system and method for managing health of users. The health kiosk system (102) is configured to manage the health of one or more users based on a dynamic extraction of one or more parameters. The health kiosk system (102) comprises a health kiosk unit (116), and a plurality of subsystems (114). The health kiosk unit (116)comprises one or more embedded sensors (118), a plurality of electrocardiogram (ECG) leads (120), and one or more server units (122). The plurality of subsystems (114)provides personalised insights, facilitates disease prevention, and supports wellness programs. The health kiosk system (102)is configured to allow healthcare professionals to trigger additional tests remotely for remote health assessments. The health kiosk system (102) obtain consent data from the one or more users to recommend optimised preferences for telemedicine, research, and analysis. FIG. 2

No. of Pages : 43 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/02/2024

(21) Application No.202441014092 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A NON-INVASIVE SENSOR AND A METHOD FOR MANUFACTURING THE NON-INVASIVE SENSOR

(51) International classification	:A61P0019020000, G16H0050300000, A61B0005110000, A61B0005000000, A61K0031120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A NON-INVASIVE SENSOR AND A METHOD FOR MANUFACTURING THE NON-INVASIVE SENSOR The present disclosure envisages a method for manufacturing a non-invasive sensor for assessing health of knee and musculoskeletal joint. The method comprises the steps of dissolving Poly-Vinylidene Fluoride (PVDF) as solute in a solution of Methyl Ethyl Ketone (MEK) and Dimethylformamide (DMF) in predetermined quantities, so as to prepare a coating solution, applying said coating solution to Poly-vinyl Chloride (PVC) strips (104) using a spin coater device (106), and baking said coated strips (104) for a predetermined time, so as to obtain the non-invasive sensor.

No. of Pages : 26 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/03/2024
(21) Application No.202441015424 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED IN-PATIENT MEDICAL EMERGENCY MANAGEMENT SYSTEM

(51) International classification	:A61B0005000000, G16H0040670000, A61B0005020500, H04N0007180000, G16H0010600000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention discloses a patient monitoring system (102) for monitoring health of hospitalized non-ICU patients. This system (102) includes a set of monitoring devices (104) for displaying a comprehensive set of vital parameters related to patients. Additionally, a set of cameras (106) is integrated into the system, continuously capturing images of each monitoring device (104). The system is powered by processors (202) that execute instructions for image analysis using an AI engine. Through seamless communication with computing devices, the processors (202) facilitate swift transmission of alert signals to healthcare professionals, offering real-time updates upon detection of critical patient conditions. These alert signals include essential information about the identified vital parameter, enabling healthcare professionals to promptly intervene and address the needs of hospitalized non-ICU patients.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024
(21) Application No.202441025802 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : Multi-lingual cluster display for two-wheeler dashboards

(51) International classification	:G06F0009451000, G06F0008380000, B60K0035000000, H04L0067100000, B62D0025140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Multi-lingual cluster display for two-wheeler dashboards [0044] The present invention discloses a two-wheeler dashboard with multi-lingual cluster display feature. The system (100) comprises a digital dashboard (101) incorporating a Thin-Film Transistor (TFT) display (102) capable of supporting Low Voltage Differential Signaling (LVDS) and Red-Green-Blue (RGB) formats for high-quality visual output. A microcontroller (103) programmed with multiple language options, allowing users to select their desired display language through an application layer (104) implementing a multilingual algorithm. The system (100) also includes an external flash memory (105) for storing a plurality of image files representing main and setting screens with vehicle parameters and user-selectable options. Additionally, the human-machine interface (HMI) (106) translating design sketches into digital formats and exporting them to an HMI cross-platform tool (107) for seamless integration with the microcontroller (103).

No. of Pages : 27 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441032993 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PORTABLE BEVERAGE COOLER

(51) International classification :F25D0031000000, F25B0021020000, H01L0023373000, F25D0003080000, F25B0021040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT PORTABLE BEVERAGE COOLER The present invention discloses a portable beverage cooler uses a special semiconductor device for cooling called the Peltier module (55). This device has two sides, each with a heat sink (54) to help transfer and release heat efficiently. A fan (57), usually on the warm side, boosts heat release. Inside, insulation keeps the coolness in and blocks outside heat, making the cooling process work better. A temperature controller manages the electric current in the Peltier module (55), letting users set the desired temperature. A power source, like a battery, supplies the needed electricity. The container, made for easy carrying and toughness, holds your drinks and the cooler parts. It's built for convenience during various outdoor activities, making sure your beverages stay refreshingly cool. Fig 1

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441032994 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WIRELESS MULTIPORT HUB

(51) International classification	:H04W0004380000, H04Q0011000000, H04L0001000000, H04L0049351000, A41B0001080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses the wireless Multiport hub represents a novel advancement in networking technology, offering a versatile solution for establishing seamless connectivity across diverse devices without the limitations of physical cabling. This innovative hub integrates multiple pin ports, facilitating efficient data transmission and device interconnectivity. Leveraging Bluetooth wireless technology, the hub eliminates the need for cumbersome cables, providing enhanced mobility and flexibility in network setup. The details, the key features and benefits of the wireless Multiport hub, highlighting its potential to revolutionize networking infrastructure and streamline communication in various environments. The benefits of the hub, including efficient data transmission, device interconnectivity, enhanced mobility, and flexibility in network setup. FIG 1

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441032995 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN INTERACTION PREDICTION AND COUCLING SYSTEM FOR FULL BODY CHECKUP

(51) International classification :A61B0005000000, A61B0005024000, A61B0005020500, A61B0005010000, A61B0005021000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT AN INTRACTION PREDICTION AND COUNSELLING SYSTEM FOR FULL BODY CHECK UP Facial scanning technology offers a breakthrough in healthcare diagnostics by assessing key health parameters such as heart rate, blood pressure, fever, stress levels, and overall body condition. It analyses physiological and psychological markers present in the face, including changes in skin colour, blood flow patterns, facial blood vessels, skin temperature, expressions, and skin conductivity. This non-invasive approach could revolutionize health monitoring, potentially integrating into medical devices and smartphone applications for convenient use. However, its accuracy compared to traditional diagnostics may vary, and privacy and data security concerns must be addressed, especially concerning sensitive health data. Fig 1

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441032997 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DUAL ANALOG STICK IN CONTROLER

(51) International classification :A63F0013240000, A63F0013420000, A63F0013211000, A63F0013210000, A63F0013670000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT DUAL ANALOG STICK IN CONTROLLER The Present invention discloses a Dual Analog Stick Controller for delivering a superior gaming experience Adding an analog stick to a gaming controller enhances user experience and gameplay dynamics significantly. Analog sticks provide precise control over in-game movements, offering a more immersive and responsive gaming experience. Unlike traditional directional pads, analog sticks offer fluid movement in multiple directions, enabling players to navigate environments with greater freedom and finesse. This added precision is particularly beneficial in genres such as first-person shooters and sports simulations, where precise aiming and movement are crucial for success. Additionally, analog sticks allow for nuanced input, enabling players to execute complex maneuvers with ease, fostering deeper engagement and skill development. Overall, integrating analog sticks into gaming controllers enhances gameplay immersion, responsiveness, and versatility, elevating the gaming experience for players of all skill level. Adding an analog stick to a gaming controller enhances user interaction and gameplay experience by providing precise and fluid control over character movement or camera direction. Analog sticks offer a wide range of motion, allowing for nuanced inputs and enabling more immersive gameplay. Their introduction revolutionized gaming by enabling smoother navigation through virtual environments and more accurate aiming in action-packed scenarios. This abstract explores the significance of integrating analog sticks into gaming controllers and the profound impact they have had on the evolution of gaming interfaces. Fig 1

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441032998 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ENHANCED PORTABLE COMPUTER

(51) International classification	:G06F0001160000, G06F0021620000, G06F0001323400, H04W0072040000, H05K0001140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT ENHANCED PORTABLE COMPUTER The present invention discloses an Enhanced Portable Computer for improving performance of system. The abstract for a portable computer would highlight its key features and benefits succinctly. "In an era dominated by mobility and connectivity, the demand for portable computing solutions continues to surge. This abstract presents a novel portable computer designed to meet the evolving needs of modern users. With seamless integration into various lifestyles and environments, this portable computer offers unparalleled convenience without compromising functionality. Embracing innovation and user-centric design, it represents the next frontier in portable computing technology. "This abstract introduces a novel design for a portable computer system aimed at enhancing user mobility and productivity. The proposed device integrates advanced computing capabilities into a compact form factor, featuring lightweight materials and ergonomic design elements. Emphasizing versatility, the system incorporates a range of connectivity options, including wireless communication protocols and multi-port interfaces, to facilitate seamless integration into various computing environments. Furthermore, attention to energy efficiency ensures prolonged battery life, while robust security measures safeguard sensitive data. Through this innovative approach, the portable computer offers a balance of performance, portability, and convenience, catering to the evolving needs of modern users across diverse industries and applications. Fig 1

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441032999 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PORTABLE SMART PUNCHING MACHINE

(51) International classification :B41J0019200000, A61B0005000000, A61M0025010000, F21Y0115100000, A61B0005107000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT A PORTABLE SMART PUNCHING MACHINE The present invention discloses a portable smart punching machine (10) for easily identifying the punching location without folding the papers. The machine comprises a battery, base plate and a linear encoder sensor. The linear encoder sensor (1) houses a measurement tape which is configured to measure the length of the sheet as it passes through the punching machine. The microcontroller (4) is configured to receive the length input data from the linear encoder sensor and to process the length input data for determining the precise centre position. The visual display (2) is configured to show/present the centre or required position of the sheet to the user by means of the received information of the microcontroller. The LED bulb (3) is configured to indicate signal to the user by means of green colour light when the centre point is reached during the machine subsequent travel over the paper. The U shaped pusher (5) is configured to punch the paper by the user after detecting the centre point, through the applying of controlled pressure over the head. The present invention (10) will reduce the time consumption of the punching process in an effective manner. Fig 1

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033000 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FOOTSTEP-POWERED ELECTRICITY GENERATION SYSTEM

(51) International classification :H02N2/18, H10N30/30, H02J7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT FOOTSTEP-POWERED ELECTRICITY GENERATION SYSTEM The present invention discloses a footstep-powered electricity generation system configured for efficient energy harvesting from human motion. It comprises a series of mechanisms orchestrated to convert the kinetic energy generated by footsteps into electrical energy. The piezoelectric material Bismuth ferrite is synthesised and converted into the square shaped four portioned tiles also the carbon electrode can be used for the energy harvesting, Carbon electrodes are high durable and resistant to corrosion, ensuring long-lasting performance in outdoor. The system incorporates a piezoelectric energy generation mechanism featuring multiple sections of piezoelectric tiles operated by the piston. Electrodes housed among the piezoelectric tiles and piston collects the electrical energy, and a unidirectional diode is used to flow of current in one direction also the AC ripple neutralizer corrects the fluctuations in occurs in electric generation and generated electricity can be stored in the batteries, The described examples illustrate various embodiments, with flexibility for modifications while retaining the essence of the invention. Fig 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033001 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ACCIDENT ACKNOWLEDGE USING AIR BAG

(51) International classification	:H04W0004900000, G08B0025010000, H04W0004029000, G08B0025080000, H04W0004020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT ACCIDENT ACKNOWLEDGER USING AIR BAG This study presents the development and implementation of an innovative Accident Acknowledger using Air Bag leveraging [10] GPS, [11] GSM, and Node MCU technologies, aimed at road safety and emergency response mechanisms. The device has [10] GPS functionality to accurately track vehicle position and monitor sudden changes indicative of accidents. The [19] Node MCU microcontroller triggers an automated response system, utilizing [11] GSM communication to swiftly transmit distress signals and precise location data to pre-defined contacts and emergency services. The device is characterized by its low power consumption, user-friendly configuration interface, and scalability across diverse vehicle types and environments. Through rigorous testing and simulation, our results underscore the device's efficacy in accurately detecting accidents, facilitating real-time location tracking, and expediting emergency alerts, thereby mitigating risks and enhancing overall road safety. This solution offers a cost-effective and scalable approach to fortifying emergency assistance and ensuring timely interventions in critical scenarios. Fig 1

No. of Pages : 16 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033005 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : RETRACTABLE CHARGER CABLE

(51) International classification :H02G11/00, H02G11/02, H02G3/08, B65H75/44
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT RETRACTABLE CHARGER CABLE The present invention discloses a retractable charger cable presents a comprehensive solution for charging electronic devices, featuring a spring-loaded reel mechanism in its wire terminal (50) for smooth cable extension and retraction. Users can effortlessly adjust the cable length using a plurality of buttons, ensuring stability during charging. A bottom-mounted wire drive (56) facilitates manual cable retraction, enhancing usability. The cable's path spacing accommodates various USB port types, offering compatibility with a wide range of devices. A protective cap (55) shields the connector when not in use, while a connecting clamp (53) ensures secure case closure, safeguarding the cable during storage. A magnetic (55) closure system, complemented by an integrated clamp (53), provides convenient sealing of the case. The durable plastic housing, with an accessible opening, offers reliable protection and easy cable management. Overall, this retractable charger cable combines innovative features and mechanisms to deliver a convenient, efficient, and durable charging solution for electronic devices. Fig 1

No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033007 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ASTUTE PROJECTOR

(51) International classification	:G01N0027414000, H02M0005458000, G01R0033280000, G09F0019180000, A63B0022000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT ASTUTE PROJECTOR The present invention discloses an astute projector for efficient projecting processes. The astute projector receives power from a power supply, which is rectified by a rectifier (1) to convert AC to DC for the pic microcontroller (2). The microcontroller (2) serves as the central component, for the entire process of the projector (3). Initially, the microcontroller (2) provides power to activate the projector (3). Once activated, a photo transistor sensor (4) detects light rays emitted by the projector (3) and sends data back to the microcontroller (2), which is running by programmed instructions, the microcontroller (2) analyses this data and directs power and signals to the control unit (5). The control unit (5), operated by a switch type, regulates the room lights (6), capable of turning them on or off as needed. This integrated system demonstrates a coordinated flow of power and information, controlled by the pic microcontroller (2), to facilitate seamless operation of the projector (3) and lighting within the room. Fig 1

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033008 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SENSOR KEY NOTIFICATION SYSTEM

(51) International classification	:G08B0021240000, G08B0021220000, A63F0013240000, G06F0016248000, G07C0009000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT SENSOR KEY NOTIFICATION SYSTEM The Present invention discloses a sensor key notification system for enhance the security and convenience. The Sensor Key Notification System presents a groundbreaking solution to the perennial problem of key misplacement. Leveraging advanced sensor technology, this smart system offers a seamless and efficient way to locate misplaced keys. The system comprises small, discreet sensors embedded within keys and strategically placed around the home or workplace. These sensors communicate wirelessly with a central hub, which serves as the control center for the entire system. When a key is misplaced, users can easily activate the system through a smartphone app or voice command, prompting the sensors to emit a distinct signal. The signal intensifies as the user approaches the misplaced key, guiding them precisely to its location. Furthermore, the system offers customizable features such as adjustable signal frequencies and notification preferences, ensuring a personalized user experience. Its intuitive interface and user-friendly design make it accessible to individuals of all ages and technological backgrounds. By eliminating the frustration and inconvenience associated with key misplacement, the Sensor Key Notification System enhances daily life and promotes peace of mind. With its seamless integration into modern living spaces, this innovative solution heralds a new era of convenience and efficiency in key management. Fig 1

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033011 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SPOILED FOOD DETECTION

(51) International classification :G01N0033000000, G16H0040670000, H04M0019040000, F25D0029000000, G01N0027407000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SPOILED FOOD DEUCATION Detecting spoiled food is crucial for maintaining food safety and preventing health risks. This abstract proposes a system for detecting rotten food using an MQ-137 gas sensor. The MQ-137 sensor is capable of detecting various gases, including those emitted by spoiled food such as ammonia, amines, and other volatile organic compounds (VOCs).The system consists of an MQ-137 gas sensor connected to a microcontroller or a single-board computer like Arduino or Raspberry Pi. The gas sensor continuously monitors the air surrounding the food storage area. When it detects the presence of gases associated with spoiled food, it triggers an alert mechanism. Upon detection of spoiled food, the system sends an alert to the user's mobile phone. This alert can be transmitted via SMS or through a phone call. The system can be integrated with GSM modules or internet connectivity to facilitate communication with the user's mobile device. Additionally, the system may incorporate a microphone and speaker to enable automated phone calls, notifying the user about the presence of spoiled food. The proposed system provides a cost-effective and efficient solution for detecting and alerting users about spoiled food, helping to minimize food wastage and mitigate health risks associated with consuming spoiled food Fig 1

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033013 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART DIAGNOSIS SYSTEM FOR INDUSTRIAL DRIVE MALFUNCTIONS

(51) International classification :G05B23/02, H02J13/00, G01R31/34, G06Q50/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT SMART DIAGNOSIS SYSTEM FOR INDUSTRIAL DRIVE MALFUNTIONS The present invention discloses an Enhanced Portable Computer for improving performance of system. Developing a smart diagnosis system for industrial drive malfunctions is crucial for enhancing operational efficiency and minimizing downtime in manufacturing processes. This abstract delves into the design and implementation of such a system, which employs advanced machine learning algorithms and sensor technology to detect and diagnose potential issues in industrial drives proactively. By continuously monitoring key parameters such as temperature, vibration, and power consumption, the system can identify abnormalities indicative of impending malfunctions. Real-time analysis of data collected from sensors enables timely intervention, reducing the risk of equipment failure and optimizing maintenance schedules. Ultimately, the integration of a smart diagnosis system enhances reliability, productivity, and cost-effectiveness in industrial settings. leveraging advanced technologies such as machine learning, data analytics, and sensor integration, this system offers real-time monitoring and analysis of drive components to detect and diagnose potential malfunctions proactively. By continuously monitoring key performance indicators and analyzing patterns in operational data, the system can predict impending failures, identify root causes of issues, and recommend targeted corrective actions. This abstract explores the transformative potential of smart diagnosis systems in industrial environments, highlighting their ability to minimize downtime, reduce maintenance costs, and enhance overall reliability and productivity. Fig 1

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033014 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LAB ATTANDANCE AND VIVA VOICE REGISTER

(51) International classification :G06Q0010100000, G06Q0050200000, G09B0007000000, G16H0040200000, G09B0007020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT LAB ATTENDANCE AND VIVA VOICE REGISTER The present invention discloses Lab Attendance and Viva voice register In academic settings, students often experience anxiety when faced with viva voce examinations. To address this concern and streamline the assessment process, we propose integrating a viva voce feature within our application. Staff members have the capability to enable the viva option, triggering notifications via email to students. Upon receiving the notification, students log into the application where they have the choice to respond to the viva either through voice or text. Their responses are then transmitted to staff members for evaluation. The staff can subsequently provide marks or scores through the application interface, facilitating efficient assessment and feedback. Furthermore, managing attendance in educational environments can be labour-intensive. To simplify this process, our application offers automatic attendance tracking as students enter the lab. By implementing this feature, attendance is recorded seamlessly without requiring manual input, thus optimizing administrative efficiency and reducing workload. Fig 1

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033015 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AGRO GUARD: AN ENHANCED GREYWATER TREATMENT SYSTEM WITH AGRICULTURAL RESIDUE INTEGRATION

(51) International classification :C02F0001280000, C02F0103000000, E03B0001040000, C02F0001760000, C02F0001780000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT The present invention discloses an innovative Agro Guard for treating the greywater system that integrates agricultural waste peels as a filter media. The system comprises an inlet pipe (1), a sprinkler (2) for distributing greywater over agro waste peel layers (3), an adjustable plate (4) is to control flow, and layers of activated charcoal and maifan stones (6) adsorbs the contaminants and improves the taste and odour. Agricultural waste peels often discarded or decomposed contain organic compounds suitable for adsorbing contaminants in wastewater. By combining these peels with activated carbon and maifan stones the system creates an effective filter media for treating various contaminants in greywater and reducing environmental pollution from agricultural residues. These components offer sufficient detention time for greywater to react with adsorbents ensuring effective treatment. Treated Greywater can be used for non-potable purposes. FIG 1

No. of Pages : 14 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033016 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART SPRINKLER IRRIGATION SYSTEM

(51) International classification :A01G0025160000, G01N0033240000, A01G0025000000, B05B0003020000, A01G0025090000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SMART SPRINKLER IRRIGATION SYSTEM The present invention discloses a smart sprinkler irrigation system for designed for automated water sprinkling. The smart sprinkler irrigation system comprises a capacitive soil moisture sensor embedded in the soil for monitoring moisture level in soil. A microcontroller serves as the central control unit, receiving input from the soil moisture sensor and sends command to a relay module for precise water sprinkling. The main nozzle acts as the primary water outlet, securely connected to the system's body for efficient water distribution. Complementing the main nozzle, a sub nozzle delivers water with high velocity for enhanced irrigation intensity. The head of the sprinkler comprises the tension spring that ensures stability and controlled movement of the swing arm, the swing arm oscillates in response to pressurized water flow, distributing water evenly across the target area. A rotational bearing facilitates smooth rotation of the system's body, contributing to efficient irrigation. The control valve, regulated by input from the relay module and soil moisture sensor, optimizes water flow based on real-time moisture levels. Overall, this smart sprinkler irrigation system combines advanced technology with structural integrity to promote efficient water usage and healthy plant growth. FIG 1

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033018 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INNOVATIVE BIO-FILTER SCRUBBER TECHNOLOGY FOR CLEANER AIR & ODOR CONTROL THROUGH AGRO RESIDUE UTILISATON

(51) International classification :B01D0053840000, G01N0033000000, B01D0053850000, C02F0003000000, B01D0053520000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT INNOVATIVE BIO-FILTER SCRUBBER TECHNOLOGY: ENHANCING AIR QUALITY AND MINIMIZING ODORS IN POULTRY FARMING THROUGH AGRO RESIDUE UTILIZATION The study developed a pellet-type biofilter media using rice husk in a wet scrubber system for odour removal. The system was operated for several days to evaluate odorous gas removal, including NH3 and H2S. The rice husk pellets provided the organic carbon source and phosphoric acid needed for microbial growth, allowing the system to continue without maintenance technology. The removal of odour gases involved adsorption and biodegradation. Ammonia gas was absorbed by the rice husk pellets and accumulated in the water as nitrite. When alkalinity and pH decreased, nitrite was converted to nitrate, while H2S gas was oxidized to sulphate. The bio-scrubber system successfully removes NH3 and H2S. FIG 1

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033019 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AQUA PURE

(51) International classification :C02F1/28, C02F11/00, C01B32/15, B82Y30/00, B01J20/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT AQUA PURE The Aqua Pure comprises, a steel alumina net (1), serving to capture large particles, sediments, and debris. Subsequently, the water passes through a layer of filter cloth (2), further trapping smaller particles and suspended solids. It then progresses to granular nano carbon (3), tasked with adsorbing organic compounds, chemicals, and Odors. The water moves through activated nano carbon (4), which efficiently adsorbs contaminants owing to its high surface area and porous structure. As it continues its journey, the water is filtered through a spun filter bed (5), capturing any remaining fine particles and clarifying the water. Upon reaching the outlet pores (6), only purified water is allowed to exit the filtration system, ensuring the removal of impurities. Water purification technologies play a crucial role in ensuring access to clean and safe drinking water worldwide. This abstract provides an overview of various water purification methods and technologies employed in modern water purifiers. It examines the key principles behind these methods, including filtration, chemical treatment, microbial elimination, and ion exchange. FIG 1

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033020 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATIC ORNAMENT TRACKING SYSTEM USING GPS

(51) International classification :H04W0004020000, G06F0021320000, G01S0019140000, H04W0012060000, G08B0021020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT AUTOMATIC ORNAMENT TRACKING SYSTEM USING GPS (1) The present invention introduces an automatic ornament tracking system incorporating GPS (1) technology, enabling real-time location tracking of both objects and individuals for continuous monitoring. This system utilizes precise GPS (1) data to facilitate diverse applications such as asset tracking and emergency response. Additionally, the integration of GPS (1) with ornaments ensures comprehensive monitoring and timely assistance in emergency situations. The system further enhances security through the use of Bluetooth-enabled Arduino module (2)s for fingerprint enrollment, enabling biometric identification and authentication. Radio frequency detector (3)s, seamlessly connected to Wi-Fi networks, bolster security by accurately identifying and verifying fingerprints in real-time. Furthermore, the system utilizes EPROM (5) devices in Arduino UNO boards for secure and durable storage of fingerprint data, ensuring data integrity and accessibility across power cycles. Overall, this integrated system offers a comprehensive and reliable solution for enhanced security and functionality in various applications.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033021 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SUSTAINABLE ALTERNATIVE MATERIAL FOR CONVENTIONAL CONCRETE PARTIALLY REPLACED WITH BOTTOM ASH AND RCA

(51) International classification	:C04B0028020000, C04B0018060000, C04B0018220000, C04B0018160000, C04B0018020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT SUSTAINABLE ALTERNATIVE MATERIAL FOR CONVENTIONAL CONCRETE PARTIALLY REPLACED WITH BOTTOM ASH AND RCA
The present invention discloses a sustainable alternative material for conventional concrete partially designed with replacement with bottom ash and recycled concrete aggregates (RCA) for reducing the construction and environmental impacts. To facilitate effective and sustainable building, the current invention presents a nominal mix design that includes bottom ash as well as Recycled concrete aggregate as a partial replacement for the fine aggregate and coarse aggregate. There are multiple processes involved in the nominal mix design involving bottom ash and recycled concrete aggregate, including a compressive test and a workability test. This idea uses bottom ash from power plants and recycled concrete aggregate that is gathered from different locations as fine and coarse aggregate. This innovation of combining general concrete mix with a partial replacement of bottom ash and RCA (recycled concrete aggregate) to create a sustainable concrete mix. FIG 1

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033023 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SEMI AUTOMATIC ROOF CLEANING MACHINE

(51) International classification :A61P0043000000, G05D0001020000, F23J0003020000, B08B0001040000, B08B0005020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT A SEMI AUTOMATIC ROOF CLEANING MACHINE The present invention discloses a semi-automatic roof cleaning machine designed to efficiently remove debris and dust from rooftops. Central to its operation is a meticulously engineered blower (1) powered by a Dc motor (2), strategically positioned to generate vital vacuum pressure. This pressure, harnessed by the blower (1), facilitates effective debris removal, ensuring thorough cleanliness across the entire surface. Integrated with a plurality of wheels (3), operable by the Dc motor (2), the machine navigates rooftops with precision and stability. A remote-control system empowers users to command wheel movement, facilitated by a microprocessor (5) and motor controller (6). Additionally, the machine features leg (8)s and a casing (4) to enhance stability and protect critical components. This invention exemplifies a synergy of innovative design and functionality, offering a convenient and effective solution for roof maintenance. FIG 1

No. of Pages : 17 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033024 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EXTENDABLE HANGER

(51) International classification :A47B0061000000, A47G0025140000, A47G0025060000, A47B0061020000, D06F0058100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT EXTENDABLE HANGER The present invention discloses the user experience of the adjustable clothes hanger (1) presents a versatile solution to address the challenges associated with traditional fixed-size hanger (1)s. This innovation allows users to customize the hanger (1)'s width to accommodate various sizes of adult and children's clothing, promoting efficient organization and simplifying closet management. The hanger (1)'s design incorporates folding sections for adjustability, user-friendly adjustment processes, and secure locking mechanisms to ensure stability. It features sturdy hanger (1) hooks (2) for reliable hanging and proper garment placement to optimize space utilization within closets. The benefits of the adjustable clothes hanger (1) include versatility, space optimization, convenience, and travel-friendliness. This invention aims to enhance wardrobe organization, preserve garment integrity, and improve user satisfaction. Fig 1

No. of Pages : 16 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033025 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART HEATING BOTTLE

(51) International classification :G05B0015020000, A61B0018000000, H01R0013660000, H04W0004029000, F41A0017060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT SMART HEATING BOTTLE The present invention discloses a smart heating bottle designed to provide users with convenient and efficient access to hot water. It features a built-in GPS display that allows users to track their location and navigate to their desired destination. The automated temperature control system ensures that the water inside the bottle is always at the optimal temperature for consumption, providing a comfortable and enjoyable drinking experience. Additionally, the bottle is designed to be travel-friendly, making it perfect for use on the go.In addition to its GPS display and automated temperature control, the smart heating bottle also boasts a range of other features. It is designed to be travel-friendly and is also compatible with a smartphone app, allowing users to monitor and control its settings remotely. t. It is equipped with several safety features, including overheat protection and automatic shutoff. These features help prevent accidents and ensure that the bottle is safe to use, even for children heat Its innovative design, coupled with its advanced features, make it an ideal choice for anyone looking for a smarter way to stay hydrated. The described examples illustrate various embodiments, with flexibility for modifications while retaining the essence of the invention. Refer Fig. 1

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
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(21) Application No.202441033026 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART TROLLY

(51) International classification :B21D0005020000, B62B0005060000, A45C0013260000, B62B0001120000, B62B0005040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT SMART TROLLEY The present invention discloses a Smart Trolley for the efficient carrying of things and baby. The Smart Trolley comprises a dc motor, connect with wheel of the Smart Trolley for the easy movement. The Smart Trolley has the controller (53) to control the speed of the motor which result in the controlling the speed of the Smart Trolley. The Batteries of the Smart Trolley provide the power supplies to the controller (53) and the motor. The Smart trolley wheels (56) are connected to the motor for the movement of the trolley. The accelerator –handle is placed in the trolley handle; it enables to easy handling of the Smart trolley. The Smart trolley contains the Foot-rest (55) for the user to handle the Smart Trolley in easy way. The Smart Trolley brake system is manual brake system of foot-rest (55) press brake system. The described examples illustrate various embodiments, with flexibility for modifications retaining the essence of invention. FIG 1

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033029 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATIC SEED SOWING MACHINE

(51) International classification :A01C7/12, A01C7/00, G05B19/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT AUTOMATIC SEED SOWING MACHINE The present invention discloses automatic seed sowing machine for efficient seed sowing. This project aims to increase the productivity and to reduce the time for seed sowing process and wastage of seeds. Automatic seed sowing machine designed and developed, which uses Solar powered DC motors driven neural network with GPS control kit. An ultrasonic sensor is also installed to detect the obstacle in the path and end of each row. This system combines the power of hardware and software, employing machine, GPStechnology, and real-time monitoring to ensure that seed are sown with utmost accuracy and efficiency. By automating the process, it reduces the reliance on human labour, minimizes errors, and enables precise seed placement at optimal depths and spacing. We delve into its innovative features, such as variable seed rate control, GPS integration for accurate row spacing, and real-time data collection. The described examples illustrate various embodiments, with flexibility for modifications while retaining the essence of the invention. Refer Fig. 1

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033031 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FABRIC TEXTURE ANALYZING DEVICE

(51) International classification :G06Q0030060000, G06F0003010000, G01N0033000000, F16H0061240000, G06Q0030020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT A FABRIC TEXTURE ANALYSING DEVICE This invention discloses with the surge in online shopping, there's a growing need for consumers to accurately assess fabric quality before purchasing. To address this, we propose a fabric detector device that enables online buyers to feel satisfied with their purchases by providing tactile feedback remotely. The device integrates artificial sensors to detect fabric types based on feel and appearance, ensuring a seamless online shopping experience. Key components include tactile sensors for measuring tactile properties, vibrating sensors for collecting data on fabric vibrations, and vibration motors for enhancing detection accuracy. By combining touch and vibration sensing technologies, our device enables quick and easy fabric evaluation without physical contact, reducing the time and uncertainty associated with online fabric purchases. FIG 1

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033032 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ANDROID TV BY USING REMOTE SENSOR (IR)

(51) International classification	:H04N0021472000, G06F0003048420, A61B0090000000, H04N0005232000, G06F0003010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT ANDROID TV BY USING REMOTE SENSOR (IR) The present invention discloses the user experience of Android TV by introducing an IR sensor remote control system. This addresses the inconvenience faced by users when navigating the TV interface, especially in the absence of a sensor remote. The IR remote enables seamless control and interaction with the Android TV, simplifying navigation, selection, and text input. By utilizing IR sensor technology, users can operate the TV from a distance without the need for physical interaction with the screen. The design incorporates components such as the Android TV, IR remote, IR receiver, power source, and proper configuration to ensure optimal functionality. Additionally, considerations like line of sight and compatibility are essential for effective signal transmission. The IR remote facilitates various functions including navigation, selection, playback control, volume adjustment, power management, and text input. The invention operates through a flowchart depicting the transmission and reception of signals between the IR remote and Android TV, resulting in seamless user interaction with the TV interface. Overall, the innovation aims to simplify the usage of Android TV and provide a more intuitive and convenient viewing experience for users. FIG 1

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033035 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ENGINE BREAKING SYSTEM

(51) International classification :F01L0013060000, B60W0050000000, F02D0013040000, F02D0009060000, F02M0026210000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT ENGINE BRAKING SYSTEM The engine braking system disclosed in this embodiment aims to immediately stop high-load heavy trucks by returning exhaust gas to the cylinder, leveraging the piston-cylinder (8) arrangement's role in converting chemical energy into mechanical work. This process involves intake, compression, power, and exhaust strokes, with the system using a pressure sensor (10) to regulate air pressure in the cylinder. The circuit includes components like the air intake valve, radiator for cooling, piston (8), valves for air circulation, throttle valve, exhaust gas control components, air filter (5) , turbine (13) for energy conversion, and muffler (14) for noise reduction. A detailed illustration of the circuit's isometric and cross-section views is provided. The system integrates various technologies to optimize braking efficiency and reduce noise emissions. This abstract summarizes the innovative engine braking system's key components and their functionalities in enhancing vehicle performance and safety. FIG 1

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033037 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BONE AUGMENTATION IN BIOMATERIALS BY USING ADDITIVE MANUFACTURING PROCESS

(51) International classification	:B33Y0010000000, A61F0002300000, B33Y0080000000, A61F0002280000, A61F0002440000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT BONE AUGMENTATION IN BIOMATERIALS BY USING ADDITIVE MANUFACTURING PROCESS This invention explores the rapid synthesis of biodegradable synthetic materials and additive manufacturing techniques for bone reconstruction, targeting both vertical and horizontal implants. The approach aims to emulate natural bone characteristics while enabling biodegradation for seamless integration with the body. Horizontal implants are indispensable for procedures like joint replacements and bone grafting, while vertical implants, customized to precise anatomical specifications, are crucial for surgeries such as spinal` fusion. By delivering fast, cost-effective, and tailored solutions that enhance patient outcomes and accelerate recovery, orthopedic surgery undergoes a transformative revolution through the rapid manufacturing of these implants facilitated by additive manufacturing technology.

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033038 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MIST IRRIGATION USING TELESCOPIC MECHANISM

(51) International classification :A01G0025160000, A01C0023040000, A01G0025000000, A01G0025020000, A01G0025060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT MIST IRRIGATION SYSTEM FOR BANANA PLANTS The present invention discloses a mist irrigation system (20) for banana plants for reducing the wastages of water in the agriculture field. The 5 system comprises a power source. The centrifugal pump (2) is operable by the power source which is configured to pump the water from the water source (3) to top of the banana leaves in mist form by means of one or more vertically slidable/expandable PVC pipes. The four way forger nozzle (5) is configured to convert the received water in mist form for irrigating through 10 the leaf pores (stomata) of the banana leaves. The plurality of rubber washers (10) housed inside the vertically slidable/expandable pipes configured to preventing the water leakages while mist irrigation. The camera (11) is configured to capture the images of the banana trees for calculating the height of the plants for irrigating the water through the leaf 15 pores. The pressure regulator (1) is configured to adjust the water pressure pumping level for achieving the mist irrigation to various heights of the plants by controlling the vertical sliding/expansion of pipes. The stepper motor (14) is configured to control the rotation of the pressure regulator for controlling the flow of water pressure to adjust the desired height of 20 apex/nozzle from the ground surface. The IoT controller (12) is controlling the camera, pump and pressure regulator for spraying the water in mist form. The present invention (20) will reduce the water wastages and manual effort for irrigating the water in the agriculture field. Fig 1

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033039 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN AUTOMATED BELT FOR WEARING PANTS TO PHYSICALLY CHALLENGED PEOPLE

(51) International classification	:G10L0015220000, A61H0003000000, G08B0021040000, A63F0013212000, A61F0009020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT AN AUTOMATED BELT SYSTEM FOR WEARING PANTS TO PHYSICALLY CHALLENGED PEOPLE The present invention discloses an automated belt system (10) for wearing pants to physically challenged people for reducing their manual effort or the need of assistance from an external person. The automated belt system (10) comprises a buckle, plurality of sensors, motorized system, button, voice control module and a control unit. The touch sensor/proximity sensor (13) is configured to activate/switch ON the system while detecting the user. The length measuring sensor (14) is configured to detect the user's body shape and measure the circumstances of the person. The motorized system comprises at least two motors which is located at both ends of buckle. The left side motor (15) is releasing the rolled belt material gradually over the waist/hip in counter clockwise direction for providing the comfortable fit after wearing the pants. The right side motor (16) is configured to receive the belt edge after covering the waist area of user for rolling the belt inside the buckle for tightening/loosening. The forward and reverse button (18) is configured to enable the rotation of right and left side motor for providing the tightening/loosening features while wearing the belt as well as after wearing the belt. The voice control module (17) is configured to operate the rolled belt movement over the waist/hip using the motor rotation based on the user voice control. The control unit (19) is configured to regulate the motorized system by means of button/voice control for wearing the belt by the physically challenged people. The present invention (10) will reduce the physically challenged people effort for using the belt to provide the comfort fit in an effective manner. Fig 1

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033040 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SUGARCANE PEELING MACHINE

(51) International classification :A23N7/00, B26D1/30, C13B5/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT SUGARCANE PEELING MACHINE The present invention discloses a sugarcane peeling machine (10) for easily removing the sugarcane peels without manual effort and time consumption. The sugarcane peeling machine (10) comprises a rotating element, inner and outer frame, hand wheel and a self-actuated spring with blade mechanism. The rotating element (53) configured to receive the rotary motion from the electric motor or by any output shaft of the conventional sugarcane juicing machine. The inner frame (58) housed inside the outer frame (57), wherein the inner frame is moveable in vertical direction. The driver and driven pulley are inserting the sugarcane inside the blade area by means of rotating element-controlled rotation. The hand wheel (50) is rotatably positioned at the top of the machine which is configured to enable the inner frame movement in vertical upward and downward directions for adjusting the distance between the driver and driven pulley (54) by means of screw rod rotation. The automatic spring actuated peeling mechanism comprises a plurality of blades. The plurality of blades (60) positioned in top, bottom, right and left sides of the inner frame for removing the sugarcane barks by passing the sugarcane through in between the driver and driven pulley area. The present invention (10) will reduce the accidents and time consumption of the sugarcane peeling process in an effective manner. Fig 1

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
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(21) Application No.202441033041 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEVICE FOR UPROOTING THE PALMYRA TUBER

(51) International classification :A01G0023060000, D01G0007060000, A61B0017040000, E05B0065100000, A01G0022000000
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(57) Abstract :
ABSTRACT DEVICE FOR UPROOTING THE PALMYRA TUBER The present invention discloses a device (10) for uprooting the Palmyra tuber from the loosened soil. The uprooting device comprises a frame, handle bar and a plucker. The handle bar (1) is configured to hold the device by the user/farmer for uprooting the Palmyra tuber. The extended cylindrical rod (5) is configured to press by the user foot for inserting the device initially in the soil. The plucker (7) comprises a plurality of sharp edges at its bottom end for inserting the device inside the soil to uproot the Palmyra tuber by operating the external handle. The rotation of external handle (4) in clockwise direction is inserting the plucker inside the soil for reaching the maximum depth for uprooting the tuber and the counter clockwise rotation of the external handle is uplifting the plucker (7) from the soil along with soil/tuber by means of internal gear arrangement and threaded shaft movement. The threaded shaft (6) is movably housed inside the frame by means of external handle rotation. The present invention (10) will reduce the manual effort, time consumption and damages while uprooting the Palmyra tuber using traditional methods. Fig 1

No. of Pages : 20 No. of Claims : 10

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(54) Title of the invention : A SEMI AUTOMATIC BRICK MAKING MACHINE

(51) International classification :B28C9/02, B28B1/087, B28B11/24, B28B15/00, B28C7/00, B28C7/12
(86) International Application No :NA
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(57) Abstract :
ABSTRACT A SEMI AUTOMATIC BRICK MAKING MACHINE The present invention discloses a semi-automatic brick making machine (10) for reducing the manual effort and time consumption of the process. The brick making machine comprises a power source, electric motor, hopper and an axial drill. The hopper (51) is configured to feed the sand, water and other essential materials manually for making the bricks. The axial drill (50) is configured to mix the sand, water and other essential ingredients using the motor rotation by allowing the regulated release of raw materials from the hopper. The brick mould (53) is provided for converting the mixture in a desired form by means of axial drill rotation. The plurality of wire cutters (56) configured to cut the bricks in the desired size by passing the injected mixture in between the wire cutters by means of the operation of hydraulic piston. The heating chamber (58) is housing a plurality of heating coils at the inner sides which is configured to heat the bricks at the specific temperature using the electrical energy. The conveyor unit (59) is configured to transmit the bricks from the cutter section to discharge point by means of the electric motor rotation. The present invention (10) will reduce the manual effort in an effective manner for making the bricks in minimum time duration. Fig 1

No. of Pages : 20 No. of Claims : 8

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(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033043 A
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(54) Title of the invention : AN AUTOMATIC SWEET PUFFED RICE BALL MAKING MACHINE

(51) International classification :A23P0030100000, A23L0007196000, A23L0007161000, A47J0043200000, A23G0003020000
(86) International Application No :NA
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(57) Abstract :
ABSTRACT AN AUTOMATIC SWEET PUFFED RICE BALL MAKING MACHINE The present invention discloses an automatic sweet puffed rice ball making machine (15) for preparing the rice balls automatically without the manual effort. The rice ball making machine (15) comprises a rotating element, bottom PLA molds, top PLA molds, beam engine mechanism and a Plummer block. The rectangular hopper (8) is configured to store the puffed rice mixture. The bottom PLA molds (6) are permanently coupled in the conveyor belt for receiving the puff rice mixture from the rectangular hopper. The top PLA molds (5) are facing downward direction which is moveably positioned in vertical upward and downward direction. The beam engine mechanism (12) is operatively connected with the rotating element for actuating the controlled movement of the plurality of top PLA molds in vertical directions. The two flat plates (13) positioned at the entry and exit sides of the conveyor belt moving bottom of rectangular hopper area, to control the excess rice mixture travelling over the bottom molds. The Plummer block (11) is configured to provide the support to the rotating element. The ball shaped puffed rice is dispensed at the left end of the machine from the conveyor/bottom mold using the gravitational force. The present invention (15) will reduce the manual effort and time consumption for making the puffed rice balls in an effective manner. Fig 1

No. of Pages : 23 No. of Claims : 9

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(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033044 A
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(54) Title of the invention : AN IRREGULAR SHAPED WORKPIECE HOLDING VICE FOR WIRE CUT EDM MACHINE

(51) International classification :B25B0001240000, B25B0001100000, B23Q0003060000, B26D0007010000, A61F0002460000
(86) International Application No :NA
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(87) International Publication No : NA
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(57) Abstract :
ABSTRACT AN IRREGULAR SHAPED WORKPIECE HOLDING VICE FOR WIRE CUT EDM MACHINE The present invention discloses an irregular shaped workpiece holding vice (60) for wire cut EDM machine to reduce the misalignment while machining the complicated pieces/parts. The vice (60) comprises a diamond shaped holding area (58), fixed and moveable jaws, screw rod and a lever. The rectangular shaped vertically positioned semi hollow plates (59) configured to mount the vice over the wire cut EDM machine. The moveable lane (55) is configured to move over the rectangular plate guideways. The work piece holding chuck (50) is positioned at the top side of the vice. The fixed jaw (51) is permanently coupled with the chuck body. The moveable jaw (52) is configured to expand/minimize the work piece holding area by means of screw rod manual rotation. The diamond shaped work piece holding area (58) is positioned in between the fixed and moveable jaw mating sides for holding the irregular shaped work pieces to complete the machining operations at the required position/angle. The lever (56) is configured to control the movement of the threaded rod for holding the different irregular shapes/sizes of the work pieces by the movement of the moveable jaw. The present invention will reduce the mistakes while machining the irregular parts in an effective manner. Fig 1

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(21) Application No.202441033046 A
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(54) Title of the invention : ALL IN ONE TAILORING KIT

(51) International classification :A41H0031000000, E02F0005320000, A41D0027240000, B23G0001240000, D05B0037040000
(86) International Application No :NA
Filing Date :NA
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(57) Abstract :
ABSTRACT ALL IN ONE TAILORING KIT The present invention discloses all in one tailoring kit designed to streamline and enhance sewing and tailoring tasks. The kit integrates essential tools including a thread cutter, seam ripper, needle threader, and folder back into a compact and portable package. The thread cutter enables precise trimming of threads after stitching, while the seam ripper facilitates easy removal of stitches for corrections. A needle threader simplifies the threading process, especially for users with dexterity challenges, promoting efficiency and convenience. Additionally, the folder back assists in neatly folding fabric edges for professional-looking seams and hems. Compact and organized, this comprehensive all in one tailoring kit offers versatility and practicality for both novice and experienced sewing enthusiasts, empowering them to achieve professional-quality results with ease. Fig 1

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(54) Title of the invention : WATCH INDICATOR

(51) International classification	:G01R0015200000, A61B0005145000, A61B0005145500, G08C0017020000, B60R0025300000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
ABSTRACT WATCH INDICATOR The present invention discloses a Watch indicator for indicating and shut off the machine (4). The Watch indicator comprises of a watch, a hall effect current sensor (1), a transcutaneous sensor (1), a control unit (2), and controller (3) which is attached with the machine (4). A transcutaneous sensor (1) which is configured to measures carbon content levels in human blood, which is operates on battery power. A Hall effect current sensor (1) which is configured detects current flow in the human body, which is operates on battery power. The plurality of sensor (1) which detects and transfer the signal to the control unit (2) and controller (3) to shut off the machine (4), which are fits within the watch casing for comfortable wear and power supply. A control unit (2) which is configured to processes signals from two different types of sensors (1) with wireless connections to the indicating the machine (4), wherein a control unit (2) is configured to collects data directly from the sensors (1) and transfer the signals for monitoring and control purposes. A controller (3) which is configured to control the machine (4) to shut off and on the machine (4) by the input signal, which is attached with machine (4) for the control the machine (4) needs to off and on for the safety precautions. wherein controller (3) is operable by the signals transmitted by the plurality of sensors (1). Fig 1

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(21) Application No.202441033049 A
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(54) Title of the invention : MORTAR PLASTER

(51) International classification	:C04B0028140000, C04B0111280000, C04B0111000000, C02F0001000000, A01G0024150000
(86) International Application No Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT MORTAR PLASTER The present invention discloses a thermal insulating plaster in the buildings to reduce the effect of temperature. The mortar plaster comprises a 230 mm masonry wall (1) held together with the mortar, 100 mm thick thermal insulating plaster (2) on the face of the wall. These thermal insulating plasters are an important means to face the energy efficiency issues in the building field, above all in the renovation process. The thermal insulating plasters consist of two materials as perlite and vermiculite. Vermiculite is the mineral which is formed by weathering or by hydrothermal hydration of bio lite or phlogopite. Perlite is an amorphous volcanic glass that has a relatively high-water content, formed by hydration of obsidian. It is a non-renewable resource. The described materials are mixed in a certain ratio by the replacement of sand in the mortar. Fig 1

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(21) Application No.202441033052 A
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(54) Title of the invention : EASY SCALES REMOVER

(51) International classification :A22C0025020000, C02F0005100000, E21B0037060000, C09K0008528000, C11D0007260000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
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(57) Abstract :
ABSTRACT EASY SCALES REMOVER The present invention discloses a scale remover, configured for removal of scales form the fish. The scale remover comprises a scale remover, with scale 5 collector and the knife. The scale of the fish would be removed by the scale remover and the slot in between the scale remover will connected to the scale collector, collects the scale being removed .The knife is present in the side of the scale remover, which can extend or contracted depend on the usage. The handle of the scale remover has the unique design with can be 10 adaptable to both the scale remover and the knife. The handle of the scale remover contains the Roll-button, which control the knife position whether the knife need to be open or in close condition. In addition, the scale remover is easy to clean and need less maintain. The described example with flexibility for modification while retaining the essence of invention. 15 Fig 1

No. of Pages : 15 No. of Claims : 6

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(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033053 A
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(54) Title of the invention : MULTIFUNCTION SAW

(51) International classification :B27B21/08, B23D59/00, B23Q17/00, G01B3/02, B27B21/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
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(57) Abstract :
ABSTRACT MULTIFUNCTION SAW The present invention discloses a multifunction saw configured for enhanced efficiency and versatility in carpentry tasks. This innovative multifunction saw design incorporates a steel measuring tape within its handle, providing a convenient and integrated solution for accurate measurements during cutting operations. The multifunction saw features a small compartment located above the handle, designed to accommodate four types of blades, allows for seamless blade changes and adjustments, catering to the specific needs of the carpenter and the materials being worked on. The adjustable blade mechanism ensures precision and adaptability, enabling swift alterations according to the requirements of the task at hand. Additionally, the inclusion of a rubber-type pencil integrated into the handle enhances the utility of the tool by providing a convenient marking tool for measurements and cutting guidelines. By combining multiple functionalities within a single ergonomic device, this multifunction saw aims to streamline carpentry processes and reduce the need for separate tools, ultimately improving efficiency and productivity in woodworking tasks. Fig 1

No. of Pages : 15 No. of Claims : 5

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(54) Title of the invention : MULTIPURPOSE CLEANING BRUSH

(51) International classification :A46B11/00
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(57) Abstract :
ABSTRACT MULTIPURPOSE CLEANING BRUSH The present invention discloses a versatile cleaning tool designed for efficient use in both kitchen and washroom settings, effectively addressing the challenge of wastable resources. This innovative cleaning device offers multifunctional utility, capable of effectively cleaning various containers and surfaces encountered in daily household chores. With its unique design, the tool enhances convenience and practicality, streamlining cleaning tasks and reducing the need for multiple specialized cleaning implements. Its adaptability allows for seamless transition between kitchen and washroom environments, catering to diverse cleaning needs with ease. By promoting efficient resource utilization and simplifying cleaning routines, this invention contributes to sustainability efforts while enhancing user experience in household maintenance. Overall, the invention represents a significant advancement in cleaning technology, offering versatile utility and environmental consciousness in modern households. Fig 1

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033056 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FOOD WASTE RECYCLE DUSTBIN

(51) International classification	:B65F0001140000, B65F0001160000, B09B0003000000, E03C0001266000, B02C0021000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT FOOD WASTE RECYCLE DUSTBIN The food waste recycles dustbin presented here integrates drying and grinding of food waste. It helps to recycle of food waste int natural fertilizer. It features an electric motor driving both an impeller for drying and blades for grinding, this both processes are don within an insulated chamber. This insulated chamber uses to maintain the inner temperature. This motor is Control is facilitated through a switch mechanism. The final powder of food waste is stored in collecting container. It is compactable in size. This innovative design offers a versatile solution for managing food waste, with potential for further customization and enhancement. Most illustrative drawing: Fig 1

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033058 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : COIR PITH EXTRACTION

(51) International classification :A01G0024250000, E03C0001266000, C02F0001000000, C05F0005000000, B02C0018120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT COIR PITH EXTRACTION The present invention discloses a Coir pith extraction for efficient coir pith extraction process. The Coir pith extraction comprises a crushing unit is configured to crushing the dried coconut shell, comprises with plurality of shredder blades, solid shaft, and hopper powered by an electric motor using belt drive. A hopper is configured to feed the dried coconut shell into the crushing unit to crush the dried coconut shell. The bevel gear is connected to electric motor to transmit motion to shaft of blender blade for efficient. By bevel gear setup in grinding unit is configured to grind the husks into coir pith. Grinding unit comprises a blender blade, a rack and pinon setup, a movable slab, a lever operator. A filtering unit is configured to remove the unwanted materials and coir pith, the filtering unit comprising a filter. A storage unit is configured to store the coir pith from the filtering and grinding unit. A storage unit has more space for storing of coir pith. It as effective and capable of storing maximum quantity of coir pith at particular space. Further comprising rectangular beam is configured to provide support of the whole machine. Most illustrative drawing: Fig 1

No. of Pages : 16 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033061 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MULTIPURPOSE TOOL HOLDER ATTACHMENT IN LATHE MACHINE

(51) International classification	:B23B0031200000, B25F0001000000, B23B0005000000, B23Q0011000000, B23B0029240000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT MULTIPURPOSE TOOL HOLDER ATTACHMENT FOR LATHE MACHINE The present invention discloses a multipurpose tool holder attachment designed for lathe machines, increase machining versatility. This attachment replaces the traditional tool post and integrates the milling setup comprising, an electric motor, outer shaft, inner shaft with collet chuck, bearing, belt, pulley, multi-point cutter, bolts, nuts, and base plates. An electric motor, coupled with a belt drive system, efficiently transfers motion to the inner shaft, enhancing cutting precision. The inner shaft, equipped with a collet chuck, securely grips cutting tools, ensuring optimal stability during machining operations. Bearings positioned on both sides of the inner shaft facilitate smooth rotation, minimizing friction and maximizing support. A V-belt mechanism facilitates power transmission, while a vertical plate securely holds cutting tools. Bolts and nuts play a crucial role, firmly securing attachment components and maintaining precise alignment. Overall, this multipurpose tool holder attachment enhances machining versatility, stability, and efficiency, marking a significant advancement in lathe machining technology. Most illustrative drawing: Fig 1

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033062 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WASTE NAPKIN RECYCLER

(51) International classification :A61F13/15, A61F13/551, B09B3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT WASTE NAPKIN RECYCLER The present invention discloses a waste napkin recycler for efficient recycling processes. The waste napkin recycler comprises a slicing unit (51) powered by an electric motor (50) with blades, solid shaft (59), and frame. An additional electric motor connected to a solid shaft (59)provides rotary motion for efficient napkin slicing. A pulping unit (52) blends napkin waste to achieve optimal pulp density, monitored by an ultrasonic sensor. A Filtering unit (57) removes contaminants, aided by a tapered pipe for pulp transport. The Bleaching unit (56), operated by an electric motor, enhances pulp whiteness and ink removal. Structural stability is ensured by beams and a base (58). A collection hopper (54) gathers napkin pieces below the slicing unit (51). An electric motor (54) is equipped with a vibration-dampening base (58) and protective casing for prolonged lifespan. Overall, the invention combines efficiency, structural integrity, and user safety for effective waste napkin recycling and reusability. Most illustrative drawing: Fig 1

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033063 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BIODEGRADABLE PHONE CASE UTILIZING SUGARCANE BAGASSE WITH SEED IMPLANT SYSTEM

(51) International classification :C08L101/16, B65D65/46
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT BIODEGRADABLE PHONE CASE UTILIZING SUGARCANE BAGASSE WITH SEED IMPLANT SYSTEM The present invention discloses a method for manufacturing biodegradable phone cases utilizing sugarcane with a seed implant system. The process involves two main divisions: production of polyhydroxyalkanoates (PHA) and seed implantation. PHA production begins with collecting sugarcane bagasse, followed by enzymatic hydrolysis and microbial fermentation to obtain PHA granules. Subsequent purification yields PHA resin ready for moulding. Seed implantation utilizes injection moulding, coating seeds with chitosan and alginate for effective germination. Chlorophytum comosum and Aglaonema seeds are selected for their adaptability and environmental benefits. The injection moulding process incorporates seeds directly into the phone case, ensuring germination without compromising seed integrity. Quality control measures include durability and flexibility tests, as well as seed distribution checks by botanists. Eco-friendly packaging further complements the sustainable nature of the product. Most illustrative drawing: Fig 1

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033064 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A COCONUT SCRAPER MACHINE

(51) International classification :A23N5/03, A23N5/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT COCONUT SCRAPER MACHINE The present invention discloses a coconut scraper machine (10) for removing the coconut from the coconut shell without damaging its property and reducing the labours effort. The coconut scraper machine (10) comprises a rectangular base, a set of rectangular jaws, angular handle, hollow rod and a plurality of blades. The set of upper and lower rectangular jaw (50) configured to hold the coconut shell for providing the consistent grip to scrap the coconut by the diamond patterned soft rubber coating. The angular handle (57) is operably connected with the jaws which is configured to actuate the gripping movement of the rectangular jaws in a controlled manner by means of arresting action of single row angular contact bearing (58). The hollow rod (60) is configured to transmit the angular movement of the angular handle into gripping action of the rectangular jaws by means of inner and outer frame. The plurality of blades (56) positioned in a rotational series over the hollow shaft for scraping the coconut by means of an electric motor rotation. The hollow shaft (55) internal area comprises plurality of springs connected with the plurality of blades configured to expand/compress the blade covering area based on the coconut sizes. The present invention (10) will reduce the manual effort and time consumption for scraping the coconut from the coconut shell. Fig 1

No. of Pages : 20 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033065 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SESAME SEED SEPARATING MACHINE FROM SESAME CAPSULE

(51) International classification :B07B0001280000, A61K0036185000, B07B0009000000, A61H0001020000, B01L0003000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT SESAME SEED SEPARATING MACHINE FROM SESAME CAPSULE The present invention discloses a sesame seed separating machine (15) from sesame capsule for reducing the manual effort and time consumption. The sesame seed separating machine comprises a rotating element, hollow chamber, splitter chamber, seed separator unit and a sieving chamber. The rotating element (9) is configured to supply the necessary rotary motion to the machine by means of electrical energy. The hollow chamber (1) is having a hopper which is configured to feed the dried sesame plants/capsules by the user/farmer. The splitter chamber (2) comprises at least two cylindrical rollers. The said two cylindrical rollers (3 & 4) operatively coupled with the rotating element by means of belt drive for separating the sesame from the sesame capsule/plant by inserting it in between the rollers. The seed separator unit (5) comprises a solid cylindrical rod. The top of solid cylindrical rod (11) is V shaped which is configured to allow the sesame seeds towards the bottom area by means of vibration received from the motor rotation using belt drive. The impurity separating slide (7) is positioned at the left side of the machine which is configured to pull down the empty capsules and plants from the seed separator area. The sieving chamber (6) is operable by the rotating element, wherein the sieving chamber is configured to remove the micro impurities/dusts from the separated sesame at the bottom end for storing the quality sesame seeds. The present invention (15) will reduce the manual effort and time consumption in an effective manner for separating the seeds from the dried plants/capsules. Fig 1

No. of Pages : 21 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033066 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A DRILLING MACHINE EXTENSION FOR SAWING PLYWOOD

(51) International classification :A61M0025000000, E21B0010220000, E21B0004000000, B60T0008480000, B27D0001040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT A DRILLING MACHINE EXTENSION FOR SAWING PLYWOOD The present invention discloses a drilling machine extension for sawing plywood comprises a shaft (1) connected to the drill bit, enabling efficient cutting facilitated by rotary motion. The extension also comprises a driving wheel (2) at a predetermined angle, pivotal in inducing motion in a follower rod (3) crucial for back-and-forth sawing action, wherein the follower rod (3) within a protective casing (6), emphasizing safety and precision in blade engagement. Additionally, a helical spring (4) aids in providing flexibility to optimize cutting performance. Through seamless integration and strategic design considerations such as a fixed angle of 35 degrees for the driving wheel (2), the extension enhances stability and control during operation. Further innovations include a minimized power requirement through optimized shaft (1) design and the accommodation of critical components within a robust casing (6), ensuring longevity and reliability. Refer Fig. 1

No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033068 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A WEARABLE INSULIN DELIVERY SYSTEM

(51) International classification :A61M5/172, A61M5/168, G16H20/17, A61M5/142
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A WEARABLE INSULIN DELIVERY SYSTEM The present invention relates to a wearable insulin delivery system comprises an insulin pod for subcutaneous insulin delivery, a smartwatch capable of monitoring blood pressure, and communication means facilitating bidirectional data transmission between the insulin pod and the smartwatch. Control logic within the insulin pod receives blood pressure data from the smartwatch and synchronizes it with insulin delivery data. The synchronized data is accessible through a companion application, providing users with comprehensive insights into their health status. By combining insulin delivery and blood pressure monitoring functionalities in a single wearable device, the invention offers a convenient and holistic solution for diabetes management. The integrated system offers several advantages, including enhanced convenience for users who can monitor both insulin delivery and blood pressure using a single wearable device. By leveraging the capabilities of the smartwatch, users can access real-time blood pressure data alongside insulin delivery information, providing a comprehensive view of their health status. Refer Fig. 1

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033069 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART PLANT POT

(51) International classification :G06Q0010060000, A01G0009020000, A01G0025160000, A01G0007040000, A01G0027000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
ABSTRACT THE SMART PLANT POT The present invention discloses a Smart Plant Pot is an innovative gardening solution designed to simplify plant care and enhance growth. It integrates a moisture-to-water converter to prevent over under-watering, automatic sensors for real-time monitoring of soil temperature and moisture levels, and an intelligent fertilizer dispensing system for precise nutrient delivery. With a user-friendly interface, it enables easy customization of watering and fertilization schedules, making gardening accessible to users of all skill levels. By automating tasks and optimizing resource usage, it promotes sustainability while fostering healthy plant growth and vibrant foliage. This revolutionary device merges advanced technology with traditional gardening practices, revolutionizing the way plants are nurtured and cultivated for both indoor and outdoor environments. The described examples illustrate various embodiments, with flexibility for modifications while retaining the essence of the invention. Refer Fig. 1

No. of Pages : 19 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033070 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A WALL AND ROOF CLEANING MACHINE

(51) International classification :A47L11/38, A47L11/40
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT A WALL AND ROOF CLEANING MACHINE The present invention discloses a wall and roof cleaning machine comprises a battery-powered DC motor (3) for efficient cleaning operations, controlled by a motor controller (9) for precise speed and direction control. A blower (1) within the frame (5) enhances stability and airflow distribution for adherence to vertical surfaces. Plurality ofrollers (2), powered by DC motor (3), enable versatile movement crucial for thorough cleaning. A remote-control system facilitates precise roller (2) movement, enhancing user convenience and flexibility. A microcontroller (8)interprets signals for accurate motor control, ensuring synchronized operation. A programmed motor controller (9)manages roller (2) movement for effective cleaning performance. Additionally, brushes (4) aid in dust and debris removal, while a secure frame (5) design and nuts and bolts ensure structural integrity and easy assembly. Refer Fig. 1

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033073 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SHEET METAL CUTTER

(51) International classification :B23D19/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT SHEET METAL CUTTER The present invention discloses asheet metal cutter represents a novel advancement in the mechanical field and industrial fields, offering a versatile solution for slicing sheet metal into definitely desired shapes efficiently with less wastage of material and reducing the physical labor work. The rotary blade (1) serves as the primary cutting tool, driven by an electric motor (6) through a chain drive (8) mechanism. The spring (2) mechanism ensures consistent pressure on the sheet metal, optimizing cutting performance and reducing operator fatigue. The incorporation of a ball bearing (3) system facilitates smooth rotation of the blade, minimizing friction and wear. a plurality of gears (4) operates precise control of blade movement, A sturdy base (7) and supporting beam (9) provide stability and rigidity to the cutting apparatus, ensuring reliable operation even under high loads. This structural framework enhances safety and enables seamless integration into existing manufacturing setups. Refer Fig. 1

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033074 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : REMOTE CONTROLLED HEIGHT ADJUSTABLE DRILLING MACHINE

(51) International classification :B23B0041000000, B23B0039160000, B25J0005000000, B23B0039000000, E21B0007020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A REMOTE CONTROLLED HEIGHT ADUSTABLE DRILLING MACHINE The present invention disclosesa remote controlled height adjustable drilling machine designed for automatic drilling operations on ceilings. It features a telescopic mechanism with three pipes: base, intermediate, and apex. The base pipe, located at the mobile base, provides foundational support and facilitates hydraulic oil flow. It ensures stability during height adjustments. The intermediate pipe expands when high pressure is applied and deploys after the apex pipe. The apex pipe deploys automatically upon oil entry, initiating the extension mechanism. Four wheels driven by two motors ensure precise movement of mobile base. The drilling unit, mounted on the apex pipe, includes crucial components like the drill bit, power supply unit, and driller body. The remote control system enables convenient height adjustment and drilling initiation. A pressure regulator ensures accurate hydraulic pressure control for height adjustments. This innovative machine streamlines operations, enhancing productivity and safety in various drilling applications. Refer Fig. 1

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033076 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A DEVICE FOR FIRE SAFETY IN E-VEHICLE

(51) International classification :A62C0099000000, A62C0003070000, A62C0003000000, A62D0001000000, A62C0037000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A DEVICE FOR FIRE SAFETY IN E-VEHICLE The present invention discloses a device for fire safety in electric vehicles, comprises a thermal sensor (1) for detecting abnormal temperatures within vehicle compartments. Collaborating with a control system comprising a microcontroller (2) and motor controller (3), the device swiftly addresses temperature irregularities by activating fire suppression systems. Integrated with a DC motor (4), the system ensures precise operation of a fire extinguisher, swiftly deploying suppression agents when needed. The thermal sensor (1) continuously monitors temperature variations, alerting the control system to potential fire hazards. Further enhancing safety, a fire extinguisher knob (5) operated by the DC motor (4) releases gas for suppression, under the control of the motor controller (3). This synchronized system enables efficient mitigation of fire hazards, bolstering safety measures for electric vehicles and occupants. Refer Fig. 1

No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033078 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADJUSTABLE COFFEE STIRRER

(51) International classification :A47J0043070000, A47J0043042000, H05B0006740000, H04H0060040000, A47J0036160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT ADJUSTABLE COFFEE STIRRER The present invention discloses anadjustable coffeestirrers configured for efficient mixing of food materials. The adjustable coffee stirrer comprises an electric motor (51), rod with end of blade (55), driven by the motor, to mix through the coffee. Therod(53) height can be changed according to the shape of the container, ensure fast mixing, with the adjustable motor driver (50)to mount the coffee stirrer on the container. The machine blade can be changed according to the material which going to blend or mix. The stirrer has the speed controller (52) to control the speed of the stirrer and to recharge the Rechargeable battery(54) in the adjustable coffee stirrer with power supply. The outer frame (58) provides stability and comfort, while the inner frame supports rotator mechanisms. The described examples illustrate various embodiments, with flexibility for modifications while retaining the essence of the invention. Refer Fig. 1

No. of Pages : 17 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033079 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED BUNDLE PAPER DISPENSER WITH COUNTER SYSTEM

(51) International classification :A47K0010380000, A47B0021030000, A47K0010320000, B25C0005020000, A24F0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT AUTOMATED BUNDLE PAPER DISPENSER WITH COUNTER SYSTEM The present invention discloses an automated bundle paper dispenser with a counter system, featuring an outer adjustable tray(53) with an outer frame to accommodate sheets of varying sizes. A roller(55) system, driven by a stepper motor(54) controlled by an Arduino UNO(51), facilitates paper movement from storage to collection. Integration of an RFID receiver(50) and keypad(52) enables user authentication and input. Powered by rechargeable batteries, the system enhances workflow efficiency in offices and academic settings, with its portability and space-saving design. Constructed from durable materials, including hardened mild steel, the dispenser ensures reliable paper dispensing, aided by specially designed rollers. While specific embodiments are described, variations and modifications are possible without departing from the scope and spirit of the invention, allowing for versatile implementation in diverse environments. Refer Fig. 1

No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033081 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SMART OFFICE FILE POSITIONING RACK

(51) International classification :G06K0019060000, F21S0008000000, G06K0007140000, A47G0025060000, C25B0015020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT A SMART OFFICE FILE POSITIONING RACK The present invention introduces a smart office file positioning rack, featuring a controlling unit utilizing Node MCU (52) to manage file placement based on reference values. A scanning unit, employing barcode scanners (51), identifies files via unique barcodes, with movement facilitated by DC motors integrated for x and y-axis motion. The driver unit, employing an L298N motor driver (50), regulates motor movement, while power is supplied via detachable sources indicated by LED lights. Speed control is achieved through Node MCU (52), ensuring precise scanning. Scanned signals are compared to stored data, triggering notifications. The rack's structure, constructed from hardened steel, ensures durability, with mild steel employed for threaded rod (53) and gear mechanisms. Mountable on various file racks, the system's adaptability extends its functionality to diverse sectors, fostering efficient workflow. The described embodiments offer flexibility for implementation, enabling modifications while maintaining. Refer Fig. 1

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033082 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ELECTRONIC CEILING CLEANER

(51) International classification :C11D0003200000, B08B0001000000, B08B0001040000, B08B0013000000, H01L0029423000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT ELECTRONIC CEILING CLEANER The present invention discloses an electronic ceiling cleaner is to remove dust and dirt efficiently and effectively, from ceilings and high surfaces in indoor environments. An electronic ceiling cleaner comprises of an electric motor (3), a brush (2), a handle (4), a cable, a plurality of buttons (5) and plurality of shafts (6) which are induced to device for the cleaning the dust from ceiling. Abrush (2) connected to an electric motor (3) that rotates to effectively remove dust from high surfaces. Its adjustable shaft (6), including the handle (4), provide flexibility for cleaning various ceiling heights, with buttons (5) directly integrated for easy height adjustment, which ispowered by a reliable power source, the electric motor (3) serves as the main component driving the cleaning operation, ensuring thorough dust removal. The seamless coordination between the motor (3), shafts (6), and buttons (5) streamlines the cleaning process, enhancing user experience. With its efficient design and robust functionality, the electronic ceiling cleaner offers an effective solution for maintaining pristine ceilings. Refer Fig. 1

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033083 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AQUATIC GARBAGE COLLECTING ROBOT

(51) International classification	:E02B0015100000, B65F0001140000, B65F0001160000, B65F0003000000, G01N0033000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT AQUATIC GARBAGE COLLECTING ROBOT The present invention disclosesanaquatic garbage collecting robot designed to collect the garbage waste from water bodies efficiently. The robot comprises a blower(8) for trapping plastic waste, a propeller (1) used to govern directional and vertical mobility, a power supply unit consisting of rechargeable batteries for powering different parts of the robot, and a waterproof casing to protect internal components from water and moisture. The robot features sensors such as hyperspectral short-wave infrared sensors (17), proximity capacitive sensors (18), and sonar sensors (19) to detect and identify garbage, obstacles, and potential hazards in the water. The present invention comprises, reach lights (3) for illumination, and tsunameters (21) for disaster detection. These components work together to optimize the robot's performance and ensure its resilience in water bodies, effectively collecting plastics and other garbage’s to reduce environmental impact. Refer Fig. 1 and 2

No. of Pages : 23 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033084 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN ADJUSTABLE MAGNETIC TRAY

(51) International classification :A45C0013020000, C21D0009000000, G11B0005720000, E01F0013020000, A47B0023000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT ADJUSTABLE MAGNETIC TRAY The present invention discloses an adjustable magnetic tray designed to enhance organization and storage efficiency for various items, particularly small metal parts, in settings such as workshops, garages, construction sites, and DIY projects. The system comprises a plurality of metal trays (1) connected to rails (3), facilitating easy adjustments to customize arrangement as needed. Beneath each tray, magnets (2) optimize space utilization by securely holding metallic objects, while rubber padding (7) prevents scratches and enhances user-friendliness. Handles (6) positioned for ergonomic comfort facilitate tray operation, and a sturdy frame (4) ensures stability and durability. Refer Fig. 1

No. of Pages : 17 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033085 A
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(54) Title of the invention : DYNAMIC CONTROL PROPELLER

(51) International classification :B63H0003040000, C09D0005160000, F41A0019050000, B05B0001300000, B64D0027000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT DYNAMIC CONTROL PROPELLER The present invention discloses aDynamic Control Propelleroffering a versatile solution for maximizing the efficiency and establishing seamless maneuverability and direction of marine ships and boats as well as for fuel efficiency. This innovative Dynamic Control Propellerintegrates specifically designed propeller blades, facilitating efficient propulsion of the marine vesseland for a sudden turning of the marine ships. This innovative design eliminates friction and wear of components. The propeller blades are easy to detach and repair. The inner ring is operable by the rotary motion of the shaft. The outer ring is operable by the actuating rod for the linear motion of the propeller. The essential key features and benefits of the present invention upgrades the existing propeller technology with a changeable pitch angle by accessing the propeller blades in both rotational motion as well as providing tilted motion. Most illustrative drawing: Fig 1

No. of Pages : 18 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033087 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SEED OIL EXTRACTION MACHINE

(51) International classification :B30B9/14, B30B15/00, C11B1/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT SEED OIL EXTRACTION MACHINE This innovative apparatus aims to maximize oil extraction capacity within minimal time, reduce size and weight for convenient domestic use, ensure energy efficiency, and deliver high-quality oil. Overcoming previous challenges and limitations, the Seed Oil Extractor features an electric motor driving a Double Start Spiral screw rod within a sturdy octagonal screw rod bracket, optimizing surface area contact with seeds for consistent force application. The inclusion of a heater facilitates seed softening, enhancing pliability and improving the crushing process. The design prioritizes structural integrity with a dual cooling system for motor optimization, a lock nut ensuring stability, and a thrust ball bearing enabling smooth rotation. An O-ring prevents oil leaks, preserving system integrity, and the apparatus includes a feed box, strainer, oil reservoir, and waste collector for a comprehensive oil extraction process. Most illustrative drawing: Fig 1

No. of Pages : 19 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033088 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HUMAN BACK WASHER MACHINE

(51) International classification :A47K0007020000, A47K0007040000, B65D0005420000, G08B0021220000, A45F0003080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT HUMAN BACK WASHER MACHINE The present invention discloses a human back washer machine outlines a user-friendly solution for efficiently washing the posterior back during bathing. An electric motor powers the setup, transmitting power through a series of gears to rotate shafts connected to soft sponge material. The sponge gently cleanses the back without causing harm, unlike harsh scrubbers. A soap water reservoir, manually controlled, supplies water to wet the sponge for effective cleaning.Adjustability features, including an adjustment lever, enhance user comfort. The rollers are strategically placed to aid in back cleaning. The motor is protected by a frame to prevent electric leakage. This design addresses the challenge of back washing, providing a practical and accessible solution for maintaining hygiene. Overall, the system offers a simple yet effective mechanism for individuals to cleanse hard-to-reach areas of their back comfortably and efficiently. REFER FIGURE 1

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033089 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD AND APPARATUS FOR POCKET MILLING REGULAR POLYGONS

(51) International classification :B29C0064118000, B33Y0010000000, G05B0019190000, A61C0013000000, B23C0003340000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT METHOD AND APPARATUS FOR POCKET MILLING REGULAR POLYGONS USING REULEAUX TOOL PROFILE The present invention discloses a method and apparatus for pocket milling regular polygonsusing reuleaux tool profile toperform pocket milling of regular polygons using a Reuleaux tool profile and a specific tool path.The cutting tool comprising a reuleaux triangle profile (01), offering a constant width for precise machining of regular polygons. The tool's path planning involves three distinct approaches. The centroidal path, which follows a specific trajectory within the pocket boundary, eliminating unmachined corners. The chain centroidal path, which progressively offsets a single centroid along the pocket boundary to create the tool path and the epicyclical motion approach, where the tool rotates around the path in a rolling motion. A computer-controlled system coordinates these paths, utilizing advanced algorithms to define the tool's movement. This system, coupled with a control mechanism, ensures accurate and efficient material removal, enabling tailored machining of regular polygon pockets with optimal precision and consistency, reducing production costs and enhancingproductivity. Refer Fig. 1

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033090 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : 3D LASER HOLOGRAM PROJECTOR

(51) International classification :G03H0001220000, H04N0009310000, G03H0001020000, G03H0001260000, G03H0001000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT 3D LASER HOLOGRAM PROJECTOR This invention discloses a 3D Visual presenter designed for projecting visuals in a realistic manner. The projector utilizes a Helium-Neon laser controlled by a control system, offering precision in holographic projection. The novel design features a stationary laser fixed to the inner frame, while the outer frame rotates, introducing dynamic movement to holographic images. This setup enhances the accuracy and depth of holographic displays. Additionally, the projector incorporates Light Emitting Diodes (LEDs) as an alternative light source, emitting specific wavelengths to contribute to precision and ensure energy efficiency. The invention provides a unique visual experience by combining rotational movement and a stable light source. The colour variants in the projector, achieved through Red, Green, and Blue (RGB) lasers, further enrich the holographic display. Most illustrative drawing: Fig 1

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202441033093 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A LARVAE SLAYER

(51) International classification :C02F0001320000, C02F0001467000, A01M0001100000, A01M0029180000, C02F0001500000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A LARVAE SLAYER The present invention discloses a larvae slayer designed for eliminating mosquito larvae, comprising a stagnant water reservoir (50) serving as the central component. This reservoir facilitates mosquito oviposition, with a drain hole and stopper (51) directing water to a main reservoir for treatment. A solenoid actuator (52) controls the stopper (51), ensuring precise water flow regulation. A solar panel (53) positioned above the stagnant reservoir harnesses sunlight to generate power, supported by sturdy legs for stability. The main reservoir integrates UV and Ultrasonic emitter (57)s for water sterilization and a water pump (58) for circulation. A macro particle filter (55) removes larvae, while an Ultrasonic emitter (57) targets micro-level contaminants, with a UV emitter (56) providing sterilization. The system's microcontroller (61) governs operation based on sunlight and weather conditions, ensuring effective mosquito control. A water pump (58) maintains a closed-loop system for efficient water circulation. Automation eliminates the need for human intervention, with periodic maintenance required for optimal performance. The dry filter (55) system effectively disrupts the mosquito life cycle, with a user-friendly design facilitating easy maintenance and repair. FIG 1

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033132 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PLUMB GUARD SHIELD

(51) International classification :G08B0013120000, G06K0019060000, G01C0015100000, F24D0019080000, E06B0009520000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT PLUMBGUARD SHEILD The present invention discloses a Plumb Guard Shield which is an innovative defence system engineered to prevent creature intrusion through plumbing systems, particularly targeting the entry of snakes into indoor spaces. It consists of a robust outer layer constructed with rust-resistant materials such as metal mesh, PVC, or metal pipes, forming a physical barrier against unwanted intruders. Inside, an intricate spiral structure with spiral spikes allows fluid flow in one direction while impeding reverse flow, ensuring the uninterrupted operation of plumbing conduits. The Plumb Guard Shield is designed with user-friendly features for easy maintenance and customization, including hinges, latches, and handles. Advanced sensors provide real-time detection and deterrence, while environmental adaptations ensure durability in various conditions. This comprehensive solution offers peace of mind to homeowners by addressing both the physical and psychological concerns associated with creature intrusion, enhancing the security and well-being of indoor spaces. Most illustrative drawing: Fig 1

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033134 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SPINNING AND ROTATING FAN

(51) International classification :F04D29/64, F04D29/00, F04D25/08, F04D29/60
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SPINNING AND ROTATING FAN The present invention discloses a spinning and rotatingceil (53)ing fan assembly revolutionizing air circulation technology by seamlessly revolving around the ceil (53)ing within a customizable and fixed path. Key components include a motor (56) assembly, aerodynamically designed fan blades, a swivel mechanism, an advanced control system, a memory module, an anti-collision sensor, and a remote control device. The swivel mechanism enables multidirectional movement for optimal airflow distribution, while the control system allows precise adjustment of rotational speed settings and motion patterns. Safety features include an anti-collision sensor to detect and prevent obstacles along the fan's path. The assembly offers personalized user experiences with stored motion patterns and wireless remote control functionality. Crafted from materials like wood, plastic, or metal, the fan blades ensure efficient airflow and quiet operation. Most Illustrative Drawing: Fig 1

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033135 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : 360 DEGREE PAINT BRUSH

(51) International classification :A46B0005000000, B44D0003120000, A46B0013000000, B44D0003220000, A46B0007040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT 360 DEGREE PAINT BRUSH The present invention discloses a 360 degree paint brush apparatus comprising a handle portion (1), a head portion (3) pivotally attached to the 5 handle via an axial joint (2), and a movable jaw mechanism (4) allowing adjustment of the head portion's angle. The head portion (3) rotates 360 degrees, accommodating various painting tasks from flat surfaces to cylindrical objects. An interchangeable brushing component (5) facilitates paint application, enhancing flexibility. Optional features include ergonomic 10 handle design for comfort, steel plate reinforcement for durability, and retractable elements for precise painting. With interchangeable attachments like brush heads and roller attachments, the paintbrush adapts to different surfaces and projects. Optional paint reservoirs minimize spills, enhancing efficiency. Overall, the 360-Degree Paint Brush Concept streamlines painting 15 processes, reduces the need for touch-ups, and delivers professional-quality results, making it suitable for both professionals and DIY enthusiasts. Most Illustrative Drawing: Fig 1

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024

(21) Application No.202441033196 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WATER HEATER WITH SHOCK RESISTANCE

(51) International classification :H05B1/00, H05B3/00, F24H1/00, F24H9/20, F24H15/407
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT WATER HEATER WITH SHOCK RESISTANCE The present invention relates to the field of material science and electrical engineering.to enhance user safety. The water heater comprises a high-resistance coil made of nichrome to heat water efficiently. Safety measures include insulation of the coil from the water and outer casing, grounding of metal parts, and a thermal cut-off switch to prevent overheating. The heater is also equipped with a water level sensor to prevent dry heating. The effectiveness of the shock resistance features is evaluated through electrical and thermal simulations. The water heater comprises of control circuit which processes the signal from the infrared sensor. When an object is detected, the control circuit cuts off the electrical supply to the heating element. The infrared sensor which detects objects, such as hands, entering the water and cuts off the electrical supply to the heating element to prevent accidents. The control circuit is responsible for processing signals from sensors, such as the infrared sensor, and controlling the operation of the heater. This significantly reduces the risk of electric shock, making it suitable for domestic and commercial applications. The described examples illustrate various embodiments, with flexibility for modifications while retaining the essence of the invention. Fig 1

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
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(21) Application No.202441033197 A
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(54) Title of the invention : ECO FRIENDLY PAVER BLOCK USING WRIGHTIA TINCTORIA SEEDS

(51) International classification :C04B28/04, C04B3/02, C0432/02, C04B14/02
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(57) Abstract :
ABSTRACT ECO-FRIENDLY PAVER BLOCK USING WRIGHTIA TINCTORIA SEEDS The present invention discloses an eco-friendly paver block using Wrightia Tinctoria seeds utilizes the Tinctoria seeds as a fine aggregate in concrete to prepare paving blocks. This preparation of paver block comprises a, 1-collection of materials, 2-weighing of materials in required ratio, 3-Testing of materials, 4-water absorption, 5-moisture content, 6-compressive strength, 7-specific gravity, 8-sieve analysis, 9-proportioning the materials, 10-Process of mix design, 11-molding and thickening, 12-compacting the materials, 13-surface finishing and demolding, 14-curing and drying, 15-Tests in hardened concrete. The present invention has paving blocks constituted of concrete has changed into an issue of our cities and urban areas, as is to be observed in residential, business and business places within the paving like buying facilities, parking regions, stopping zones and transport stops. It offers a hard floor that is stylish, comfortable to walk on, trafficable, extremely hard and easy to hold up. The precept point of this studies is to create stable paving blocks with update satisfactory aggregates by means of tinctoria seeds with numerous proportions of 20%, 25% and 30%, paving blocks have been casted and tested in keeping with the hints given within the Indian requirements for precast concrete blocks for paving (IS: 15658:2006). FIG 1

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(54) Title of the invention : WOOL BRICK WITH FIBRE

(51) International classification :B01J0019000000, B65D0065460000, D01B0003100000, E04B0001760000, D06M0101120000
(86) International Application No :NA
Filing Date :NA
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(57) Abstract :
ABSTRACT WOOL BRICK WITH FIBRE The present invention discloses a Wool brick with fiber for efficient thermal insulation. The wool brick with fiber comprises, wool with hemp fiber(1) which owns tremendous thermal insulation houses, making wool bricks mainly powerful in regulating indoor temperatures and lowering electricity consumption for heating and cooling. Wool is glaringly fireside-resistant, offering an added layer of safety and safety in constructing applications. Wool bricks will also be treated with greater hearth retardants to enhance their hearth resistance homes further. Unlike traditional brick substances, which can also make a contribution to landfill waste at the forestall of their lifespan, wool bricks are biodegradable and environmentally sustainable. The mixture of wool fiber and binding dealers inside the wool brick method imparts strong structural integrity, making sure durability and lengthy-term normal performance in several creation environments. Fig 1

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(19) INDIA
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(54) Title of the invention : CO2 OBSERVER

(51) International classification :B01D0053880000, B01J0013120000, B01J0013020000, A61K0009500000, B01J0013060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT CO2 OBSERVER The present invention discloses a CO2 observer introduces an innovative method for air purification by incorporating specially designed microcapsules into interlocking bricks. The entire process comprises of from material selection (2) to area testing, highlighting meticulous planning and execution. The core components of the project include the interlock bricks (1) serving as the foundation, a meticulous selection process for materials (2), and the development of a core material (3) containing Titanium Dioxide (TiO2) and nutrients for Chlorella algae. Additionally, a protective and selectively permeable shell material is engineered to ensure controlled release of core contents. The methodology encompasses preparation, emulsification (8), phase separation (10), and shell solidification, culminating in the integration of microcapsules into the brick composition. Rigorous testing and optimization (22) procedures validate air-purifying performance (23) and structural integrity before scale-up and field testing. This groundbreaking initiative merges environmental sustainability with cutting-edge material science, aiming to combat urban pollution and foster healthier living spaces. Fig 1

No. of Pages : 17 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/05/2024
(21) Application No.202441035043 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MINDPLAY: NURTURING MENTAL HEALTH

(51) International classification :G06Q0030020000, A61B0005160000, G06F0040300000, G06N0020000000, G16H0015000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
The elevation of complete design of MindPlay: Nurturing Mental Health (100) comprising: (i) User Device (101), (ii) Application eco system (102), (iii) Personalized Report Generator (103), (iv) Mindfulness Resources (104), (v) Continuous Support (105), (vi) Professionalize consultation (106). Fig 2 is an exemplary embodiment of disclosure which illustrates the design of Personalized Report Generator (103), including Game Data Acquisition (107) to collect user interactions, choices, response times, Data Pre-processing (108) for cleaning and preparation, Feature Analysis (109) to identify patterns and correlations related to mental well-being, Statistical Analysis (110) to understand central tendencies and to perform hypothesis testing, ML Techniques (111) to predict mental health aspects, Insight Generation (112) to extract key insights regarding potential areas of mental well-being and translate insights into understandable, actionable language for the user report, Report Generation (113) to create personalized reports.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/05/2024
(21) Application No.202441035619 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : COMPOSITION FOR TREATMENT OF NEU1RODEGENERATIVE DISEASES

(51) International classification :A61K0009000000, A61P0025280000, A61P0031100000, A61K0031050000, A61P0025000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A COMPOSITION FOR TREATMENT OF NEURODEGENERATIVE DIS1EASES ABSTRACT 5 A composition for treatment of neurodegenerative diseases is provided. The composi1tion includes a combination of Rifampicin (Rifampin) as an antibiotic, Lamisil (Terbinafine) as an antifungal agent, curcumin as an anti-inflammatory agent, and can1nabidiol (CBD) as a lipophilic potentiating agent, in synergistically effective propor1tions. The composition provides reduced likelihood of the body developing immunity 10 to the treatment over time. The composition includes about 25 milligram (mg) to 500 mg of Rifampicin (Rifampin) is from administered. The composition includes about 25 mg to 400 mg of Lamisil (terbinafine). The composition includes about 5 mg to 40 mg of lipophilic statin. The composition is administered every 12 hours, depending on age and weight of a patient. The neurodegenerative disease includes multiple sclerosis. The 15 composition is presented in a single oral form including at least one of: a pill, a capsule, or a tablet.

No. of Pages : 32 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/06/2024
(21) Application No.202441046338 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WEARABLE PERSONAL AIR PURIFYING RESPIRATOR APPARATUS

(51) International classification	:A62B0007100000, A62B0009000000, A62B0018000000, G01N0033000000, A62B0009060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses a wearable personal air purifier device designed to provide purified clean air to the user in any environment. The device incorporates a wearable breathing mask, an air flow system housed within a container, an electronic control unit, a power supply unit, and a sensor unit for real-time air quality monitoring. The air flow system draws in ambient air, filters it using HEPA filters and sterilizes it with ultraviolet radiation before delivering it to the breathing mask. The electronic control unit regulates the airflow system and displays information about the device's status and air quality. The sensor unit monitors pollutants in the surrounding air and transmits data to a display or mobile app. The wearable air purifier apparatus offers a solution for personal air purification by combining filtration, sterilization, air quality monitoring, and user comfort in a single device.

No. of Pages : 22 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/06/2024

(21) Application No.202441046660 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SELECTIVE ENCRYPTION ENABLED STEGANALYSIS FOR EFFICIENT MEDICAL DATA TRANSMISSION

(51) International classification	:G06T0001000000, G06F0021600000, G06F0021620000, H04N0021234700, H04N0019467000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A selective encryption assisted steganalysis method(100) consist of i) Steganography to embed confidential data in carrier medium (101). ii)Steganalysis (103) to selectively encrypt the confidential files.

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/06/2024

(21) Application No.202441046719 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IDENTIFICATION OF AMR PROTEIN FROM MDR GRAM-NEGATIVE BACTERIA (E.COLI)

(51) International classification	:C12Q0001040000, C09K0011770000, C12Q0001180000, A61K0039000000, C12N0001360000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Multidrug resistance (MDR) in bacteria develops the antimicrobial resistance (AMR) against the action of antibiotics. AMR mostly takes place in gram-negative bacteria which is highly recessive due to its thick peptidoglycan outer membrane layer. The outer membrane proteins (OMP) are essential for the uptake of nutrients, construction of OM and the virulence nature of bacteria. The OMP's are aligned by the protein complex called p-barrel assembly machinery (BAM), on disruption of this complex the virulence of the gram-negative bacteria can be mitigated. PROTAC (Proteolysis targeting chimera), a small chimeric molecule is designed to induce the enzymatic lysis of BAM. In summary. PROTAC is a promising technique to degrade small molecules present in bacteria and to reduce the degree of pathogenicity.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024
(21) Application No.202441047243 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN ASSISTIVE DEVICE 5 FOR VISUALLY IMPAIREDINDIVIDUALS AND A METHOD OF ENABLING NAVIGATION THEREOF

(51) International classification :G09B0021000000, G05D0001020000, A61H0003060000, A61H0003000000, G06F0016583000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
AN ASSISTIVE DEVICE FOR VISUALLY IMPAIRED INDIVIDUALS AND A METHOD OF ENABLING NAVIGATION THEREOF 5 ABSTRACT A method (700) of enabling navigation of visually impaired individuals using an assistive device is provided. The method includes capturing (702) images of a region in the proximity of the assistive device (100) via a camera (104) associated with the assistive 10 device. The method also includes detecting (704) faces within the images captured using a computing unit (102) associated with the assistive device (100), extracting (706) one or more key facial features from the detected faces via the computing unit (102), and comparing (708) the key facial features with trained facial encodings stored in a dataset associated with the assistive device (100) for identifying known individuals in 15 the vicinity of the assistive device (100). The method (700) further includes generating (710) an audio output for the visually impaired individual via a speaker of the assistive device (100) based on the comparison thereby enabling autonomous mobility of the visually impaired without obstruction. 20 FIG. 7

No. of Pages : 43 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047259 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MOBILE APP FOR COMMUNITY BASED DISASTER PREPAREDNESS

(51) International classification :G06F0011140000, G16H0080000000, G16H0010600000, H01F0027020000, G06Q0010060000
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
The proposed invention acts as a centralized information hub, offering disaster guidelines, real-time alerts, and personalized emergency plans. The system revolutionizes disaster preparedness by combining user-friendly interfaces, community engagement, and robust information management, ensuring reliable response to disasters. Fig 1 depicts the integration of a mobile application with a Disaster Management System, highlighting the User Device(101), Authentication, and the "Uses" component(102) that integrates Community Data and Disaster Info with the Backend API(103). In conjunction, Fig 2 illustrates the core of the system, emphasizing the "Uses" component (102) with the Application (104), Community Data (105), and Disaster Info (106), facilitating GPS navigation and real-time communication. Fig 3 delves into the Backend API(103), the Backend API (109) serves as the core, connecting and managing functionalities. It acts as the backbone(107), orchestrating seamless interactions, while ensuring robust service delivery(108) comprising Disaster Info(110) Community Data(111), and User Management (112).

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :20/06/2024

(21) Application No.202441047264 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : CONNECTED CLASSROOM FOR ENVIRONMENT SENSOR BASED LEARNING ENVIRONMENT

(51) International classification :G06N0003040000, G06K0009620000, G06F0003048170, G06T0011200000, G09B0019000000

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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A learning environment system (100), comprising: a plurality of environmental sensors (101) configured to collect real-time data on at least two environmental factors selected from the group consisting of temperature, humidity, air quality, light levels, and noise levels; a data processing unit (102) operatively coupled to the plurality of environmental sensors, configured to receive and process the real-time data; a user interface (103) Fig 2 is an exemplary embodiment of disclosure that illustrates advanced functionalities of the learning environment system (100), building upon the foundation described in claim 1. First, the user interface (103) is enhanced with a graphical representation of the learning environment (201). This feature provides students with a visually intuitive way to interpret the real-time data, fostering deeper engagement and comprehension. Furthermore, the user interface goes beyond basic interaction by facilitating student participation in citizen science projects (202).

No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047267 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART CONTRACTS FOR LEGAL AGREEMENTS

(51) International classification	:H04L0009320000, H04L0009060000, G06Q0020020000, G06Q0050180000, G06Q0020400000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)NEW HORIZON COLLEGE OF ENGINEERING
Address of Applicant :This invention describes design of peer-to-peer block chain model for trading the businesses(100). The decentralized network of interconnected businesses(101) interacts with the invented model which provides modules with functionality related to energy management system with reputation scoring through block chain network enabling businesses(102). Bengaluru ---------- ----------
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(57) Abstract :
This invention presents a novel smart contracts, which are essentially scripts that are anchored in a decentralized manner on blockchains or other similar infrastructures, it is possible to make the execution of predetermined procedures visible to the outside world. The programmability of previously unrealized assets, such as money, and the automation of previously manual business logic are both made possible by smart contracts. This model aims to enhance the authentication and transparency of Smart contracts through blockchain technology. Smart contracts are simply programs stored on a blockchain that run when predetermined conditions are met. Basic data is acquired and preprocessed to obtain preserved evidence data, laying the foundation for accurate authentication. They typically are used to automate the execution of an agreement so that all participants can be immediately certain of the outcome, without any intermediary's involvement or time loss. The design illustrates the trading in businesses(101) interfacing with the invented model which provides modules with functionality related to Method and System for Executable Smart Legal Contract Construction and Execution over Legal Contract (102). The model also illustrates the software components of the complete design of the modular and shows the Legal and smart contract pair pattern(102), which comprises the dataset(103), contractual classes(104), interfaces(105), and scoring model(106).

No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024
(21) Application No.202441047268 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUGMENTED REALITY FITNESS COACHING SYSTEM AND METHOD

(51) International classification :A63B0024000000, G09B0019000000, G16H0020300000, G16H0020600000, A61B0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Augmented Reality Fitness Coaching System and Method(100) aim to enhance fitness coaching by incorporating various components. The system includes a performance evaluation(200)feature to assess user progress and provide personalized feedback. An analysis engine(300) interprets data to offer insightful feedback, while an AR engine(400) enhances the overall fitness experience. The system also features a 3D environment(500) for interactive exercising and an instructional design(600)for effective guidance. The method integrates technological and pedagogical principles to generate clear and measurable learning objectives aligned with fitness goals. Additionally, the system employs movement tracking(310), biomechanical analysis(320), and real-time feedback(340) for optimal performance. The system's interactive elements, such as virtual trainers and progress tracking, ensure engaging and effective fitness coaching.

No. of Pages : 21 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047271 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PREDICTIVE MAINTENANCE FOR PUBLIC INFRASTRUCTURE USING MACHINE LEARNING

(51) International classification	:G06N0020000000, G05B0023020000, G06Q0010000000, G06N0005040000, G06Q0010060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention ensures the reliability and longevity of public infrastructure assets. By leveraging advanced data analytics techniques and machine learning algorithms, infrastructure managers can proactively anticipate equipment failures and schedule maintenance activities accordingly. This invention discusses the key components of predictive maintenance systems, including data collection, preprocessing, feature engineering, machine learning model selection and training, deployment, and continuous improvement. The invention also highlights the benefits of predictive maintenance, such as reduced downtime, optimized maintenance schedules, and improved asset management practices. Additionally, it explores challenges and considerations in implementing predictive maintenance solutions for public infrastructure and provides insights into future research directions in this field. The elevation of complete design (100) of Predictive maintenance for public infrastructure using machine learning (101) interacting with advanced algorithms (102) .

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047273 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IGNITIONGUARD : DEEP LEARNING MODEL FOR PROACTIVE FIRE PREVENTION

(51) International classification :G06N0003080000, G06N0003040000, G06F0016360000, G01N0033520000, H04W0004900000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The elevation of complete design of Ignitionguard: Deep Learning Model for proactive fire prevention (101) comprising of IgnitionGuard System (102), Data Processing Layer (103), Model development layer (104), Real-time Monitoring Layer (105), Algorithmic Detection Layer (106), Automated Response Layer (107) and User interaction layer (108). A Design for IgnitionGuard System (102) comprising User Interaction (109), Data Handling (110), Model Training (111), Development (112), System Operation (113) and Initiate Emergency Response (114).

No. of Pages : 16 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024
(21) Application No.202441047274 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BLOCKCHAIN ENABLED IOT-BASED FIRE DETECTION

(51) International classification :G08B0017100000, G08B0017120000, G08B0017060000, H04W0004700000, G08B0007060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
The elevation of complete design (100) of IoT devices acquiring Complex flame and smoke from real time videos (101) interacting with an Encapsulated System for Real Time Fire Detection with P2P Alert Mechanism in Blockchain Network (102) comprising: (i) Flame and Smoke Detection using Image Processing Techniques (103) and (ii) P2P Alert Message Creation and Transmission on Blockchain Network (104).

No. of Pages : 15 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047276 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : RIVER FLOW DATA ACQUISITION AND DISTRIBUTION USING BLOCKCHAIN AND IPFS

(51) International classification	:H04L0009320000, G06F0016182000, A61F0013537000, G06F0021640000, G08G0001010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The elevation of complete design (100) of sensors and mobile devices to acquire and capture the images of streamflow (101) interfacing with the designed system for river stream flow data aggregation using Blockchain with InterPlanetary File System (IPFS) (102) comprising of Data Acquisition Layer (103), Data Aggregation Layer (104), Data Storage Layer (105) and End Users' Service Layer (106).

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047281 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BRAND REPUTATION MANAGEMENT WITH SOCIAL MEDIA SENTIMENT ANALYSIS

(51) International classification	:G06N0020000000, G06Q0030020000, G06Q0050000000, G06N0003080000, G06F0040300000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The elevation of complete design (100) of a Company's social media interactions (101) interacting with advanced algorithms and artificial intelligence of Brand Reputation Management with Social Media Sentiment Analysis (102). Fig 2 is an exemplary embodiment of disclosure which illustrates the comprising software components of the complete design of the Brand Reputation Management with Social Media Sentiment Analysis (102), which comprises the Data Collection (103), Sentiment Analysis using Machine Learning and Natural Language Processing Techniques (104), and Actionable Insights Based on Customer Feedback and Brand Perception Metrics (105).

No. of Pages : 17 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047334 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SECURESTUD: BLOCKCHAIN-DRIVEN STUDENT RECORD PROTECTION

(51) International classification :G06Q0050200000, G06Q0010100000, H02J0007000000, G06F0017000000, G06F0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The elevation of complete design of SECURESTUD: Blockchain-Driven Student Record Protection (100) comprising of Educational Records from Educational Institutions, Certification Authorities and Employers (101) and Automated System for SECURESTUD (102). Fig 2 is an exemplary embodiment of disclosure which illustrates the comprising software components of the complete design of the Automated System for SECURESTUD (102), which comprises the Data Collection (103), Data integration and verification (104), and Block Chain Network Automated System (105).

No. of Pages : 17 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024
(21) Application No.202441047337 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART HOME AUTOMATION WITH WEARABLE SENSOR INTEGRATION

(51) International classification :G06F0001160000, H04L0012280000, G05B0015020000, A61B0005021000, G06F0003010000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
Together, these technologies provide a holistic approach to smart home automation, using real-time data from wearable devices to optimize energy use, enhance comfort, and create a living space that supports the individual's well-being and lifestyle.The elevation of complete design (100) of a model for storing individual data of mental and physical status is stored in the main (101) and IoT techniques is used in for analyzing the action (102) .Fig 2 is an exemplary embodiment of disclosure which illustrates the comprising steps GPS (103), motion detector (104)Blood pressure monitor (105) ,Bluetooth(106) . Fig 3 illustrates the final integrated smart home appliance with clean (113),light(114),water heater(115),fan(116),fridge (109),AC (110),Music(111) and finally air purifier(112) which gets activated based on the input given by the AI integrated wearable device.

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047339 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTO ROTATE FINGERPRINT MODULE FOR EV POWERED IGNITION

(51) International classification :G06F0021320000, B60R0025250000, B60R0025040000, G07C0009250000, B60R0025240000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention provides a fingerprint-powered ignition system for electric vehicles (EVs), enhancing security and convenience. This system uses biometric authentication to ensure that only authorized users can start the vehicle, significantly reducing the risk of theft. By eliminating the need for physical keys, it offers a seamless and user-friendly experience. The fingerprint sensor is integrated with the vehicle's ignition and control systems, allowing for quick and reliable recognition. This innovative approach not only improves security but also simplifies the driving experience, making it more efficient and secure for EV users.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047344 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : REAL ESTATE TRANSACTION USING BLOCKCHAIN TECHNOLOGY

(51) International classification	:G06Q0050160000, G06Q0020380000, G06Q0020360000, G06Q0020060000, H04L0009320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The elevation of complete design of Real Estate Transaction Using Blockchain Technology (100) comprising: (i) User Terminal (101), (ii) Intermediary Company Terminal (102), (iii) Real Estate Transaction Service (103), (iv) Crypto currency Transaction Block chain System (104), (v) Verify e-sign (105), (vi) Blocks (106) and (vii) Block Chain (107). Fig 2 is an exemplary embodiment of disclosure which illustrates the design of Crypto currency Transaction Block chain System (104), including First User (108) who wants to buy the property, Verify E-Sign (109) which is taken from the user's sale intention. If its valid then Generate 1st Block (110), which is connected with Crypto Currency Transaction Block chain system (111) with hash value. Second User (112) sends purchase information with e-sign to Licensed Real Estate Agency (113), which will Verify 2nd user payment (114). If it's valid payment then Generate 3rd Block (115) and connect to the system with hash value. User's E-Sign & e-wallet address Verification Process (117) will be done after getting the subscription approval message from system. After valid verification approval message with private key sent to user while generating the final block.

No. of Pages : 16 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024
(21) Application No.202441047385 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BLOCKCHAIN BASED CERTIFICATE VERIFICATION IN HIGHER EDUCATION

(51) International classification	:H04L0009320000, H04L0009060000, G06F0021640000, H04W0012100000, H04W0012108000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The elevation of complete design (100) of Blockchain based Certificate Verification in Higher Education (101) interfacing with the designed system for Blockchain based Certificate Verification in Higher Education (102) comprising of Receiving Certificate Information (103), Calculating Hash Value (104), Validation by Comparing Hash Values (105) and Chaining the Block for the Corresponding Certificate (106).

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047412 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLECTUAL PROPERTY PROTECTION: BLOCKCHAIN INNOVATIONS

(51) International classification :H04L0009060000, G06Q0010100000, G06Q0020380000, G06Q0020400000, G06F0016270000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The elevation of complete design (100) of User Computing Devices and Pool Devices (101) interfacing with the designed system for designed system for Intellectual Property Protection using Blockchain Technology (102) comprising of Updating the balance of Smart Contract (103), Initial State Update of Smart Contract (104), Implementing Transaction by executing Smart Contract (105) and Final State Update of Smart Contract (106).

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047419 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DECENTRALIZED SOCIAL MEDIA PRIVACY ON THE BLOCKCHAIN

(51) International classification	:H04L0009320000, G06Q0050000000, H04L0009060000, H04L0009080000, G06Q0020380000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The elevation of complete design (100) of Decentralized Social Media using Blockchain (101) interfacing with the designed system for Decentralized Social Media: Privacy on the Blockchain (102) comprising of Receiving Social Media Content Request (103), Verification and Validation (104), Providing consent for Media Content by Executing Smart Contract (105) and Content storage in Blockchain (106).

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024
(21) Application No.202441047438 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED WORKFLOW OPTIMIZATION SYSTEM

(51) International classification :G06Q0010060000, G06Q0030020000, G06N0020000000, G06Q0010040000, G06Q0010100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The goal of the invention is to Automate Workflow Optimization System, which represents a groundbreaking solution at the intersection of artificial intelligence and business process enhancement. Designed to streamline operations, the system initiates with scientifically planned robotic process automation (RPA) implementation, leveraging embedded analytics to measure and align with strategic business outcomes. By seamlessly deploying AI skills through an adaptive fabric, the system enables iterative improvements, creating a dynamic cycle of planning, measuring, and reporting. This innovative approach not only enhances operational efficiency but also positions businesses to adapt and thrive in an ever-evolving landscape.

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024
(21) Application No.202441047444 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EARLY PARKINSON'S DISEASE DETECTION APPLICATION USING MACHINE LEARNING MODELS

(51) International classification :G06K0009620000, G06N0020000000, G06N0003040000, G16H0050200000, A61P0025160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The elevation of complete design (100) of Healthcare Systems (101) interacting with Early Parkinson's Disease Detection Application Using Machine Learning Models (102) comprising: (i) Data Preprocessing (103), (ii) Spectrogram generation (104), (iii) Dataset Diversification (105), (iv) Feature Extraction Using ANN Model (106), (v) Classification Using Enhanced KNN Algorithm (107) and (vi) Evaluation and Fine Tuning of KNN Classifier (108). Fig 2 is an exemplary embodiment of disclosure which illustrates the comprising software components of the complete design of the Early Parkinson's Disease Detection Application Using Machine Learning Models (102), which comprises the Data Preprocessing (103), Spectrogram generation (104), Dataset Diversification (105), Feature Extraction Using ANN Model (106), Classification Using Enhanced KNN Algorithm (107) and Evaluation and Fine Tuning of KNN Classifier (108).

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047457 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN OF FIXED BLADE BANANA BUNCH CUTTER

(51) International classification :A61K0008440000, H01R0013050000, A61H0015000000, A61K0008190000, H01S0005420000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Nowadays due to increase in urbanization and globalization, Banana farming playing a vital role and is earning very good revenue in the export. Hence with the available Banana cutter its time consuming, not compatible, bad ergonomic design, fruits will be damaged in the process of removal hence find it difficult to use in the mass production. Here in the present innovation the above factors have been considered and come up with a new ergonomic design which is easy to use, safe to operate, less time consuming, damaging of the fruits will be avoided.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047460 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : REAL TIME LANGUAGE TRANSLATION APP FOR CROSS-CULTURAL COMMUNICATION

(51) International classification	:G06F0040580000, G06F0003010000, H04W0004180000, G07C0005000000, H04N0021810000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The real-time language translation app for cross-cultural communication is a mobile and web application designed to enable seamless conversation between individuals with different languages. This application is used to carry out the task of language translation(101) accepting input data(102) thereby understanding the information(103) recognizes the gesture(104) by retrieving the information(105) conclusively gives the output of desired language(106). The representation of user interaction with desired model(102) depicts the processing of the model, thereby the user interacts with the interface(107) through the input, which goes through a set of collection unit (108) is then transferred to the translation unit(109) that consists of the Speech Recognition Module(110) thus recognizes the information(111). The conversion to text occurs(112) subsequently the text translation is completed(113). After recognizing the text, gesture recognition occurs by retrieving the information(105) and the translated data is provided as desired output(114).

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047512 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN OF NANOMATERIAL COATED PORTABLE WATER BOTTLE WITH USB-CONNECTED HEATER

(51) International classification	:B82Y0030000000, B05D0001020000, C01B0032194000, A61K0041000000, B67D0003000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A nanomaterial coated water bottle (101) consists of i)A rGO nano- coated bottle module (100) and ii) Nanomaterial module (101).

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/06/2024

(21) Application No.202441047668 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : REAL-TIME COMBINE PURCHASE APPLICATION

(51) International classification	:G06Q0030060000, G06Q0030020000, G06Q0020360000, H04M0015000000, G06F0021320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The goal of Real-Time Combine Purchase Application is to facilitate group coordination, negotiation, and purchase of items or utilization of available services with the users available in the proximity. Users benefit from the power of bulk orders and enjoy significant cost savings. Traditional shopping experiences often lack the ability to connect like-minded buyers who may benefit from pooling their resources or sharing information. This gap in the market is the inspiration for the need of the Combine Purchase system. Users can buy daily groceries, share the services like OTT rather than bearing the complete charges on their own and can be a part of group entertainment services by identifying other users in the proximity with similar preferences in a very dynamic manner. The elevation of complete design (100) of User Community (101) interacting with Real-Time Combine Purchase Application (102) comprising: (i) User Registration (103), (ii) User DB (104) , (iii) Product/Service registration (105), (iv) Product/Service DB (106) and (v) Identifying users with similar interests (107). Fig 2 is an exemplary embodiment of disclosure which illustrates the comprising software components of the complete design of the Real-Time Combine Purchase Application (102), which comprises the User Registration (103), User DB (104), Product/Service registration (105), Product/Service DB (106) and Identifying users with similar interests (107).

No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/06/2024
(21) Application No.202441047692 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : Augmented Reality based travel assistance system for Revolutionizing Women Safety method thereof

(51) International classification	:G06F0003048100, G01S0013931000, G08G0001096700, G06Q0010020000, H04M0001253000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A travel safety assistance system(100) consists of (i)A user interface for inputting(ii) a travel details, including (iii)a destinations and (iv) a duration of stay.

No. of Pages : 18 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/06/2024

(21) Application No.202441047695 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ROBUST CELESTIAL OBJECT TRACKING SYSTEM WITH INTEGRATED FAULT CORRECTION

(51) International classification	:G02B0023160000, G01S0003786000, G01C0021020000, G09B0027040000, G09B0027060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Robust Celestial Object Tracking System (100) with Integrated Fault Correction is an affordable and comprehensive solution designed for precise pointing and tracking of celestial bodies, ideal for hands-on Astronomy educational initiatives, STEM learning and Astrophotography.

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/06/2024

(21) Application No.202441047700 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADJUSTABLE MULTI FUNCTIONAL MAJOR STRING PLECTRUM DESIGN FOR VEENA

(51) International classification :G10D0003173000, C07K0014470000, A61B0005000000, A44C0009020000, G04G0009000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A Design of adjustable multi-functional major string plectrum (100) for veena consist of (1) A string Plectrum (101), (2) An adjustable ring (102) and (3) Finger Gripper (103).

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/06/2024

(21) Application No.202441047707 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SENTIMENT-DRIVEN PRODUCT RECOMMENDATIONS FOR E-COMMERCE

(51) International classification	:G06Q0030060000, G06N0020000000, G06Q0030020000, G06N0003080000, G06F0040300000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The elevation of complete design (100) of online E-commerce customer interactions and Product related information (101) interacting with advanced algorithms and artificial intelligence of Sentiment-driven product recommendations for E-commerce (102). Fig 2 is an exemplary embodiment of disclosure which illustrates the comprising software components of the complete design of the Sentiment-driven product recommendations for E-commerce (102), which comprises the Data Processing (103), Sentiment Analysis using Machine Learning and Natural Language Processing Techniques (104), and Recommendation Engine (105).

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :21/06/2024

(21) Application No.202441047744 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : ENERGY-EFFICIENT CLOUD COMPUTING ECOCLOUD

(51) International classification :G06F0009500000, G06F0001320300, G06Q0010060000, G06F0011300000, H02J0003380000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The In an era dominated by the insatiable demand for cloud computing services, the environmental toll and escalating operational costs associated with burgeoning data centers have become critical concerns. In response to this pressing challenge, the invention titled "ENERGY-EFFICIENT CLOUD COMPUTING: ECO-CLOUD" emerges as a transformative solution. Operating at the nexus of cloud computing and sustainability, ECO-CLOUD leverages advanced algorithms and infrastructure optimizations to redefine the paradigm of energy consumption in data centers. This innovation is meticulously crafted to achieve three fundamental objectives: firstly, to significantly reduce energy consumption in cloud computing environments, thereby ameliorating their environmental impact; secondly, to enhance overall sustainability by minimizing the carbon footprint inherent in conventional cloud services; and thirdly, to improve operational efficiency in data centers through the deployment of innovative energy-efficient algorithms and technologies. The core of ECOCLOUD lies in its dynamic resource allocation methodology, intelligently optimizing workloads to reduce idle power consumption. It further distinguishes itself through the integration of renewable energy sources, allowing data centers to harness clean energy and contribute to a greener computing ecosystem.

No. of Pages : 16 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/06/2024

(21) Application No.202441047745 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SENTIMENT DRIVEN LAW ENFORCEMENT STRATEGIES THROUGH MACHINE LEARNING

(51) International classification	:G06N0020000000, G06F0040300000, G06N0003080000, G06N0020200000, G06N0003040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The elevation of complete design of Sentiment Driven Law Enforcement Strategies through Machine Learning (100) considers various types of data collected from various data sources such as social media, news articles, and historical crime records interacted (101) with Machine learning and Natural language processing algortihms to Transform Law Enforcement Strategies with Sentiment-Driven Machine Learning for Proactive Crime Prevention (102). Fig 2 is an exemplary embodiment of disclosure which illustrates the comprising software components of the complete design of Transforming Law Enforcement Strategies with Sentiment-Driven Machine Learning for Proactive Crime Prevention (102), which comprises the Data Processing (103), Sentiment Analysis using Machine Learning and Natural Language Processing Techniques (104), and Crime Prediction and Resource allocation (105).

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/06/2024
(21) Application No.202441048116 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AEROPLANE ACCIDENTS AVOIDING TECHNIQUES

(51) International classification :A61N0001160000, G99Z0099000000, A24F0027000000, F24V0050000000, C05F0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The human value is uncountable in the entire universe, as the human body parts, if you sell them, will be around 1-2 crore rupees, but if you go in depth, their value will not be predictable. In short, you can say that human value is equal to global resources. As the sun has a lot of fire element energy and can be equal to the to the sun, energy will be gained from direct human residues. The final stage in adho disha from a human being is the agni putras, which has a high density and high temperature and can store a lot of fire. So these integrated energies from these and all human beings will be added, which is equal to 100 times the energy from the sun. The final form of human being has special teeth, which are 1000 times more energy than heat obtained from normal fuel. Thus, these energies are uncountable when considering the human body. In this research paper, we will explore how man will become energy sources and energy resources as a test piece in the human body. This energy demand and supply are 100 times greater than the required global energy. In the early days, people lived a longer life span than their living terms. But in the current scenario, people are passing away because of so many kinds of waves. The only reason for longevity is that the person will stay in the universe but not on earth, as in cases of higher density, they will go in a downward adho disha direction, as many lokas as hell. This paper is mainly chiefly focus on how a person will live as longevity in nature as earth planet. The final test results as a survey of these samples of persons give many concepts as to how to live a life of as many as possible years. These survey results will be obtaining the density of persons as liquids as chemistry is equivalent to rasatala liquids, so these will be collected from a particular nerve from a particular finger of the hand, and then that person's density automatically becomes less, such that that person will be stable on earth. If at all demsity is high, then he goes to hell. The fire nerve from the thumb of any person will be whatever liquid comes that will be unwanted, but that is also used for the utilization of a matchstick or matchbox as fire will be generated. But manufacturing these matchboxes is highly costly, but it is essential to a person's life. The fire finger thumb naadi reveals nerve, from this nerve we can collect liquid to transform this in to good match box, by using this technology the human body density kept as controlledway. Further the fourth state of matter plasma the long range electric and magnetic field offire. Also liquid state of fire also present those are all in atmosphere collision leads to fracture fire hazards. So the shielding is necessary to barrier to avoid such collision. In atmosphere air contains combination of all gases some of them in different states uniting leads to collision. This paper is dealt with remedies to such problems and collisions. The carbon content is huge and is present as an earth element in the exact area below the Bhuuloka earth planet. There is the largest thermal energy existence, and that can be utilized as global energy produced and transferred to all nations world-wide. The greatest thermal energy is not only a single type of reservoir source but also the creation level of species that can be overcome from that place because the killers are killed persons and left below the earth planet very large below the distance. So in this way, the human body is treated as a car for the transformation of patala soil in the form of deceased persons residues as soil, and also the deceased person is utilized as a car for traveling from Patala to Earth. the entire universe as a single atom in this way, the proton, electron, and neutron as uurdhwa disha as positron proton, adho disha electron, and in earth neutron existence. From this thermal energy utilization, the entire world's required level of demand meets the production of electricity 10 times enough in the global energy supply chain. These are from the application of the Agni Putras series connection, as the current is the same throughout the whole process. If these agni putras touch the human body, then fever will surely come as they have a temperature more than 100 times greater than the average human body. In creation not only earth planet but also made sun, moon as required.

No. of Pages : 8 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/06/2024
(21) Application No.202441048681 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AI-DRIVEN PRECISION ELECTRIC VEHICLE (EV) CHARGING SYSTEM WITH ROBOTIC ARMS AND METHOD EMPLOYED THEREOF

(51) International classification :G05D0001020000, B25J0009160000, B25J0011000000, H02J0007000000, B60L0053160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards an AI-driven precision electric vehicle (EV) charging system with robotic arms and method employed thereof. The system employs a robotic arm equipped with either a pincher mechanism or precision grippers, along with adaptable end effectors, all powered by artificial intelligence (AI). This setup enables automatic charging of electric vehicles (EVs) by utilizing a combination of high-resolution cameras, LiDAR, and ultrasonic sensors. These sensors work together to detect the position of the vehicle's charging port and navigate the area surrounding the vehicle. The AI controller facilitates decision-making regarding the position and trajectory of the robotic arms by processing sensor data, enabling the system to adapt to environmental variations in real time for a successful connection between the charging connector and the EV. The mobile joints in the robotic arms offer multiple degrees of freedom, allowing for movement along complex trajectories to reach the EV's charging port from various directions. Feedback on the system's behavior can be provided by force or torque sensors, depending on the control architecture employed. Auto-docking mechanisms, guided by path planning algorithms, determine optimal movement paths to the EV's charging port, avoiding obstacles and minimizing the risk of collision. Fig. 1

No. of Pages : 21 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/06/2024
(21) Application No.202441048704 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADVANCED REMOTE INDUSTRIAL MONITORING AND CONTROL SYSTEM WITH CYCLOCONVERTER-IM DRIVES AND IOT AND METHOD EMPLOYED THEREOF

(51) International classification	:H04L0067120000, G05B0019418000, G05B0013040000, G05B0023020000, H04L0043040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards an advanced enhanced remote industrial monitoring and control system with cycloconverter-IM drives and IoT and method employed thereof. The system includes various components are a Cyclo link IoT Gateway 102, a remote drive sensor module 104, a Cyclo watch monitoring system 106, an IoT-Drive controller 108, a motor Sync IoT Interfaces 110, a Cyclo Net Control Unit 112, a drive guard security module 114, a data mote industrial sensor 116, a Cyclo sense telemetry module 118, a Data Harbor Industrial Logger 120, an IoT-direct drive interface 122, a remote drive monitor Hub 124, a Cyclo tune optimisation Module 126, an IoT-Link motor controller 128, a Cyclo Sync Control Hub 130 and an IoT-master motor monitor 132. This system is to combines various components to enable timely measurements, data transfer, and real-time decision-making, and this integration facilitates precise operation of motors and circuit breakers. This device enables real-time control of industrial processes with heightened reliability, safety, and precision. The system delivers deterministic real-time control, intelligent decision-making, and robust security through the integration of Cycloconverter-IM Drives and IoT technology. Fig. 1

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024
(21) Application No.202441048813 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HYBRID MICRO CIRCUIT (HMC) FOR PRE-AMPLIFIER OF GM DETECTOR

(51) International classification	:H03K0007060000, G01T0001180000, G08B0025100000, A61M0016000000, H02P0006160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
"HYBRID MICRO CIRCUIT (HMC) FOR PRE-AMPLIFIER OF GM DETECTOR" comprises a charge integrator for receiving detection signal from a Geiger Muller (GM) detector and for amplifying suitably for further processing. A non-inverting operational amplifier (2) boosts the amplified signal further. A comparator (3) cuts off noise signals from the further processed signal to a desired level with adjustable threshold. First monostable multivibrator (4) provides a transistor-transistor logic (TTL) output proportional to the detector output for each GM detector event, by taking the output from the comparator. Second monostable multivibrator (5) generates a long milli second duration output, which is used to drive and trigger a D.C. buzzer, which outputs a beep sound for each radiation event detected. An alarming part also generates an alarming sound on crossing threshold level set for alarm condition. The above components are packaged in the form of SIL package which occupies a very small printed circuit board area. The circuit of the present invention is utilized to obtain required functions using few integrated circuits & discrete components that are all packaged into a small printed circuit board (PCB) which is compressed to a single in-line (SIL) package, thereby making a compact structure. Refer Figure no 1

No. of Pages : 11 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :27/06/2024

(21) Application No.202441049160 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : SELF-ADAPTING UNIVERSAL REMOTE USING IR SENSING TECHNOLOGY

(51) International classification	:G06Q0010080000, G06Q0020400000, H04W0004020000, G01S0013860000, G08B0013196000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

The development of a remote identification system utilizing advanced sensor technology is presented in this project. This system is designed to provide efficient, accurate, and real-time identification of objects or individuals from a distance. The core of the system comprises various types of sensors, including ultrasonic, and Radio-Frequency Identification, which collectively enhance its capability to detect and identify targets under different environmental conditions. The data collected by these sensors is processed using sophisticated procedures to ensure reliable identification and minimize false positives. The proposed system demonstrates significant potential for applications in surveillance, and inventory management. Field tests confirm its robustness and effectiveness, highlighting its advantages in terms of range, accuracy, and adaptability compared to traditional identification methods. This innovative approach offers a promising solution for modern identification challenges, paving the way for future advancements in remote sensing and identification technologies.

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/06/2024
(21) Application No.202441049171 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A DEEP LEARNING-BASED INTERFERENCE MITIGATION SYSTEM FOR WIRELESS COMMUNICATION NETWORK

(51) International classification	:G06N0003040000, G06N0003080000, G06K0009620000, H04B0017260000, G06T0007000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards the deep learning-based interference mitigation system for wireless communication network. The system includes a convolutional neural network (CNN) module to extract spatial features from signal data; a recurrent neural network (RNN) module to analyze time-series data; and a long short-term memory (LSTM) network module integrated with the RNN for predicting future interference values. A graph neural network (GNN) module optimizes data flow and mitigates interference. A generative adversarial network (GAN) module simulates interference scenarios, while a deep Q-network (DQN) module optimizes real-time responses. An attention mechanism enhances detection accuracy. A data collection module gathers raw signal data and historical interference events. A processor runs all modules and executes adaptive algorithms, continuously optimizing network performance. FIG. 1A

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202441049733 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED DESIGN AND CONFIGURATION SYSTEM FOR MICROSTRIP PATCH ANTENNAS USING MACHINE LEARNING ALGORITHMS AND METHOD EMPLOYED THEREOF

(51) International classification	:G06N0020000000, H01Q0009040000, G06N0003080000, G06F0030000000, H04L0043500000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards an automated design and configuration system for Microstrip Patch Antennas using Machine Learning Algorithms and method employed thereof. The system comprises several key components working together to optimize microstrip patch antenna designs. The data acquisition module collects input data based on design parameters for computational models. This raw data is then refined and processed by the preprocessing unit and feature extraction tool, preparing it for machine learning analysis by identifying relevant features. The Machine Learning Model Library contains various machine learning models that enable the system to predict the performance of a microstrip patch antenna under different configurations, such as material and dimensions. These models are trained by the system's training engine using historical data, which enhances their efficiency across diverse configurations. Once the machine learning models identify optimal antenna designs, they are tested using the system's simulation interface. This interface can connect to electromagnetic simulation software such as HFSS, EMPro, and CST, allowing for virtual performance testing of the antenna designs. An optimization engine within the system adjusts antenna parameters in real time, fine-tuning the design to achieve nominal performance based on user-defined criteria, such as minimizing return loss and maximizing bandwidth. The validation module then tests the antenna design against stringent performance criteria to ensure it meets the desired specifications. Users interact with the system via a user-friendly interface, where they can input parameters and retrieve results. Fig. 1.

No. of Pages : 21 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024

(21) Application No.202441049738 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN INTEGRATED THERMAL ENERGY STORAGE SYSTEM FOR A HELMET

(51) International classification	:A42B0003040000, F28D0020020000, A42B0003280000, H05K0007200000, H01M0010655600
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards an integrated thermal energy storage system for a helmet. The system includes a helmet shell providing protective outer layering, with at least one phase change material (PCM) container positioned within, storing PCM for thermal regulation. A heat transfer module communicates thermally with the PCM container, facilitating heat exchange between the wearer's head and the PCM. Insulation material encasing the PCM container minimizes heat loss to the environment. A control system equipped with sensors and a microcontroller monitor and regulates PCM charge, ensuring optimal cooling. A recharging mechanism maintains PCM integrity for sustained cooling efficiency. Furthermore, a ventilation module integrated into the helmet shell enhances airflow, contributing to overall wearer comfort, thereby managing heat transfer, crucially maintaining a comfortable temperature within the helmet for effective cooling.
FIG. 1

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/06/2024
(21) Application No.202441049966 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : APPARATUS AND PROCESS FOR CONTINUOUS MILLING AND DRYING OF SLURRY AND WET SOLID MATERIALS

(51) International classification	:F26B0021000000, F26B0017100000, F01N0013000000, F26B0001000000, C02F0011120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT APPARATUS AND PROCESS FOR CONTINUOUS DRYING AND MILLING OF SLURRY AND WET SOLID MATERIALS Apparatus (100) for the continuous treatment of slurry and wet solid materials comprises a supply blower (14) delivering heated air through a heater (4) into a milling and dispersion chamber (19) containing high-speed mills (17,18) for material processing. The dispersed material is then transferred to a drying chamber (1) where heat and mass transfer occur, facilitated by adjustable airflow via a flap valve (20). Coarse and fine particles are separated using first and second cyclone separators (2, 3), with collected particles stored in collectors (8, 15). An exhaust suction blower (6) maintains system airflow, while a control panel (7) equipped with temperature sensors (21), airflow controls, and motor speed controls ensures optimal operation. The apparatus (100) also features variable1speed blowers (6, 14), variable-speed motors for the mills (17,18), a screw feeder (16) for material introduction, and a hot air recirculation system to reduce energy consumption and achieve efficient treatment. [Figure 2]

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/06/2024
(21) Application No.202441050085 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INBUILT BREATHALYSER ON STEERING WHEEL OF CAR WITH A SMART SCREEN.

(51) International classification :G01N0033497000, B60K0028060000, G01N0033980000, B60K0028040000, B62D0001040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
Drunk driving is a serious problem for road safety since it causes a lot of accidents and deaths every year. This idea solves this issue by incorporating a breathalyzer apparatus right into a car's steering wheel. Integrated inside the steering wheel assembly, the system includes a breathalyser unit, ignition interlock mechanisms, fuel cell sensor, smart screen, speed limiter, and suction motor. The smart screen initiates a breathalyzer test as soon as the driver gets into the car. The breath sample is drawn into the fuel cell breathalyser sensor by the suction motor in the vent system on the steering wheel when the driver exhales. By measuring the alcohol content, this sensor produces a current that is proportionate to the blood alcohol content. The smart screen shows the BAC results in real time and gives the appropriate advice. The ignition system is activated, allowing regular vehicle operation, if the blood alcohol content is less than the permitted limit. The device limits the vehicle's speed if the blood alcohol content is somewhat higher. An ignition interlock prevents the car from starting if the blood alcohol content (BAC) is higher than the threshold. The motorist is alerted visually and aurally about their BAC level and any operating limitations. Through the prevention of drunk driving and the encouragement of responsible conduct, this integrated approach improves road safety

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202441050344 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADVANCED AIR QUALITY MONITORING SYSTEM FOR WIRE ARC ADDITIVE MANUFACTURING (WAAM) PROCESSES

(51) International classification	:B23K0009040000, G01N0033000000, B33Y0010000000, B23K0009320000, F24F0110500000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT ADVANCED AIR QUALITY MONITORING SYSTEM FOR WIRE ARC ADDITIVE MANUFACTURING (WAAM) PROCESSES The present invention discloses an advanced air quality monitoring system specifically designed for Wire Arc Additive Manufacturing (WAAM) processes. This system integrates a gas sensor to continuously measure air constituents such as nitrogen oxides (NOx) and carbon monoxide (CO). An Arduino microcontroller processes the sensor data and interfaces with an OLED display for real-time feedback. Additionally, a warning light and alarm buzzer provide immediate alerts when pollutant levels exceed safe thresholds. The system features a robust protective casing that shields the microcontroller and sensors from high temperatures and adverse environmental conditions typical of WAAM operations. This setup ensures reliable performance and enhances operator safety by facilitating timely responses to air quality hazards. The invention offers a modular and compact design, enabling easy integration and portability within various WAAM setups, and supports data logging for comprehensive air quality analysis and improved manufacturing safety.

No. of Pages : 23 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024

(21) Application No.202441050345 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN EFFICIENT FILAMENT EXTRUSION DEVICE

(51) International classification	:B29C0048000000, B33Y0030000000, B29C0048050000, B29C0048920000, B29C0048020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT An efficient filament extrusion device The invention relates to a device to cool the filament in a filament extrusion process and to regulate the extruded filament diameter by using the parallel roller and a forced water-cooling chamber.

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202441050346 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : RELIABLE MEASUREMENT APPARATUS FOR DYNAMIC VIBRATION

(51) International classification	:G11B0033080000, H01L0041090000, B06B0001060000, G01H0001000000, G01N0021640000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Reliable measurement apparatus for dynamic vibration An apparatus for measurement of dynamic vibration in plurality of test specimens is disclosed. The apparatus has an universal fixture to receive any type of specimens, and is easy to assemble.

No. of Pages : 12 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202441050347 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A METHOD FOR OPTIMIZING REGULAR FLOOD PATTERNS IN OIL AND GAS RESERVOIRS

(51) International classification :E21B0043160000, E21B0043000000, E21B0043200000, E21B0043300000, E21B0043240000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT A method for optimizing regular flood patterns in oil and gas reservoirs The present invention provides a method for optimizing regular flood patterns in oil and gas reservoirs to enhance oil recovery. It involves calculating the optimal ratio of spacing between injection and production wells (d/a) for various flood patterns. This method addresses issues of well interference and viscous fingering by determining ideal well configurations and ratios for classical and inverted patterns, applicable to patterns from 4-spot to 23-spot and beyond. The method includes steps to derive d/a, P/I, and I/P ratios, ensuring improved sweep efficiency and maximized oil recovery while minimizing production costs and ensuring uniform pressure fronts in the reservoir.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024

(21) Application No.202441050413 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PORTABLE CHATGPT TERMINAL SETUP USING ESP32 AND TFT SCREEN

(51) International classification :H04L0067131000, A63B0071060000, G06Q0010100000, G06Q0030020000, G06F0009451000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
This project aims to create a ChatGPT terminal setup using an ESP32 microcontroller, a TFT screen, and a PS2 keyboard. The setup facilitates interactive communication with ChatGPT, providing a compact and portable interface. The ESP32 acts as the central processing unit, managing input from the PS2 keyboard and displaying the output on the TFT screen. The project involves configuring the ESP32 to handle serial communication, process user inputs, and render responses from ChatGPT in real-time. The TFT screen serves as the display for the conversation, while the PS2 keyboard allows for user input. This setup is ideal for applications requiring portable AI interaction, such as educational tools, personal assistants, and smart devices. The project demonstrates the integration of hardware and software to create a functional AI terminal, showcasing the capabilities of the ESP32 in managing peripheral devices and handling complex tasks

No. of Pages : 6 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050436 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : COIR PITH-BASED CAR AIR FRESHENER GEL

(51) International classification :A61K8/02, A61K8/97, A61K8/92, A61K8/18, A61P31/04, A61K8/65, A61K8/02, A61K8/97
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
COIR PITH-BASED CAR AIR FRESHENER GEL ABSTRACT This invention discloses a novel car air freshener gel designed to be an eco-friendly and health-conscious alternative to conventional options. The air freshener utilizes coir pith, a readily available and biodegradable by-product of the coconut industry, as the primary carrier base. Natural essential oils provide pleasant fragrance, eliminating the use of synthetic chemicals commonly found in traditional air fresheners. A natural gelling agent ensures controlled release of the fragrance for sustained odor elimination and air freshening within the car environment. This sustainable and effective invention minimizes environmental impact while promoting in-vehicle air quality. The gel passively releases the fragrance through evaporation and diffusion. Over time, the gel dries out, leaving behind a disposable coir pith residue with minimal environmental impact. The lifespan of the air freshener depends on factors like gel quantity, fragrance concentration, temperature, humidity, and air circulation.

No. of Pages : 17 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050437 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A DIGITAL COIR YARN RUNNAGE MEASUREMENT DEVICE

(51) International classification :G02B0006360000, G01D0005347000, A01G0024250000, A61B0005000000, G01N0035000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A DIGITAL COIR YARN RUNNAGE MEASUREMENT DEVICE ABSTRACT The present invention relates to a digital coir yarn runnage measurement device that is fast, accurate, user-friendly and low maintenance. Our present invention comprises of pre-programmed microcontroller (103), an optical rotary encoder (100), a permanent magnetic DC motor (105), LCD display (102) for output and a weighing (101) instrument, caterpillar (209) roller arrangement which consists of 4 timing pulleys and two synchronous timing belts. The coir yarn is led through the inlet guide (201) of the device to the caterpillar (209) roller arrangement driven by a DC motor (105) connected to one of the pulleys. The number of rotations is recorded by an optical rotary encoder (100) and transferred to the pre-programmed microcontroller (103). The yarn is weighed in a weighing (101) arrangement connected to the microcontroller (103). The runnage of the coir yarn is tabulated and displayed by the microcontroller (103) and is displayed on the LCD screen (202).

No. of Pages : 11 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050448 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED PLANTING ROBOTS WITH REAL-TIME IOT-INTEGRATED SOIL HEALTH MONITORING SYSTEM AND METHOD EMPLOYED THEREOF

(51) International classification	:G16H0050200000, G01N0033240000, G06Q0050020000, G05D0001020000, A01C0007200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards an automated planting robots with real-time IoT-integrated soil health monitoring system and method employed thereof. The innovative system comprising a solar panel array is configured to convert solar radiation into electricity to power the robot. A microcontroller unit (MCU) in the robotic platform for agricultural planting performs tasks such as data processing, decision-making, and coordinating robotic actions. One or more movable sensors are configured to analyze soil conditions, place seeds accurately in the agricultural field at appropriate depths, and monitor soil health using soil moisture sensors. A GPS module configured to detect and navigate to predetermined planting spots, send data to robotic modules to assist in seed planting, and detect plants in the selected field. A wireless communication module is configured to communicate with a centralized computer, enable the collection of data from individual modules, facilitate real-time inspections and imaging using stored data in online storage, enhance machine learning algorithms used in the IoT system and precision planting, and utilize real-time data to gain knowledge about plant locations for cutting or plucking, and the plant growth environment, including soil quality. Fig. 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050654 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A DEVICE TO AUTOMATICALLY IGNITE AND EXTINGUISH MOXA

(51) International classification :A61H0039060000, A23G0009260000, A24C0005320000, A62C0035020000, A23P0010100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A device 100 to burn a medicinal stick 150 can include a housing 102 with a plurality of holders 200 comprises a slidable platform 202 to hold the medicinal sticks 150; a time-based release mechanism 206; an extinguisher component 300 such that when medicinal stick 150 inserted into the at least one holder 200, presses the platform 202 to close an electrical circuit 208 and activate respective burner 204 to burn the medicinal stick 150. When a temperature sensor 210sends a signal for the temperature above a predefined temperature, activates time-based release mechanism 206 to pop-up the platform 202 to expel the medicinal stick 150 and deactivation of the electric ignition circuit 208 to extinguish the burner 204. A cutting mechanism 302 cut the unburned medicinal stick 150, and a pushing mechanism 308 pushes the ash into the ash collecting tank 318the device 100, which is a Moxa Igniter and Extinguisher Plate device.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050655 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PORTABLE SYSTEM FACILITATING AUTOMOBILE WINDSHIELD CLEANING, AND METHOD THEREOF

(51) International classification : B60S1/02, B60S1/04, B60S1/34, B60S1/38, B08B7/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Present invention discloses a portable system facilitating automobile windshield cleaning, and method thereof. The system (100) includes a centrally mounted buffering unit (108) including a central buffer coupled with one or more buffers (110) mounted onto one or more cross rails (124) connected to the central buffer (108-1). The centrally mounted buffering facilitates cleaning of a windshield (104) of an automobile (102) by employing a rotation mechanism (112) and a cleansing technique. An absorptive material lining (118) absorbs any excess volume of a cleansing solution remaining as a residue generated on the windshield during the cleaning process. Further, the system (100) includes a cleaning mode controller (120) coupled with one or more sensing modules (126) and the centrally mounted buffering unit. The cleaning mode controller (120) adjusts cleaning of the windshield employing one or more cleaning modes based on a level of contamination on the surface of the windshield (104).

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050656 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A MODULAR SYSTEM TO CLEAR SNOW FROM A VEHICLE

(51) International classification :E01H5/10, E01H5/12, E01H5/00, E01H5/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system 100 is disclosed to clear snow from a vehicle 102 can include a cover 104 comprising an inlet pipe 106 and an outlet pipe 108; a pump 110 embedded with the cover 104 to circulate coolant; and a thermal pad 114 to provide additional heating temperature to the coolant using engine 116 exhaust. The coolant running in pipe is made to pass from the radiator 118 and when engine 116 is started, the coolant is heated up and pumped into the cover 104 for circulation thereby heating the cover 104 to melt the accumulated snow over the cover 104. An automatic temperature regulation 120 unit configured with a plurality of temperature sensors 122 dynamically adjust the heat distribution based on real-time temperature data. The vehicle 102 comprises a transceiver module to set a preheating schedule for activating the snow removal system 100 remotely.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050657 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD TO DETECT SHOALS FOR PRECISION FISHING

(51) International classification :G06Q0030060000, G05D0001000000, G01S0015960000, G06Q0010080000, G08G0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system 100 to detect real-time location of shoals within seabed can include a device 102 including a sonar sensor 104 configured to detect range of at least one shoal; a camera 106 to capture real-time images of the shoals; a GPS 108 to determine location of the device 102; and an on board controller 116. And a method including step for transmitting, using the satellite-based communication 150, and real-time location of a device 102 using GPS 108, and one or more sonar returns sensed by a sonar sensor 104 for seabed environment to a ground station 122. The device 102, receiving data from the ground station 122 for navigating the device 102; and capturing one or more real-time images of shoals for identifying and classifying fishes using deep learning algorithm; and transmitting processed data to the ground station 122 for user 124 updates. The ground station 122 provides user 124 a user-friendly interface through mobile application to access real-time shoal's location data.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050668 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART COOLING STAND FOR DETECTING TEMPERATURE, AND METHOD THEREOF

(51) International classification :G06F0001200000, H05K0007200000, F28D0021000000, H01M0010480000, H01L0023340000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present disclosure discloses a smart cooling stand (100) for detecting temperature. The smart cooling stand (100) configured to support one or more electronic devices such as laptops and tablets. The cooling stand (100) includes a base structure with integrated temperature sensors (102) to monitor temperature of the electronic devices positioned on it. A control unit (104) connected to these temperature sensors (102) receives temperature data and activates a liquid cooling system (110) when the temperature exceeds a predefined threshold. This liquid cooling system (110) absorbs and dissipates heat, thus lowering temperature of the electronic devices. Additionally, the control unit (104) transmits an alert to a connected computing device (122), notifying an entity of the temperature exceedance and activation of the liquid cooling system (110). This cooling stand (100) ensures optimal operating temperatures, enhancing device performance and longevity.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024

(21) Application No.202441050674 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM FOR ENHANCING ENGINE PERFORMANCE BASED ON WEATHER CONDITION ON SHIPS

(51) International classification :H04B0010116000, B63B0049000000, B63H0021210000, G08G0003000000, G01S0017950000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
System for enhancing engine performance based on weather condition on ships. The said system comprises input parameters such as engine, anemometer, weather forecast, voyage data, inclinometer and current will be collected by microcontroller and data is transfer through Li-Fi transmitter and those values will be receive through Li-Fi receiver. Then, the data is given to the tinyml model deployed in a microcontroller chip to predict the engine performance in ships via LCD such as alert message, ECU and course assist to easily determine the ship's engine performance. The present invention provides efficient ship engine monitoring system, and it is very useful for shipping industry.

No. of Pages : 10 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050675 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IMPOSTOR RESILIENT MULTIMODAL METRIC LEARNING FOR REAL TIME OBJECT IDENTIFICATION USING DEEP LEARNING

(51) International classification :G06K0009620000, G06N0003080000, A61B0005000000, G06K0009000000, G06N0003040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Impostor resilient multimodal metric learning for real time object identification using deep learning is the proposed invention. Human-following robot have become more prevalent in recent times, and their monitoring requires reliable and precise human identification. Re-identification measures have been presented in recent studies for target person recognition; nevertheless, these metrics suffer from weak generalization and impersonators in a nonlinear multi-modal reality. In order to address real-world problems and identify the target individual experiencing appearance changes when moving across various indoor and outdoor locations or domains, this study learns a domain generic person re-identification. Our generic metric learns deep cross-representations to handle position, perspective, and other factors by utilizing a unique attention method.

No. of Pages : 16 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050748 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FLUID FLOW CONTROL VALVE WITH LATCH ASSEMBLY AND ELECTRIC SWITCH ASSEMBLY

(51) International classification :F16K17/00, F16K17/04, F16K27/02, F16K1/00, F16K17/06, F16K17/10
(86) International Application No:NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
A fluid flow control valve (100) includes a latch assembly (116) for preventing automatic release of a sealing flange (112) due to one or more flange release factors including counter fluid pressure, velocity, and a vacuum. The sealing flange closes an outlet port (106) of the fluid flow control valve when fluid flow velocity exceeds a predefined threshold. The latch assembly includes a locking pin (122) and a locking lever (118) coupled to the sealing flange. The locking lever engages and disengages with the locking pin to latch and unlatch the sealing flange when the sealing flange is closed and opened, respectively. Latching the sealing flange precludes any flange release factor from releasing the sealing flange in the closed condition. An electric switch assembly (128) connected to the sealing flange controls operation of the sealing flange in a circulation mode for an uncontrolled fluid flow and in a service mode. Reference figure: FIG. 2

No. of Pages : 37 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202441050757 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WEED DESTROYING SYSTEM AND A METHOD THEREOF

(51) International classification :G02B0026100000, B23K0026082000, B23K0026140000, B23K0026400000, B23K0026080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
WEED DESTROYING SYSTEM AND METHOD THEREOF Disclosed is a weed destroying system (104) including a plurality of galvo heads (202) and controller (204). Each of the galvo heads (202) includes a mirror (302), a motor (304), and a laser emitter (306) configured to emit laser beam such that the laser beam strikes the mirror when emitted by the laser emitter (306). The controller (204) generates an emit signal such that the controller (204), upon generation of the emit signal, actuates the motor (304) that facilitates an angular adjustment of the mirror (302) of each galvo head of the plurality of galvo heads (202). The angular adjustment of the mirror of each galvo head of the plurality of galvo heads (202) converges the laser beam emitted by the laser emitter (306) of each galvo head of the plurality of galvo heads (202) at a single point. FIG. 1 will be the reference figure.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050764 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DYNAMIC CONTENT PERSONALIZATION ENGINE FOR WEB APPLICATIONS

(51) International classification	:G06Q0030060000, G06N0020000000, H04L0067500000, G10L0013000000, G06N0020200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention presents a system and method for real-time personalization of web application content, leveraging sophisticated machine learning algorithms to enhance user engagement. By analyzing user behaviors such as clicks, searches, and time spent on pages, the system dynamically generates personalized content recommendations. This adaptive personalization engine integrates seamlessly into various web applications, continuously learning from user interactions to refine its predictions. The result is a tailored user experience that adapts to individual preferences and contexts, significantly boosting satisfaction and retention. This innovative approach transforms static content delivery into a dynamic, user-centric process, marking a significant advancement in web technology and user experience design.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050765 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BLOCKCHAIN-BASED SECURE DATA SHARING PLATFORM FOR WEB APPLICATIONS

(51) International classification :G06Q0020400000, H04L0009320000, G06F0021620000, G06F0021640000, H04L0009080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention introduces a secure data-sharing platform for web applications that utilizes blockchain technology to enhance data integrity, confidentiality, and traceability. By recording all data transactions on a decentralized ledger, the system ensures that data remains tamper-proof and verifiable without relying on centralized servers. The platform includes features such as data encryption, access control, and transaction verification, enabling secure sharing of sensitive information. Designed for applications in finance, healthcare, and other industries requiring high data security, this innovation provides a robust solution for secure data management and sharing. It marks a significant advancement in leveraging blockchain for secure web application data transactions, offering a reliable and transparent alternative to traditional methods.

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050767 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AI-DRIVEN ADAPTIVE USER INTERFACE FOR MOBILE APPLICATIONS

(51) International classification	:G06F0008300000, G06F0009451000, H04L0067500000, G09G0005140000, H04M0001724540
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention introduces an adaptive user interface (UI) system for mobile applications, utilizing artificial intelligence to tailor the UI dynamically based on user preferences, usage patterns, and environmental factors. The system comprises modules for analyzing user behavior, understanding context, and adapting the UI, thereby enhancing the overall user experience. By continuously monitoring interactions such as clicks and swipes, the system identifies trends and adjusts UI elements in real-time. Additionally, it incorporates contextual information like location and ambient conditions to further personalize the interface. This innovation aims to replace static UI designs with a responsive, intuitive, and user-centric approach, significantly improving engagement and satisfaction with mobile applications.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050770 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FAKE NEWS DETECTION IN SOCIAL MEDIA MANAGEMENT USING DEEP LEARNING AND AI

(51) International classification :G06Q0050000000, G06N0003080000, G06F0016953500, G06Q0020120000, G09B0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Fake News Detection in Social Media Management Using Deep Learning and AI ABSTRACT Social media are online platforms for communication that grease stoner-generated content products and publications as well as stoner commerce. People use these forms of communication more than conventional media like radio, TV, and journals because they're more readily available and quick. On the other hand, false information, like fake news, is constantly spread for unrighteous reasons. The spread of false information has a mischievous effect on society, worsening interpersonal pressures and harming the reports of organizations and public numbers. The idea of information integrity becomes vital because of the spread of fake news on these platforms. Machine literacy exploration shows pledge. The delicacy of the protrusions is, nonetheless, one of the primary downsides. We've suggested two cold-blooded deep literacy models to describe false news, and we've assessed our models using two real datasets FA- KES and ISOT. Due to the suggested models' experience in relating false news, we were able to achieve 99 delicacies on ISOT for both models and 68 and 63 delicacies on FA- KES, independently, for the other model. Other studies that use analogous data sets to generalize models have been offered. When compared to other machine literacy models, the results are superior.

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050789 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ARTIFICIAL INTELLIGENCE AND IOT-BASED SMART HEALTH CARE SYSTEM TO PREVENT AND DETECT ALL TYPES OF HEART DISEASE

(51) International classification :A61B0005000000, A61B0005024000, A61B0005020500, G01K0013200000, G16H0080000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Artificial Intelligence and Iot Based Smart Health Care Systems to Prevent and Detect all Types of Heart Disease ABSTRACT The Internet of Effects (IoT) is a network of bias and technology that lets particulars communicate with one other and the pall for ultramodern medical care. To assess and handle ever-collected electronic clinical records, an accurate illness vaticination model is demanded. An RHMIoT frame using featherlight block encryption and decryption is presented for safe pall surroundings. Cardiovascular complaint delicacy is calculated using machine literacy and deep literacy. The ensemble voting classifier was most accurate at 95. IoT health monitoring results reduce croaker visits and case-croaker consultations. numerous need medical staff to cover their health. We used technology to simplify patient opinion and treatment in this proposed bid. IoT technology is being used to construct a smart health monitoring system that can measure blood pressure, heart rate, oxygen position, and temperature. This approach helps pastoral conventions communicate with megacity hospitals concerning case health. The IoT system will notify a croaker if a case's health changes are grounded on established parameters. The largest relative error (?r) in measuring heart rate, patient body temperature, and SPO2 was2.89,3.03, and1.05, independently, similar to marketable health monitoring systems. This IoT-ground health monitoring device allows croakers fluently collect real-time data. High-speed internet lets the system examine parameters regularly. pall storehouse permits unborn reclamation of once measures. This approach would identify and treat COVID-19 victims beforehand.

No. of Pages : 10 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024

(21) Application No.202441050790 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TRACTOR OPERATED RAISING PLATFORM FOR FRUIT HARVESTING

(51) International classification :A01D46/20, A01D46/247
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Harvesting fruit crops is a labor-intensive and risky task. In India, few fruit harvesting machines are commercially available, and their high prices are often unaffordable for Indian farmers. The Tamil Nadu Agricultural Engineering Department offers a truck-mounted hoist for hire at Rs. 450/hour, with an effective field capacity of 12 trees per hour. This hoist, priced at Rs. 42 lakh, has operational costs of Rs. 2,500/hour, as per Bureau of Indian Standards specifications. However, it is costly and unsuitable for coconut farms due to its small tires. To address these issues, a tractor-mounted telescopic hoist has been conceptualized, with 2-D and 3-D drawings prepared. The estimated purchase price is Rs. 20 lakhs, and its operational cost is Rs. 1,600/hour, 36% lower than the truck-mounted hoist. This new hoist has a lower initial cost and can easily operate in orchards and coconut plantations due to the tractor's larger rear tires.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050815 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BIO-PHOTOVOLTAIC SYSTEM

(51) International classification	:C12M0001000000, H01G0009200000, H01M0008160000, H01G0011860000, B82Y0010000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a bio-photovoltaic system (100) for generating electrical energy from light energy leveraging the process of photosynthesis is disclosed herein. The Bio-Photovoltaic System (100) consisting a body (101) having a plurality of units (102), wherein each unit comprises of photosynthetic micro-organisms immobilized on a conductive substrate (103) coupled with a semiconducting material (104) to generate chemical energy utilizing the process of photosynthesis in presence of sunlight. The plurality units (102) also comprise of an anode (105) & cathode (106) made up of a transparent material to facilitate electron transport without obstructing the photosynthesis process. The plurality units (102) further comprising of an illumination source (107) configured to illuminate the micro-organisms in case no sunlight is available for the process of photosynthesis. The storage of the generated electricity is sanctioned by the supercapacitor (109) connected to the system (100).

No. of Pages : 28 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050822 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BIOGAS GENERATING DEVICE AND WORKING METHOD THEREOF

(51) International classification :B09B3/00, C10J3/00, B01D53/86, B09B1/00, B09B5/00, C02F3/28
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
A biogas generating device featuring an advanced fiber-reinforced polymer composite gas cylinder, integrated safety sensors, and an IoT-based interface for monitoring gas volume and refill notifications. The device includes a user interface for recipe recommendations based on remaining gas, enhancing user convenience and optimizing biogas usage. Accompanied Drawing [FIGS. 1-3]

No. of Pages : 17 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050870 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR ACCESSING AND AUTHENTICATING DIGITAL ARTIFACTS

(51) International classification	:G06F0021640000, H04L0047125000, G06Q0010100000, H04L0067100000, H04L0009320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed is a system and method for accessing and authenticating a plurality of digital artifacts. The system includes a memory (108); and a processor (110). The memory (108) is configured to store a plurality of instructions about the digital artifacts. The processor (110) is configured to execute the plurality of instructions. The processor (110) is configured to provide a plurality of encrypted communication channels for exchanging the digital artifacts. The processor (110) is configured to handle the communication and exchange needs of a plurality of users associated with an organization by leveraging a plurality of cloud-based technologies. The processor (110) is configured to verify the authenticity of the digital artifacts by using a plurality of authentication mechanisms. The processor (110) is configured to provide a user interface that enables the organization to perform a plurality of customizations. Figure 2.

No. of Pages : 35 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050877 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTONOMIC QUERY OPTIMIZATION SYSTEM FOR MULTISTORE BIG DATA PROCESSING WITH FEEDBACK LOOP

(51) International classification	:G06F0016245300, G06F0016245800, G06F0009500000, G06F0016220000, G06F0016210000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention relates to an Autonomic Query Optimization System for Multistore Big Data Processing with Feedback Loop. The system comprises a mediator that manages query processing across multiple data stores via wrappers. An adaptive optimizer within the mediator generates query execution plans, while a query analyzer processes execution feedback. The system implements a continuous feedback loop where actual cardinalities and performance metrics from query executions are used to calculate derived cardinalities (DC = |AC - EC|). These derived cardinalities and metrics are stored in a statistics repository and used to optimize future query plans. The system executes queries across relevant data stores, collects feedback, updates statistics, and continuously refines its optimization strategy. This approach enables real-time adaptation to changing data characteristics and system conditions, potentially improving query performance and resource utilization in heterogeneous multistore environments.

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050879 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : COCONUT SHELL AND BASALT FABRIC REINFORCED POLYMER HYBRID COMPOSITE FOR AWE SYSTEM ENERGY KITES

(51) International classification :A63H0027080000, B29C0033380000, C09D0167000000, B29K0105160000, B01D0039140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The invention relates to designing and fabricating energy kites for AWE systems with on-ground power conversion. The design process CAD model incorporating specific aerodynamic parameters, including a 159.9753 ft rotor diameter and 79.9868 ft blade span. It considers 164.042 ft/s wind speeds and 140 rpm rotor speeds, using flow analysis to simulate real-world scenarios with a 644.8 klb total system mass. The fabrication method involves treating (2) coconut shells with sodium 10 wt.% fluoride, 15 wt.% oxalic acid in deionized water for 8 hours, grinding (4) them into 150-micron microparticles (5), and dispersing them in a polyester resin mixture (6). This mixture impregnates (8) basalt fabric layers (7) using a wet layup method, followed by room temperature curing and post-curing at 100°C for 20 hours. The resulting energy kite (10) features a 79.99 ft blade length, 1117.95 ft² surface area, and 2358.6784 kg total mass, achieving 26.52% system efficiency.

No. of Pages : 14 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050882 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LIVE MUSIC GENRE IDENTIFICATION THROUGH DEEP LEARNING TECHNIQUES

(51) International classification :G06N0003080000, G06N0003040000, G06K0009620000, G10H0001000000, G10L0025240000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is the live music genre identification method (100) through deep learning techniques wherein the method (100) comprising receiving live audio input of music performances (102). The method includes preprocessing the audio input (104) to extract relevant features, including Mel-frequency cepstral coefficients. The method also includes training a convolutional neural network model on a dataset of labeled music samples (106) to learn hierarchical representations of various music genres. The method also includes applying the trained model (108) to the pre-processed live audio input to predict the genre of the music performance in real-time. The method also includes providing a user interface (110) for interactive submission of audio files and displaying the anticipated genre classification. The method also includes incorporating customizable settings (112) to allow users to adjust classification parameters based on individual preferences. The method also includes implementing a recommendation module within the classification model (114) to suggest new genres to users based on their music preferences.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050883 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FUNCTIONALIZED SILICA NANOPARTICLES FORMULATION FOR TOOTHPASTE

(51) International classification :A61K8/02, A61K8/25, A61K8/92, A61K8/23, A61K8/73, B82Y30/00, A61K8/21
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention relates to novel toothpaste formulation designed to enhance oral hygiene through multifunctional silica nanoparticles and carefully selected additives. The composition includes 30% w/w Functionalized Silica Nanoparticles, incorporating Calcium-doped Silica for enamel remineralization, Phosphate-doped Silica for enhanced mineral uptake, and Triclosan-loaded Silica for antimicrobial action. Additionally, it contains Humectants (20% w/w) like Glycerin and Sorbitol for moisture retention, Abrasive Agents (15% w/w) such as Hydrated Silica for effective cleaning, and Surfactants (2% w/w) like Sodium Lauryl Sulfate for foaming. Binding Agents (5% w/w) such as Xanthan Gum and Carboxymethyl Cellulose ensure viscosity and consistency, while Flavoring Agents (1% w/w) like Peppermint Oil provide a pleasant taste. pH Regulators (1% w/w) such as Sodium Bicarbonate maintain optimal pH, and a Fluoride Source (0.24% w/w) like Sodium Fluoride prevents cavities. Sweeteners (1% w/w) like Xylitol add sweetness and reduce bacterial growth. Water (24.76% w/w) serves as a solvent and consistency agent

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050884 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART MULTIFUNCTIONAL NANOCOMPOSITE WITH CONTROLLED RELEASE MECHANISM FOR COMPREHENSIVE WATER PURIFICATION

(51) International classification :C02F1/28, C02F1/70, C02F1/72, B01J35/45, B01J35/39, B82Y30/00, B82Y40/00, C01G49/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to the TiO2@Ag@Fe3O4 nanocomposite represents a novel and multifunctional solution for comprehensive water purification. Comprising a core-shell structure with titanium dioxide (TiO2) nanoparticles at its core for efficient photocatalytic degradation of organic pollutants, a shell of silver nanoparticles (Ag) providing potent antimicrobial properties, and an outer layer of magnetic iron oxide nanoparticles (Fe3O4) enabling easy recovery via magnetic separation. The nanocomposite is further coated with a pH-responsive polymer, facilitating controlled release of silver ions and regeneration of the TiO2 surface under varying pH conditions. In vitro studies demonstrate its exceptional performance in photocatalysis, antimicrobial efficacy against Escherichia coli and Staphylococcus aureus, high adsorption capacity for heavy metals like Pb2+ and Cu2+, and efficient recovery efficiency. This innovative material holds promise for advanced applications in environmental remediation and water treatment technologies.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/07/2024

(21) Application No.202441050898 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : ADVANCED AUTONOMOUS VEHICLE NAVIGATION SYSTEM WITH GNN BASED ROUTING ALGORITHM

(51) International classification :G06N0003040000, G06N0003080000, G01C0021340000, G01C0021360000, G05D0001000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses an advanced autonomous vehicle navigation system utilizing Graph Neural Network (GNN)-based routing algorithms to enhance route planning and decision-making capabilities. Traditional navigation systems for autonomous vehicles often rely on pre-defined maps and static algorithms, which may not adequately adapt to dynamic environments or complex traffic scenarios. In contrast, the proposed system integrates GNN technology to dynamically learn and optimize route planning based on real-time traffic conditions, historical data, and environmental inputs. Key components of the system include a data ingestion module for collecting and preprocessing sensor data, a GNN-based routing algorithm module for real-time route computation, and a decision-making module for executing optimal driving actions. The GNN architecture enables the system to learn spatial dependencies and traffic patterns, thereby improving accuracy in predicting optimal routes and navigating efficiently through urban and suburban environments.Furthermore, the system incorporates machine learning techniques to continuously update and refine its routing strategies based on feedback from vehicle sensors and external data sources. This adaptive capability ensures robust performance across diverse driving conditions and enhances overall safety and efficiency in autonomous vehicle operations. In summary, the advanced autonomous vehicle navigation system with GNN-based routing algorithms represents a significant advancement in intelligent transportation systems, offering enhanced adaptability, efficiency, and safety in navigating complex urban landscapes.

No. of Pages : 11 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050901 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTONOMOUS VEHICLE TRAFFIC RECOGNITION BASED ON ARTIFICIAL INTELLIGENCE

(51) International classification :B60W0030120000, G08G0001160000, G06N0020000000, G05D0001020000, G01S0013931000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a traffic recognition system for autonomous vehicles, designed to improve lane-keeping and object detection capabilities using artificial intelligence (AI). The system comprises a camera mounted on the vehicle's hood to capture real-time video, which is then preprocessed using image processing techniques to enhance quality and extract relevant features. The Hough Transform algorithm is employed to detect lane lines, and an Arduino UNO is used to steer the vehicle based on the detected lane information. The system also incorporates machine learning algorithms to recognize and track various traffic objects such as pedestrians, vehicles, traffic lights, and signs, and to predict pedestrian intentions. This integration of advanced image processing and AI techniques aims to enhance the reliability and safety of autonomous driving, addressing the limitations of existing lane-keeping assist systems under adverse weather conditions and complex road layouts. The invention promises to improve public confidence in autonomous vehicles and contribute to the future of intelligent transportation systems. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050903 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : THREE-PHASE BIDIRECTIONAL METER INTERCONNECTED TO THE GRID WITH MONITORING OF ELECTRICAL ENERGY GENERATION FROM A PANEL-MICROINVERTER SET

(51) International classification :G01R22/06, H02J13/00, G05B23/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention pertains to a three-phase bidirectional meter system that interconnects with the electrical grid and monitors electrical energy generation from a photovoltaic (PV) panel-microinverter set. This system includes a measurement module capable of recording energy flow in both directions, a communication module for real-time data transmission, and a user-friendly display interface. The grid interface module ensures seamless integration with existing electrical infrastructure and compliance with grid standards. Additionally, the PV interface module tracks energy generation from the PV system, and the data acquisition system collects and processes this information for analysis and reporting. The system also features a robust data management system for long-term data storage and advanced analytics, along with safety mechanisms such as overvoltage and overcurrent protection, ensuring reliable and efficient energy management. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050945 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PHISHING DETECTION AND SOLUTION- A MACHINELEARNING APPROACH

(51) International classification :G06F0021620000, G06N0020000000, G06F0021550000, G06F0021310000, H04M0003436000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention deals with the significant rise in usage of the internet, people share their personal information everywhere, without having a proper idea if a website is truly what it seems to be. This increases the chance of personal data being exposed to cyber-crimes such as phishing which enables cyber-criminals to deceive users and steal their sensitive data. The crime of stealing sensitive information costs Internet users billions of dollars a year. Through the anonymous online structure, hackers come up with new tactics, such as phishing scams, to trick victims into using fake websites to collect their sensitive information such as accounts, usernames, passwords, and so on. Understanding that a legitimate web page or a phishing scam is a major challenge, given its semantics-based attack, which greatly exploits the vulnerability of computer users. Considering this issue, we propose a development project focused on the detection of phishing and possible solutions for the same, which aims to identify whether a website is legitimate or phished. This is achieved by comparing and implementing various machine-learning techniques. In this report, we compared 3 major machine learning algorithms to find out the most optimal algorithm for labelling a website based on its URL as either phishing or legitimate.

No. of Pages : 28 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050947 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD TO OPTIMIZE RESOURCE MANAGEMENT AND PREDICTIVE ANALYSIS FOR AGRICULTURAL PRACTICES

(51) International classification	:G06Q0050020000, H04L0009080000, H04W0004700000, G06N0020000000, H04L0067120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
ABSTRACT A SYSTEM AND METHOD TO OPTIMIZE RESOURCE MANAGEMENT AND PREDICTIVE ANALYSIS FOR AGRICULTURAL PRACTICES The present disclosure describes a system (100) for optimizing resource management and predictive analysis in agriculture practices. The system includes Internet of Things (IoT) devices (102) placed throughout farms to capture environmental and crop condition data. A cloud server (110) communicates with the IoT devices (102) via a long-range communication medium (104) to receive and store the data. The server includes a data collection module (111) and a data annotation module (112) with units for labelling (112a), classifying (112b), segmenting (112c), and event tagging (112d) of the data. An AI-trained model (114) processes standardized data to generate predictive recommendations, which are stored on a central blockchain server (115a). A user computing device (118) accesses the central blockchain server (115a) to synchronize with a local blockchain ledger and display real-time predictive recommendations for farming.

No. of Pages : 31 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050948 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR SENTIMENT ANALYSIS OF SOCIAL MEDIA DATA REGARDING A COMMUNICABLE DISEASE VACCINATION

(51) International classification :G06Q0050000000, G06K0009620000, G06F0040300000, G06Q0030020000, G06N0003080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SYSTEM AND METHOD FOR SENTIMENT ANALYSIS OF SOCIAL MEDIA DATA REGARDING A COMMUNICABLE DISEASE VACCINATION The present disclosure envisages a system (100) and a method (800) for sentiment analysis of social media data regarding a communicable disease vaccination. The system (100) comprises a data collection module (106), a pre-processing module (108), a vectorization module (110), a classification module (112), and an output module (114). The data collection module (106) collects a social media data related to the communicable disease vaccination. The pre-processing module (108) generates a pre-processed dataset collect the social media data related to the communicable disease vaccination. The vectorization module (110) vectorizes the pre-processed dataset by implementing a plurality of vectorization techniques. The classification module (112) implements a pre-trained classification model on the vectorized dataset to generate an output by classifying sentiments of the tweets as positive, negative, or neutral based on the output of the pre-trained classification model. The output module (114) provides the generated output.

No. of Pages : 47 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050955 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATIC MEDICAL VENDING SYSTEM AND METHOD

(51) International classification :A61F0017000000, G07F0011000000, G07F0017000000, G16H0015000000, G07F0007020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure provides a computer implemented system and method for an automated medical vending system to dispense medical supplies including medications that do not require a physician's prescription. The automated medical vending system dispenses basic pharmaceuticals for conditions such as high blood pressure, diabetes, colds, fevers, headaches, and offers first aid supplies like bandages, cotton, ointments, and other commonly used tablets. The automated medical vending system includes the following components. ESP 32 (30 Pin); ESP 32 Base board; USB programming cable (A to B); External power supply (for stand-alone operation); Solderless breadboard for external circuits, and 22 g solid wire for connections; Host PC running the ESP 32 development environment. Versions exist for Windows, Mac and Linux; DC Servo Motor to dispense the selected medicines; LCD Display; RFID Reader and Tags; 1 x 3 Matrix Keypad; 0.5 Sq mm Cables for interconnecting all the peripherals.

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050960 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NOVEL PRIMER FOR THE RAPID DETECTION OF MYXOCOCCUS USING POLYMERASE CHAIN REACTION

(51) International classification :C12N0001200000, C12Q0001686000, C12R0001010000, C12Q0001687600, C12Q0001689500
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a novel primer for the rapid detection of Myxococcus using polymerase chain reaction (100) , comprising, a forward primer (102) with the sequence GGC GTG CCT AAC ACA TGC A. The novel primer for the rapid detection of Myxococcus using polymerase chain reaction (100) also includes a reverse primer (104) with the sequence ACC CCA GTT ACC GAC CA.

No. of Pages : 26 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050988 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART POSTURE DETECTION AND CORRECTION FOR COMPUTER USERS USING MACHINE LEARNING POSE ESTIMATION

(51) International classification	:G06K0009620000, A61B0005000000, A61B0005110000, A63B0024000000, G06T0007730000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The widespread use of computers has led to growing concerns about posture-related health issues, such as back pain and repetitive strain injuries. This paper presents a Real-Time Posture Monitoring and Feedback System for computer users, utilizing machine learning techniques like Histogram of Oriented Gradients (HOG), Support Vector Machines (SVM), and advanced pose estimation models such as PoseNet and MediaPipe. The system captures real-time video to detect key body landmarks like the head, shoulders, spine, and limbs. HOG and SVM are used for basic posture detection, while PoseNet and MediaPipe provide detailed and accurate analysis. The system continuously monitors posture and provides immediate feedback through visual alerts, sounds, and wearable device vibrations when poor posture is detected. Utilizing an extensive dataset of posture images for training, the system adapts to individual users and offers personalized recommendations. Testing in office and home settings showed significant improvements in posture, increased user awareness, and reduced discomfort from prolonged computer use. This innovative system seamlessly integrates into daily routines, helping users maintain better posture and promoting long-term health.

No. of Pages : 7 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/07/2024

(21) Application No.202441050994 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : MACHINE LEARNING BASED APPROACHES FOR PREDICTION OF PERSONALISED FEEDBACK AND ASSESSMENT IN HIGHER EDUCATION

(51) International classification	:G06N0020000000, G06Q0050200000, G06K0009620000, G06N0003080000, G09B0019000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

Machine Learning based Approaches for Prediction of Personalised Feedback and Assessment in Higher Education is the proposed invention. The proposed invention focuses on understanding the functions of Assessment in Higher Education. The invention focuses on analyzing the parameters of Personalised Feedback in Education using algorithms of Machine Learning.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/07/2024

(21) Application No.202441050998 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : MACHINE LEARNING APPROACHES FOR AUTOMATING STUDENT PERFORMANCE PREDICTIONS FOR ENHANCING UNIVERSITY EDUCATION SYSTEM

(51) International classification	:G06Q0050200000, G06N0020000000, G06K0009620000, G09B0007020000, G06N0003040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

Machine learning approaches for automating student performance predictions for enhancing university education system is the proposed invention. The proposed invention focuses on understanding the functions of enhancing education of university using algorithms of Machine Learning. The invention focuses on analyzing the parameters of Student Performance Predictions using algorithms of Machine Learning.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441050999 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM TO IMPROVE EFFICIENCY OF IC ENGINES IN AUTOMOBILE VEHICLES BY USING HYDRO PNEUMATIC ACCUMULATORS

(51) International classification	:E02F0009220000, F15B0001040000, F16K0031060000, F15B0001020000, B60K0025060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The invention is about using hydro pneumatic accumulators for saving size and improving efficiency of internal combustion engines in motor vehicles. IC engine(1) used for driving the vehicle is also connected to drive a hydraulic pump(P), which through a solenoid valve(5), pumps oil to hydraulic port of an accumulator(3), whose pneumatic port is connected to a pneumatic pressure vessel(6). Solenoid valve also connects a hydraulic motor(M) which gets pressurised hydraulic oil from another accumulator(4) whose pneumatic port is connected to pressure vessel. Hydraulic motor gives drive to engine shaft through overrunning clutch(11). Solenoid valve positions itself according to signals received from an electric contactor and microprocessor, basing on limit switches indicating position of pistons in accumulators. In its second position, solenoid valve interchanges hydraulic pump and motor connections and also its port connections between accumulators, to pump oil into second accumulator and to drive hydraulic motor from the other, maintaining continuity of the system.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051000 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "ISOBARIC PRESSURE MAINTENANCE IN 'EXPANDING AND CONTRACTING VESSEL' USING LEVER-ARMS ATTACHED WITH MECHANICAL ADVANTAGE EQUIPMENT"

(51) International classification	:B66D0003160000, A61M0005315000, A63B0021000000, A63B0021062000, B60G0021055000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The device shown in figure-1 named as "Isobaric pressure maintenance in 'expanding and contracting vessel' using lever-arms attached with mechanical advantage equipment" relates to physical-sciences. An 'expanding and contracting vessel (10)' is a pressure vessel "made of two close fitting cylinders sliding one over the other, and provided with seal rings and washers". In devices applying upward pushing force it is fixed along bottom side of a supporting means mounted on columns (50). In devices applying downward pushing force, it is supported on a pedestal (80) provided at ground level. Its movable part's closed face is connected through a piston-rod (90) provided along its vertical axis to outer resistance-arm (280) of a set of interconnected lever arms (250). Its effort arm (80) is attached to a load transmission chain (110) connected to driven part or load chain (110) of the means for mechanical advantage. The said means for mechanical advantage is of any one type among "a chain hoist (100) hanged from an elevated staging (60), an inverted chain hoist (100) anchored to through its bottom side hook to a pedestal (80), a load enhancement gear box (150), and a set of pulleys and chains (180)". The driving part or hand chain (120) of the means for mechanical advantage is attached with a long hand chain (120) which is passed through a pulley (310) held on an elevated staging (60) or a deep vertical pit (130) and left to hang freely. Objects (220) having sufficient weight are attached at lower end of the hand chain (120). Pulling force exerted by hanging loads (140) on hand chain (120) is transmitted through means for mechanical advantage attached to the lever arms (260) and also through the set of interconnected lever arms (100) to the resistance arm (90) attached to movable cylinder of the expanding and contracting vessel (40) to continuously maintain predefined pressure in it (40).

No. of Pages : 81 No. of Claims : 26

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051001 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FAKE NEWS DETECTION USING MACHINE LEARNING

(51) International classification :G06N0003040000, G06N0020000000, G06F0016953500, G06F0016330000, G06F0016350000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Abstract: The rapid spread of fake news has emerged as a significant global challenge, with profound social and economic repercussions across various sectors. This study presents a novel system for detecting fake news using machine learning and natural language processing (NLP) techniques. The proposed system leverages CountVectorization and TF-IDF Vectorization for text preprocessing, and employs a Bidirectional Long Short-Term Memory (LSTM) network combined with a Passive Aggressive Classifier for accurate classification of news articles. Additionally, the system features keyword search functionality and domain verification modules to enhance user interaction and credibility assessment. The keyword search module provides probability estimates for the presence of specific keywords in authentic news articles, while the domain verification module cross-references domain names against databases of known reputable and fake news sources. The user-friendly interface ensures accessibility, enabling users to submit articles, perform keyword searches, and verify domains efficiently. This comprehensive approach not only addresses the pressing issue of fake news detection but also demonstrates the effectiveness of combining machine learning and NLP techniques in creating reliable and scalable solutions for real-world applications.

No. of Pages : 10 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051002 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LANE DETECTION SYSTEM IN AUTONOMOUS VEHICLES USING MACHINE LEARNING TECHNIQUES

(51) International classification :G06N0003080000, G06N0003040000, G05D0001020000, G06T0007110000, H04L0001000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: The present invention relates to a lane detection system for autonomous vehicles that employs advanced machine learning techniques to enhance the accuracy and reliability of lane detection for ADAS. By integrating deep learning algorithms with traditional image processing methods, the system provides robust and accurate lane detection capabilities. The invention systematically reviews existing approaches and identifies the most effective techniques to create a state-of-the-art solution for lane detection in autonomous vehicles.

No. of Pages : 9 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051003 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A COMPREHENSIVE MODEL FOR EARLY DETECTION AND REAL-TIME MONITORING OF PARKINSON'S DISEASE USING MACHINE LEARNING TECHNIQUES

(51) International classification	:G06K0009620000, G16H0050700000, G16H0010600000, A61B0005000000, G16H0050200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract: The present invention relates to a comprehensive model for the early detection and real-time monitoring of Parkinson's Disease (PD) using advanced machine learning techniques. The model integrates Logistic Regression, Support Vector Machines (SVM), Extra Trees Classifier (ETC), and an ensemble method combining ETC, SVM, L1, L2 regularization, and AdaBoost to enhance diagnostic accuracy. Achieving an impressive 91% accuracy, this integrated approach significantly improves the reliability of early PD detection. The invention also features a real-time monitoring framework that continuously tracks patient data, providing dynamic insights and allowing for adaptive interventions tailored to the patient's evolving condition. To enhance data interpretability, the model incorporates t-Distributed Stochastic Neighbor Embedding (t-SNE) visualization, offering clear, actionable insights into complex patient data. Comparative analyses of algorithmic strengths, feature selection techniques, and parameter tuning strategies are employed to optimize model performance. This invention provides a valuable tool for clinicians, enabling early diagnosis and personalized management of Parkinson's Disease, and sets the stage for future innovations in personalized healthcare.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051004 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT-INFUSED ACCELEROMETER SENSORS FOR EARLY DETECTION AND CONTINUOUS MONITORING OF PARKINSON'S DISEASE

(51) International classification	:A61B0005000000, A61B0005110000, A61B0005160000, H04W0004380000, A61B0005145000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
Abstract A system for early detection and continuous monitoring of Parkinson's Disease using IoT-infused accelerometer sensors. The system comprises wearable devices with accelerometers to capture movement data, a microcontroller to process this data, and a wireless communication module to transmit the data to a cloud-based platform. The platform uses machine learning algorithms to analyze the data and provides real-time insights and alerts to healthcare providers and patients.

No. of Pages : 10 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051005 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ENHANCING IMAGE PLAGIARISM DETECTION THROUGH OPTICAL CHARACTER RECOGNITION (OCR) AND EDGE ANALYSIS

(51) International classification :G06Q0010100000, G06F0021100000, G06K0009620000, G06Q0050180000, H04N0001000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Abstract The present invention enhances plagiarism detection in documents by integrating Optical Character Recognition (OCR) and Edge Analysis techniques to address the oversight of textual content embedded in images. Traditional plagiarism detection tools often miss text within images, leading to incomplete reports and inadequate protection of intellectual property. This invention identifies images in documents, extracts text from these images using OCR, and employs Edge Analysis to improve OCR accuracy by delineating text boundaries. The extracted text, along with the document's textual content, is subjected to plagiarism detection algorithms to ensure comprehensive analysis. A detailed plagiarism report is generated, covering both textual and image-embedded content. This method significantly improves the scope and reliability of plagiarism detection, safeguarding the rights of content creators by ensuring thorough examination and accurate identification of all plagiarized content within multimedia documents.

No. of Pages : 10 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051032 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD ENABLING DETECTION OF FRESHNESS OF VEGETABLES

(51) International classification :H04N0005232000, G06F0003010000, G01N0021950000, G01N0033020000, A47J0031520000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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Filing Date :NA

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(57) Abstract :
Present invention discloses a system and method enabling detection of freshness of vegetables. The system (100) includes one or more sensors (102) configured to acquire one or more quality parameters associated with at least one vegetable (114) placed in the vicinity of the one or more sensors (102) by a user (118). An image capturing unit (104) captures images of the vegetable. Further, the system includes one or more control units (106) coupled to the one or more sensors, the image capturing unit and a communication module. The control unit receives data from the sensors and the image capturing unit and process the data to detect freshness of the vegetable and predict on-shelf lifetime of the vegetable. Further, the control unit informs the user about the score of freshness and the on-shelf lifetime and allow vendors to collect the vegetable from the user by acquiring a location of the user.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051033 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PRESERVING AGRICULTURAL PRODUCTS IN STORAGE CONDITIONS BASED ON REAL-TIME DATA

(51) International classification	:G06N0020000000, H04W0004029000, H04W0004700000, G01N0033020000, B65D0081200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure relates to a system for preserving agricultural products in storage conditions based on real-time data. The system (102) monitors and detects parameters of environment in real-time using sensors (118), parameters can include gas levels, spectral signatures, moisture level, flow rates, a density variation, structural integrity, biological molecules, and contamination concentrations. The system (102) analyses parameters of environment by analyzing module (212) using machine learning techniques, agricultural products can include seeds, grains, fruits, and vegetables. The system (102) processes parameters by processing module (212) to determine real-time data of environment, real-time data can include contaminants, foreign objects, mold growth, insect infestations, and anomalies can include clumping, bridging, and flow problems. The system (102) enables ventilation unit (124), refrigeration unit (126) by actuation module (216) to regulate storage conditions based on real-time data to preserve agricultural products within environment, where storage conditions pertains to temperature, humidity, and gas composition.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051034 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TRI-GATE FIN FIELD-EFFECT TRANSISTOR OPERATIONAL AMPLIFIER FACILITATING LOW SUPPLY VOLTAGE FOR BIOMEDICAL APPLICATIONS

(51) International classification	:H01L0029780000, H01L0029660000, H01L0029423000, H01L0027120000, H01L0029060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Present disclosure relates to a Tri-gate Fin Field-Effect Transistor (FinFET) operational amplifier (102) facilitating low supply voltage for biomedical applications. Trigate FinFET (102) includes a three-dimensional channel (202) formed by a fin (112) coupled to a substrate (110). Trigate FinFET (102) includes a source (104) and a drain terminal (106) configured to inject a current flow and collect the current flow, respectively, which is passed through the three-dimensional channel. Trigate FinFET (102) includes a gate electrode (108) configured to control a flow of electrons through the fin to create an electric field. Trigate FinFET (102) includes a high dielectric material gate oxide (114) configured to provide an insulation between the gate electrode (108) and the fin (112), and enable the current flow from three sides of the channel by reducing a short channel effects based on one or more parameters and by utilizing 5nm FinFET technology.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051035 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BINDER COMPOSITION AND METHOD THEREOF

(51) International classification :C04B0028040000, C04B0111000000, C04B0028080000, C04B0028020000, C04B0007153000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A binder composition and method thereof is provided. The invention involves alkali-activated cementitious binder utilizing a ternary blend of Ground Granulated Blast furnace Slag (GGBS), Flyash, and microsilica. The binder composition serves as a sustainable alternative to Ordinary Portland Cement (OPC) which offers enhanced durability, high strength properties, and reduced carbon footprint, making it an environmentally friendly and cost-effective solution for construction applications. The binder composition enhances the durability and impermeability of concrete structures, leading to increased longevity and reduced maintenance costs over time. The binder composition can be tailored for a wide range of construction applications, including precast elements, structural concrete, pavements, and other infrastructure projects, providing versatility and adaptability to diverse project requirements.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051098 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A HYBRID INVASIVE WEED AND GRASSHOPPER OPTIMIZATION MODEL FOR ENHANCING ROUTING EFFICIENCY IN FLYING AD HOC NETWORKS (FANETS)

(51) International classification	:H04W0084180000, H04W0040020000, H04L0045000000, H04L0045120000, G06F0030394000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses a hybrid optimization model combining Invasive Weed Optimization (IWO) and Grasshopper Optimization Algorithm (GOA) to enhance routing efficiency in Flying Ad Hoc Networks (FANETs). The model leverages the exploration capabilities of IWO and the exploitation strengths of GOA to dynamically optimize routing paths, reducing latency and improving network reliability. The invention includes methods for initializing candidate solutions, evaluating fitness, performing reproductive and dispersal operations, and refining solutions, resulting in a robust and efficient routing algorithm for FANETs.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/07/2024

(21) Application No.202441051106 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : PREDICTIVE ANALYSIS OF SOCIAL MEDIA AND CYBERCRIME EFFECTS ON HIGHER EDUCATION ACADEMIC PERFORMANCE USING MACHINE LEARNING

(51) International classification	:G06N0020000000, G06Q0050000000, G06K0009620000, G06Q0050200000, G06N0003080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Predictive Analysis of Social Media and Cybercrime Effects on Higher Education Academic Performance Using Machine Learning is the proposed invention. The proposed invention focuses on understanding the functions of Cybercrime Effects on Higher Education Academic Performance using algorithms of machine learning. The invention focuses on analyzing the parameters of Social Media Effects on Higher Education using algorithms of Machine Learning.

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/07/2024

(21) Application No.202441051114 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : TECHNOLOGICAL DEVELOPMENTS' DEEP IMPACT ON ORGANISATIONAL CHANGE MANAGEMENT

(51) International classification	:G06Q10/06, G06Q10/0631, G06Q10/10, G06Q30/02
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
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(57) Abstract :
Technological Developments' Deep Impact on Organisational Change Management ABSTRACT Change is now an integral element of the lives of all individuals as well as the actuality of businesses. Still, the maturity of businesses is brazened with the critical need for change in their day-to-day operations; still, their perspectives on change vary. The most important purpose of this exploration is to conduct an in-depth analysis of the influence that change and change operations have on the accomplishment of business pretensions and objects from the perspective of the association under disquisition. To be more specific, it addresses the reasons that induce change, which can be either internal or external influences; it identifies the different forms of change and organizational change; and it investigates the good and negative impacts of change. In addition to this, it'll exfoliate light on the ideas and operations of change operation with the backing of the numerous change models; it'll explain in depth how to apply an effective change operation, as well as the implicit benefits that change operation can give to the business. There's a possibility that any attempt to change will be met with resistance; thus, associations should concoct styles to reduce the position of resistance, which will eventually lead to a further flawless transition of change. It's the responsibility of leaders and directors to act as models for good change operations because they have a significant part to play in the process of enforcing the change. To successfully apply change enterprises, operations, and associations should make certain that any change plan is aligned with the pretensions and objects of the pot. This is supported by the colorful literature that is included in this invention, which affirms the connection between change, change operation, and the accomplishment of commercial pretensions and objects. When it comes to change operation, the four factors that make up the independent variables are the organizational end, transformational leadership, participation and communication, education and training, and organizational invention.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/07/2024

(21) Application No.202441051118 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : ROBA MULTIPLIER-DRIVEN FIR FILTER SYNTHESIS: UNITING EFFICIENCY AND SPEED FOR ENHANCED DIGITAL SIGNAL PROCESSING

(51) International classification :H03H0017020000, G06F0007499000, H03H0017060000, G06F0007533000, G06F0007523000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: The primary objective of this invention is to enhance the computational efficiency of Digital Signal Processing (DSP) systems, enabling faster and more energy-efficient operations. DSP systems are integral to modern electronics, serving crucial roles in applications ranging from audio and video processing to telecommunications and biomedical signal analysis. Traditional DSP computations can be slow and energy-intensive, necessitating the development of innovative approaches to improve performance without significantly compromising accuracy. This invention introduces a novel Rounding-Based Approximate (RoBA) multiplier designed for Finite Impulse Response (FIR) filters. The RoBA multiplier approximates the multiplication process by rounding numbers to the nearest whole number, simplifying the hardware implementation and reducing computational complexity. The key innovation of the RoBA multiplier lies in its ability to balance the trade-offs between computational speed, power consumption, and accuracy. By approximating multiplications, the RoBA multiplier reduces the number of logical operations required, leading to substantial savings in power and area. This approach is particularly beneficial in applications where speed and energy efficiency are prioritized over absolute precision. The multiplier identifies rounded numbers corresponding to the inputs and utilizes shift operations to compute intermediate products efficiently. The final approximation is achieved using a combination of barrel shifters, a Kogge-Stone adder, and a subtractor block, which together streamline the multiplication process. In addition to its innovative design, the RoBA multiplier is practically integrated into FIR filter architectures, demonstrating its direct application and performance benefits. FIR filters, preferred in DSP applications for their stability and linear phase response, can be resource-intensive to implement, especially in real-time processing scenarios. The proposed FIR filter design incorporating the RoBA multiplier shows marked improvements in key performance metrics, including reduced delay, lower power consumption, and decreased utilization of slice Look-Up Tables (LUTs) and bonded Input/Output Buffers (IOBs). Comparative analyses with traditional Vedic multipliers highlight the superior efficiency and speed of the RoBA multiplier, making it a promising solution for next-generation DSP systems. The comprehensive evaluation of the RoBA multiplier includes both theoretical analyses and empirical results, showcasing its potential to revolutionize DSP system design. The multiplier's architecture is optimized for VLSI implementation, ensuring scalability and adaptability across various DSP applications. The innovation not only addresses the critical need for energy-efficient computing but also sets the stage for further advancements in approximate computing techniques. This invention holds significant promise for enhancing the performance of DSP systems, paving the way for more efficient and responsive electronic devices.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051119 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AI BASED ROBOTIC SURGERY METHOD AND PROCESS

(51) International classification :A61B5/00, A61B34/30, G16H40/60
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT This necessitates treating patients with the least amount of doctor-patient contact possible. Robots may partially replace some medical jobs, therefore introducing them into the healthcare industry reduces the demand for medical professionals while also protecting frontline healthcare workers from coronavirus exposure. This invention's goal is to draw attention to the growing significance of robotic applications in the healthcare industry and related fields. In order to achieve this goal, a comprehensive analysis of the different robots used globally to confine and weaken the COVID-19 virus was carried out. The study's findings show that, in addition to its other benefits like cleaning and disinfection, robotics in the healthcare industry significantly reduces the spread of SARS-CoV-2 by preventing the virus from spreading between patients and healthcare personnel.

No. of Pages : 7 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051120 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTIVE MOBILE AD HOC NETWORKING IN DECLARATIVE POLICY

(51) International classification	:H04W0084180000, H04W0040100000, H04W0040240000, H04W0028020000, H04L0045480000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The nodes in MANETs are constrained with limited power for their vital operations since the connectivity of the network will go down as soon as node energy gets exhausted. Node failures due to power constraints cause system failures and hence minimize end-to-end connectivity in the network. And also mobility and congestion of the nodes lead to frequent link failures and packet losses affecting the QoS performance of the protocol. In this work, we used an effective proposed scheme, named as Hybrid optimization System (HOS), for efficient and routing and transmission wireless networks. As to enhance the network lifetime as well as for reliable and efficient communication in wireless sensor network the protocol employed should be energy efficient, which can be further achieved by using a good quality routing technique.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051121 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED PERSONALITY PREDICTION THROUGH CV ANALYSIS AND EMPLOYEE PERFORMANCE

(51) International classification	:G06Q0010060000, G06N0020000000, G06Q0010100000, G06N0005040000, G06N0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Personality Prediction through Resume Analysis is an innovative approach that uses artificial intelligence techniques. Through this approach identify the candidate's personality traits and behavioural patterns from their resumes. The predictive model that analyze the resumes and examining sentence structures, word choices using Natural language processing (NLP). The candidates personality prediction is analyzes by the examination. Results. This results can infer personality traits, such as openness conscientiousness, extroversion, agreeableness and emotional. And also predict the employee performance.

No. of Pages : 9 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051122 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FRUITS DISEASES & AMP; PREDICTION DETECTION USING CONVOLUTIONAL NEURAL NETWORK

(51) International classification :G06N0003080000, G06N0003040000, G06K0009620000, G06N0003020000, G06F0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The challenge of identifying and categorizing fruit illnesses is extremely complex because different fruit varieties can have noticeable differences in their features. We use a feature vector technique to handle these difficulties since we know it works well for managing this kind of variability. Every fruit goes through picture pre-processing to improve its representation before features are extracted. Together with the fruit samples, we establish a classified training dataset that we use to build a Convolutional Neural Network (CNN) modelSorting fruits into fresh and rotting categories is the main goal. Important phases of the suggested model's development include feature creation, classifier learning, and pre-processing. The model; effectiveness is then carefully assessed using statistical metrics including accuracy, recall, and precision. This all-encompassing method seeks to offer a reliable means of automating the differentiation between fresh and rotting fruits according to their visual attributes

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024

(21) Application No.202441051126 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ECO-FRIENDLY GEOPOLYMER CONCRETE USING INDUSTRIAL WASTE FOR SUSTAINABLE CONSTRUCTION

(51) International classification	:C04B0028000000, C04B0018140000, C04B0111000000, C04B0018080000, C04B0028040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention introduces eco-friendly geopolymer concrete, formulated using industrial waste materials, aimed at promoting sustainable construction practices. The geopolymer concrete is produced by recycling industrial by-products such as fly ash, slag, and silica fume, which serve as alternative binders to traditional Portland cement. This innovative concrete offers comparable strength and 270 durability while significantly reducing the carbon footprint associated with conventional concrete production. The use of industrial waste not only minimizes environmental impact but also contributes to the circular economy by repurposing waste materials. This sustainable construction material is suitable for various structural applications, providing an environmentally responsible solution for 275 modern building demands.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024

(21) Application No.202441051127 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DECENTRALIZED APPLICATION FOR SAFE CROWDFUNDING USING BLOCKCHAIN TECHNOLOGY

(51) International classification	:G06Q0020060000, G06Q0020380000, G06Q0040060000, G06Q0020360000, G06Q0020400000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Present invention deals with the web 2.0 or the modern Internet has come a long way in terms of technological advancements and milestones. The current trend of Web 3.0 has taken over with technologies like blockchain with the aim of decentralization making the Internet fairer and eliminating the need for centralized authorities. Web3 is conceptualized as giving ownership of data back to end-users through decentralization. Ethereum which is responsible for the creation of thousands of decentralized applications is the largest community-run decentralized network, and it powers the cryptocurrency known as ether (ETH). It is also known as the successor of Bitcoin. Ethereum allows for the creation of production-ready apps that are focused on transactions of money or value between two or more parties. Financial apps are applications that focus on building our cryptocurrency services and include subject areas such as payments, lending and borrowing, investments, crowdfunding, insurance, and portfolios. Using the Ethereum development environment we aim to create a web-based decentralized application that can help creators and inventors fund their ideas with crowd contributions. With the help of blockchain technology, Ethereum technology and frontend frameworks such as React and Next, we aim to develop a robust and complete web application. This application provides a safe crowdfunding platform to users with secure & verified online transactions.

No. of Pages : 22 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051128 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A COMPACT INSET COUPLED-FED TRIANGULAR PATCH ANTENNA FOR WIDEBAND 5G APPLICATIONS

(51) International classification	:H01Q0009040000, H01Q0001380000, H01Q0005378000, H01Q0001270000, H01Q0001240000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention presented here is an innovative for 5G applications, a compact inset coupled-fed high bandwidth triangle antenna is demonstrated. A large bandwidth can be achieved by combining the inset and coupling feeding with a triangle-shaped patch. With a VSWR of less than 2, the suggested antenna's working frequency of 3.6 GHz spans the frequency range needed for 5G applications, which is between 2.8 and 5.6 GHz. The primary characteristics of the suggested antenna are its smaller dimensions (20.5 × 13.5 mm2) and about 35% increased bandwidth. Significant factors that match the simulated results exactly are S11, radiation pattern, radiation efficiency, and peak gain in the proceeding of the proposed antenna. With the addition of two parallel rectangular strips with a triangular-shaped patch, the antenna is capable to achieve 40% reductions in size, 81.74% radiation efficiency, and 2.61 dB peak gain for the suggested antenna. With a center frequency of 3.6 GHz and a reflection coefficient of 28.6 dB, the fractional bandwidth is 66.67% (2.8 GHz to 5.6 GHz). With a smaller surface wave and an excellent omnidirectional radiation pattern, the antenna's inset coupling feeding arrangement makes it appropriate for Sub-GHz 5G applications.

No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051140 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AI-DRIVEN PATIENT MONITORING AND WARNING SYSTEM FOR DETECTING EMOTIONS, ABNORMAL MOVEMENTS AND BEHAVIOURS IN BED

(51) International classification :G06V40/20, G16H50/20, G16H50/20, G16H10/60, A61B5/00, G08B21/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
This invention details an advanced electronic patient monitoring device equipped with a high-resolution camera and integrated infrared capabilities for continuous patient video capture, even in low-light conditions. The device streams real-time footage to an AI algorithm that analyzes patient behavior, body language, facial expressions, and physiological signals to detect anomalies and generate severity-based alerts. Additionally, it includes a wearable glove with sensors for monitoring skin conductance, heart rate, blood oxygen saturation, and hand movements. The AI's analytical inferences and alerts are displayed on a centralized screen for quick healthcare staff response. The device operates on edge devices within the hospital network, interfacing with Electronic Health Records (EHR), and can be configured for remote home care. Infrared features include night vision and thermal imaging to detect patient distress, while a communication module sends alerts to healthcare staff's mobile devices, enabling remote access to real-time data and analytics. The user interface displays real-time data, prioritizes alerts, and allows historical data review, ensuring comprehensive patient monitoring and care.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051141 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : VANCOMYCIN ENCAPSULATED IN ALDEHYDE MODIFIED ALGINIC ACID NANOHYDROGEL TO IMPROVE ANTIBACTERIAL EFFICACY

(51) International classification	:A61K0009060000, A61K0009510000, A61K0047360000, A61K0009160000, A61K0009000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The current invention outlines a method for synthesizing vancomycin encapsulated in aldehyde modified alginic acid nanohydrogel which aimed to improve the aqueous solubility, biocompatibility, and antibacterial effectiveness. The method comprises steps as 75 mg of aldehyde modified alginic acid Na-salt was dissolved in 25 ml distilled water. 5 ml of 0.334% of calcium chloride was added dropwise with stirring continued for 45 min at room temperature to make aldehyde modified alginic acid nanohydrogel. Finally, 0.5 ml of vancomycin (5 mg/ml) was added to aldehyde modified alginic acid nanohydrogel and sonicated for 15 mins to obtain the final product of vancomycin encapsulated in aldehyde modified alginic acid nanohydrogel. The encapsulation capacity was calculated and found to be 67%. The product showed higher antibacterial activity and sustained release profile.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051144 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ECO-FRIENDLY HEAT EXCHANGER CONTROL SYSTEM FOR ENHANCED REACTOR PERFORMANCE THROUGH CYCLOCONVERTER TECHNOLOGY AND METHOD EMPLOYED THEREOF

(51) International classification :F24F0013200000, H04L0001180000, F28F0027000000, F24F0011770000, F28F0013000000
(86) International Application No :NA
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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards eco-friendly heat exchanger control system for enhanced reactor performance through cycloconverter technology and method employed thereof. An eco-friendly heat exchanger control system comprising a cycloconverter control unit that receives and manages data from input sensors on a real-time basis and send to eco heat exchanger interface. The eco heat exchanger interface transmits data concerning the adjustment to at least one heat exchange component. A reactor efficiency regulator that monitors and adjusts operation of the heat exchange components and sends to thermal energy optimizer. Finally, the thermal energy optimizer that analyzes and optimizes energy flow within the system. FIG. 1

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(22) Date of filing of Application :04/07/2024

(21) Application No.202441051151 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : OBJECT DETECTION USING MACHINE LEARNING TO AVOID ACCIDENT

(51) International classification	:G06K0009620000, G06N0003080000, G06N0003040000, G05D0001020000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The main aim of Object Detection is to detect all the objects that are present in that particular image. The important thing in object detection is to make system detect the object by making it to learn how to do that which is nothing but training the dataset and allowing system to detect the object by itself. The searching or recognition process in a real time scenario is so tough. So far, no effective solution has been found The Objective of our project is to detect of objects using You Only Look Once (YOLO) approach. This method has several advantages as compared to other object detection algorithms. In other algorithms like Convolutional Neural Network, Fast Convolutional Neural Network the algorithm will not look at the image completely but in YOLO the algorithm looks the image completely by predicting the bounding boxes using convolutional network and the class probabilities for these boxes and detects the image faster as compared to other algorithms.The robotic vehicle is operated based on the input from algorithm output.

No. of Pages : 10 No. of Claims : 5

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(22) Date of filing of Application :04/07/2024
(21) Application No.202441051152 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ON THE COORDINATION OF CHARGINGDEMAND OF ELECTRIC VEHICLES IN ANETWORK OF DYNAMIC WIRELESSCHARGING SYSTEM

(51) International classification :H02J7/00, B60L53/00, G06Q50/06, B60L55/00, H02J50/10, B60L53/12, B60L3/00, B60L58/10
(86) International Application No :NA
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Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Battery storage forms the most important part of any electric vehicle (EV) as it stores the necessary energy for the operation of EV. So, in order to extract the maximum o/p of a battery & to ensure its Power transfer it is necessary that a efficient battery management system exist is the same .It monitors the Parameters, determine Hardware and software and provide necessary services to ensure safe operation of battery. The proposed system only monitor the battery and Power transfer but also protect it to avoid accidents from occurring. The proposed model has following functions current, voltage measurement, , protection, battery Fault detection, liquid crystal display (LCD) etc. Electric vehicles (EVs) are automobiles powered by one or more electric motors, which draw energy from rechargeable batteries instead of relying solely on internal combustion engines (ICEs) that consume fossil fuels. It monitors and controls the operation of the battery pack, ensuring its optimal performance, safety, and longevity. It indicates how much charge is available in the battery at a given time, allowing users to estimate the remaining range or usage time before recharging is required.

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(19) INDIA
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(21) Application No.202441051153 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT BASED PREGNANCY WOMEN HEALTH MONITORING SYSTEM FOR PRENATAL CARE FOETAL MONITORING

(51) International classification	:A61B0005000000, A61B0005145500, A61B0005024000, A61B0005020500, H04L0067025000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Abstract The integration of Internet of Things (IoT) technology into women's pregnancy monitoring has the potential to revolutionize prenatal care. This project utilizes a comprehensive approach, incorporating Arduino-based devices such as DHT11 for temperature, pulse rate monitoring, pulse oximetry, pressure sensor, and MEMS sensor. The heart of the system lies in the IoT platform, specifically NodeMCU, which enables real-time data transmission and remote monitoring. This paper presents a novel solution to enhance the precision and efficiency of pregnancy monitoring through a connected ecosystem of sensors and IoT technology.

No. of Pages : 9 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051159 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A METHOD FOR BREAST CANCER CLASSIFICATION

(51) International classification	:G06N0003080000, G06K0009620000, G06N0003040000, A61B0005000000, G06T0007000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses a novel approach for improving the accuracy and 5 reliability of breast cancer image classification by integrating Convolutional Neural Network (CNN) (102) and Restricted Boltzmann Machine (RBM) (104) techniques. Traditional methods for classifying breast cancer images often encounter challenges related to feature extraction and model robustness. By combining CNN's (102) ability to learn hierarchical features from raw image data with RBM's (104) capability to 10 capture higher-order dependencies among features, the proposed system achieves enhanced classification performance. Pre-processing techniques are employed to extract relevant features from breast cancer images, which are then fed into a CNN (102) for initial classification. Subsequently, RBM (104) is utilized to refine the classification results by capturing intricate relationships among features. The fusion 15 of CNN and RBM (100) outputs result in improved accuracy and reliability of breast cancer image classification, paving the way for more effective diagnosis and treatment planning in clinical settings.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051161 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A NOVEL 2-(2-OXO-2H-CHROME-3-YL)2-OXO-2H-CHROME-3-YL) PROPANOIC ACID AND THE PROCESS FOR PREPARATION OF THE SAME

(51) International classification	:C07C0051120000, C07C0053080000, C07C0045640000, C01D0015020000, C07C0067140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards the novel 2-(2-Oxo-2H-chrome-3-yl)2-Oxo-2H-chrome-3-yl)Propanoic acid and the process for preparation of the same. The process comprising steps of reacting salicylaldehyde with dihydrofuran-2,5-dione in the presence of triethylamine at a temperature of 100°C for 1 hour to yield 2-(2-oxo-2H-chromen-3-yl)acetic acid, alkylating the obtained 2-(2-oxo-2H-chromen-3-yl)acetic acid with methyl iodide in dimethylformamide (DMF) in the presence of potassium carbonate for 12 hours; hydrolyzing the resulting methyl 2-(2-oxo-2H-chromen-3-yl)propanoate with lithium hydroxide monohydrate in a mixture of methanol, tetrahydrofuran, and water at room temperature for 2 hours; isolating 2-(2-oxo-2H-chromen-3-yl)propanoic acid as a white solid with a yield of 58%. FIG. 1

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/07/2024

(21) Application No.202441051162 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : STONE PICKER CUM CLOD BREAKER

(51) International classification :A01B0043000000, H04L0067500000, B60K0017280000, G01N0033240000, A01D0017060000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

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Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :
The proposed system is to increase the efficiency of stone picker used in agriculture field to remove all the undesirable stone from the field to make the soil favorable for crops to grow and increase the productivity. The goal is to use the machine in all types of soil including wet soil. The proposed system is specialized with a clod breaker which make the equipment more efficient in wet soil by breaking the soil clod and removing the stone alone. The clod breaker is a device made up of three rubber sheet that are attached to a rotating shaft which is driven by PTO (Power Take Off) of tractor and the shaft located just above the digging plate which break the soil clod by the action of impact force. The conveyer made up of iron rods spaced sequentially are used to separate the soil and stone. The soil particle moves down while travelling in between the gaps of the conveyer. The conveyer is supported by two shafts in which one is a driver shaft and the other is the driven. The driver shaft is driven by the PTO of tractor. The proposed system is operated with the power of tractor and it doesn't need any additional power. The stones that are separated is collected in a hopper located at the rear of the equipment and it is attached with a hydraulic push mechanism which enable the movement of the hopper up and down to empty the hopper after certain distance of operation. The proposed system reduces the amount of dust storm created while operating in dry land and thus it also reduces the ill-effects that may cause by this dust storm.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
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(21) Application No.202441051172 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A METHOD FOR CHATGPT LANGCHAIN-BASED DOCUMENT PROCESSING

(51) International classification	:G10L0015183000, G06F0040216000, G06F0016360000, G06F0008730000, G06F0040440000
(86) International Application No Filing Date	:NA :NA
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(57) Abstract :
Disclosed herein is a secure ChatGPT langchain-based document processing method (100). The method (100) begins with input preparation (102), acquiring documents and user queries. Language model processing (104) utilizes language models to extract pertinent information meticulously. Question input and answer extraction (106) ensure precise answers to user queries. Langchain 10 integration (108) fortifies data security, while blockchain encryption and security measures (110) enhance impregnable data storage. Verification and output (112) affirm accuracy, and documentation and logging (114) capture the process. User interaction (116) is facilitated through an intuitive interface. Continuous improvement (118) commits to perpetual enhancement based on 15 user feedback and consistent updates.

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(19) INDIA
(22) Date of filing of Application :04/07/2024

(21) Application No.202441051186 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN OF A NORMALIZED-BOOSTING MODEL FOR SALE PREDICTION IN BIG MART

(51) International classification	:G06Q0030060000, G06Q0010060000, G06Q0030020000, G06F0016250000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Demand and supply are the most important features in seller and buyer concept. To develop a plan for selling things organizations should predict accurately the needs of customers or demand. Various stores like Big Mart should predict the sales and modify the business strategy accordingly based on performance projected. The presented paper introduces a novel normalized boosting method for demand forecasting for firms like Big Mart. Marketplace model is maintained by the company where the shops sell multiple products in multiple places across the country at the same point of time which is handled by business model for firms like Big Mart. The approach presented an algorithm named boosting model, this exhibits better results with reliability when compared among other learning methods. Important roles like data transformation, selection of Feature, and exploration of data will take place in the algorithm. The proposed methodology is widely employed on Big-Mart Sales data. Here, data discovery, processing, and required amount of relevant data are fetched for the forecasting of precise future results.

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(43) Publication Date : 12/07/2024

(54) Title of the invention : CROP HEALTH MONITORING USING IOT SENSORS

(51) International classification :G06Q0050020000, G06N0020000000, G06Q0010040000, G01N0033240000, A01G0025160000
(86) International Application No :NA
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(57) Abstract :
Farmers of today face the problem of decreased crop yield. One of the main things a farmer can do to increase crop yield is to select the correct crop. Not performing analyses like metrological factors checking and soil analysis and having less knowledge about soil fertility leads to less crop yield. Knowing the above details will boost crop production. Farmers face considerable challenges in selecting the right crop since the climate does not follow a pattern, and the farmers need to gain basic knowledge regarding crop selection and modern farming methods. When farmers select the same crop every season, the soil will lose fertility, leading to low crop yield. Machine learning (ML) algorithms and IoT devices are used in the proposed study to make a system that can perform accurate, practical and valuable decision-making. The farmer can achieve maximal yield with the help of the system. This system will suggest to the farmer how to select the right crop. Compared to the laboratory testing performed in the olden days, the proposed regression model is reliable, where manual errors can be avoided. In the area of agriculture, the main priority is the selection of the correct crop. As a contribution to agriculture, Smart Crop Selection model based on machine learning and IoT was developed. Metrological information and soil factors are the data used for our system. Potassium, CO2, EC, temperature, soil's humidity, rainfall, nitrogen, phosphorus and pH value are the factors used by the system for crop selection. Only some of these factors are employed by the existing system, making it inefficient compared to our proposed model. Our proposed system sends real-time sensory data to analyze the various factors.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024

(21) Application No.202441051211 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FORCED COOLING SYSTEM FOR NEMA 17 STEPPER MOTORS IN 3D PRINTERS AND METHOD THEREOF

(51) International classification	:H05K0007200000, G06F0001200000, A61N0005060000, B01D0046000000, F01P0001000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Forced Cooling System for NEMA 17 Stepper Motors in 3D Printers and Method Thereof The present invention discloses a forced cooling system for NEMA 17 stepper motors used in 3D printers and method thereof. The system features a cooling chamber comprised of a base and a lid, which form a sealed unit connected by a hinge and secured with nuts and bolts. The base and lid contain helical airflow paths, allowing for efficient heat dissipation by directing forced air from a cooling fan through the chamber. The present invention ensures optimal airflow over the motor's surface, effectively managing heat and preventing overheating. This cooling mechanism enhances motor performance, reliability, and longevity while fitting compactly within the limited spaces typical of 3D printers. By overcoming the limitations of existing natural and fan-based cooling methods, the invention provides a more effective and maintenance-friendly solution, ultimately improving the safety and efficiency of 3D printing operations.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051212 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN AUTOMATIC WINDING SYSTEM FOR FILAMENT EXTRUSION

(51) International classification :B65H0067060000, G04B0005020000, B62B0009000000, G04B0005160000, B21D0001140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT An automatic winding system for filament extrusion The invention relates to an automatic winder with an existing filament puller, enabling simultaneous winding during the pulling operation. This integration leverages the current power and control systems, eliminating the need for additional machinery and reducing setup complexity. The use of a pull-belt system for power transmission ensures synchronized operations, leading to consistent tension and precise winding patterns. FIG.2

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051213 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DUAL FAN COOLING SYSTEM FOR REDUCING WARPAGE IN FUSED FILAMENT FABRICATED PARTS AND METHOD THEREOF

(51) International classification	:B29C0064118000, B33Y0030000000, B33Y0010000000, H01L0023467000, B29C0064106000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT DUAL FAN COOLING SYSTEM FOR REDUCING WARPAGE IN FUSED FILAMENT FABRICATED PARTS AND METHOD THEREOF The present invention discloses a dual fan cooling system and method to enhance the cooling efficiency of Fused Deposition Modeling (FDM) printers. The system comprises a modular cooling fan holder and a circular base. The fan holder accommodates at least two fans and securely attaches to the printer's extruder, while the circular base features inlets and outlets for optimal airflow distribution. The dual fan configuration ensures uniform cooling across the print surface, reducing warpage, improving layer adhesion, and enhancing surface quality. The system is adaptable to various printer models and can dynamically adjust airflow based on real-time conditions, using sensors and speed controllers. This design simplifies integration with existing FDM setups, providing a cost-effective solution to improve print quality, reduce material wastage, and increase production efficiency, making it ideal for achieving high-quality prints with complex geometries and overhangs.

No. of Pages : 22 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051214 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR UNLOCKING SMART LOCKS

(51) International classification :G06F0021320000, H04W0012060000, H04L0012280000, H04W0012080000, G16H0020130000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A system and method for unlocking smart locks Unlocking smart locks with the advancement of a system. These systems utilize image recognition-based methods to provide a secure and efficient method for accessing smart locks. By using facial recognition technology, users can easily unlock their smart locks without the need for physical keys.

No. of Pages : 18 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/07/2024

(21) Application No.202441051235 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : SELF-SUSTAINING ELECTRICITY GENERATION VIA REVOLVING GATE WITH ESP8266 INTEGRATION

(51) International classification :H02J7/00, H02J7/32, G16Y10/35, F03G7/08, H02K7/18
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
The revolving gate system is a groundbreaking approach to generating electricity that combines renewable energy sources with innovative technology. This system harnesses the kinetic energy produced by the gate's movement to efficiently generate electricity, further enhanced by the integration of Internet of Things (IoT) technology enabling remote control and monitoring. The core concept lies in the conversion of mechanical energy into electrical energy through the rotation of the gate, driving a generator, and offering a sustainable and eco-friendly solution for decentralized power generation. The system is versatile and scalable, making it adaptable to various environments and requirements. It can be integrated with LED lighting systems, switching on lights based on ambient light levels, and regulating mobile charging stations. The revolving gate system has the potential to significantly reduce energy consumption and environmental pollution while offering a sustainable and eco-friendly alternative to traditional power sources. As the world's energy needs continue to grow, this innovative technology offers a promising solution to meet these demands while reducing our reliance on fossil fuels and promoting a more sustainable future.

No. of Pages : 28 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024

(21) Application No.202441051242 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FRAUD DETECTION IN HEALTH INSURANCE: AN ENSEMBLE LEARNING PERSPECTIVE

(51) International classification	:G06Q0040080000, G06N0003040000, G06N0020200000, G06Q0020400000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a system and method for detecting fraud in health insurance claims using ensemble learning techniques. By integrating multiple machine learning models, including decision trees, random forests, gradient boosting machines, and neural networks, the system enhances the accuracy and robustness of fraud detection. Key components include modules for data collection, preprocessing, feature extraction, model training, and ensemble learning. The system analyzes health insurance claims in real-time, generating alerts for suspicious claims and providing detailed reports for further investigation. This innovative approach aims to reduce financial losses and improve the integrity of the health insurance industry.

No. of Pages : 17 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024

(21) Application No.202441051245 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT IN FOOD AND HEALTHCARE: A CROSS-DISCIPLINARY APPROACH TO SMART NUTRITION MONITORING

(51) International classification	:G16H0020600000, G06N0020000000, G16H0020300000, A61B0005000000, H04L0067120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides an advanced IoT-based system for smart nutrition monitoring, integrating wearable devices, smart kitchen appliances, data analytics, and a user-friendly mobile application to deliver real-time dietary insights, health monitoring, and personalized nutritional recommendations. By automating data collection from physical activity, biometrics, and food consumption, and processing this data through advanced machine learning algorithms, the system offers accurate and holistic health and nutrition management. Additionally, the system supports integration with medical devices for comprehensive health monitoring and includes social and community features to enhance user engagement and adherence to dietary goals.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051246 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SMART TOILET SYSTEM

(51) International classification :A61L0002100000, E03D0009000000, A47K0011020000, E03D0005100000, A47K0013300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
ABSTRACT A SMART TOILET SYSTEM The present invention discloses a smart toilet system (10) for reducing the usage of water and increasing the hygiene environment in toilets. The smart toilet system comprises a proximity or motion sensor is configured to detect the presence of the user and to indicate when the user has finished the waste disposal process. The rail conveyor system (20) is configured to dispense the biodegradable plastic bag in horizontal direction for collecting the human waste under the seat of the user. The heating chamber is configured to automatically seal the waste collected biodegradable plastic bags within the bowl by using the nichrome wire. The vacuum pipeline system (35) is connected with the heating chamber/bowl which is configured to transport the waste sealed bags to the trash bin. The UV disinfection module (50) is having the UV-C light sources which is strategically positioned within the toilet cubicle to disinfect surfaces and to destroy bacteria/viruses. The hot air drying module (55) is configured to dry the surfaces thoroughly for minimizing the risk of bacterial growth and providing comfortable experience to the next users. The control system is configured to execute the operations in the chronological order. The present invention (10) will reduce the water usage and will increase the hygiene environment in an effective manner. Fig 1

No. of Pages : 27 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051247 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A HAPNAN WHEELCHAIR SYSTEM FOR PHYSICALLY CHALLENGED PEOPLE

(51) International classification :A61B0005000000, A61G0005100000, A61B0005145500, A61G0007100000, A61G0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A HAPNAN WHEELCHAIR SYSTEM FOR PHYSICALLY CHALLENGED PEOPLE The present invention discloses a hapnan wheelchair system (50) for physically challenged people to reduce the efforts for completing the routine works. The wheelchair system (50) comprises a wheelchair comprises at least one pair of front and rear wheels. The wheels operable by the power source for supplying the necessary energy and rotary motion. The lifting assembly (1) can be positioned at any location of ceiling which is configured to lift and place the physically challenged person from wheelchair to other areas. The metal skirt (13) is configured to prevent the accidents/injuries due to cloths getting tangled in the wheels. The BP machine (18) is configured to check and maintain the blood pressure flow of physically challenged person. The pulse oximeter (19) is configured to calculate the percentage of oxygen bound haemoglobin in the blood. The medical display is configured to indicate the measured health parameters in digital form. The hip belt (17) is made of nano technology which comprises plurality of sensors or the like, for sensing the feelings of the person from the brain to the other parts of the body. The robotic hand (16) is configured to perform the work of the person with the help of haptic technology. The present invention will help to complete the works of the physically challenged person in an effective manner. Fig 1

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051248 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FOLDABLE AND MOVABLE CROSS LOCK LINK FOR PORTABLE DIGITAL DEVICES

(51) International classification :A61B0005000000, G01N0033543000, F16M0011100000, B23P0019040000, H04B0007060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The adjustable folding bracket stand (100) as claimed in claim 1, wherein, the left base structure (101) and right base structure (102), the cross lock link (103-a) and (103-b), the lock pins (104-a) and (104-b), made of aluminium alloy, is applicable for supporting digital devices which include laptops, computer tablets, and mobile phones on a table in an inclined vertical position for long durations of time

No. of Pages : 12 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

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(21) Application No.202441051255 A

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(54) Title of the invention : IOT BASED TECHNOLOGY FOR SAFEGUARDING MINERS

(51) International classification :G01N0033000000, A61B0005000000, G08B0021120000, C12M0001360000, H04W0004380000

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(57) Abstract :
The present invention relates to a system designed to enhance safety in underground mining environments through the integration of IoT-based technologies. The system includes a network of sensors deployed to monitor critical parameters such as gas levels, humidity, and environmental conditions in real-time. Data collected by these sensors is processed by a central unit capable of analyzing safety conditions and triggering visual and auditory indicators for miners and supervisors. The proposed system will utilize components such as Node MCU, LEDs, LCD display, buzzer, humidity sensor, gas sensors, and integrate them with the Blynk IoT platform for Android and web applications. Furthermore, the system incorporates a Blynk IoT platform for remote monitoring and management, enabling proactive decision-making and rapid response capabilities to mitigate risks and prevent accidents. This innovative approach aims to significantly improve safety protocols, protect personnel, and optimize operational efficiency in challenging underground mining settings.

No. of Pages : 20 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051265 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HYBRID MULTIFERROIC CALAMITIC (ROD SHAPED) LIQUID CRYSTAL SOLAR CELL

(51) International classification	:C09K0019540000, H01G0009200000, C09K0019020000, C09K0019320000, C09K0019040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention provides hybrid multiferroic calamitic liquid crystal solar cell by incorporating lyotropic room temperature ferroelectric calamitic liquid crystal electrolyte composition for improving power conversion efficiency of the solar cell. Hybrid multiferroic calamitic liquid crystal (HMLC) solar cell comprises a first layer of n-type inorganic semiconductor deposited on conductive fluorine doped tin oxide (FTO) glass-electrode 101, a second thin layer of light absorbing inorganic sensitizer 103; wherein the inorganic sensitizer strained titania FTO glass-electrode acts as a light absorbing electrode, a third layer of lyotropic room temperature ferroelectric discotic liquid crystal electrolyte 104 applied between the light absorbing electrode and a light reflecting electrode and a fourth layer of reflective platinum deposited FTO glass-electrode 105 configured to act as the light reflecting electrode. The components between the two electrodes act as multiferroic solid-liquid crystal composite. The direction of movement of electrons between the electrodes can be altered through the polarization direction of multiferroic solid-liquid crystal composite. The lyotropic room temperature ferroelectric calamitic liquid crystal electrolyte composition comprises of an achiral calamitic molecule (4-cyano-4'-pentylbiphenyl) (5CB) and bis(trifluoromethane)sulphonimide lithium salt Li[CF3SO2]2N in tert-butyl pyridine.

No. of Pages : 53 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051298 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FUNCTIONALIZED SILICA NANOFORMULATION FOR ORGANORUTHENIUM COMPLEX DELIVERY AND A PROCESS FOR ITS PREPARATION

(51) International classification	:A61K0009510000, C23C0016180000, A61P0035000000, C08K0003360000, H01L0021285000
(86) International Application No Filing Date	:NA :NA
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(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT FUNCTIONALIZED SILICA NANOFORMULATION FOR ORGANORUTHENIUM COMPLEX DELIVERY AND A PROCESS FOR ITS PREPARATION The present disclosure relates to a functionalized silica nanoformulation comprising polymerized 10,12-pentacosadynoic acid (PCDA) coated organoruthenium complex loaded silica nanoparticles and a process for its preparation. The functionalized silica nanoformulation is fluorogenic, pH responsive and provides targeted delivery of organoruthenium complex to cancer cells. The process for the preparation of functionalized silica nanoformulation is simple, efficient and economic.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
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(21) Application No.202441051299 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM FOR AUTONOMOUS VEHICLE ROAD CONDITION IDENTIFICATION AND DRIVING MODE ADJUSTMENT

(51) International classification	:G06N0003040000, G06N0003080000, G05D0001020000, G05D0001000000, B60W0030180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A SYSTEM FOR AUTONOMOUS VEHICLE ROAD CONDITION IDENTIFICATION AND DRIVING MODE ADJUSTMENT The present disclosure discloses a system(100) and a method(200) for autonomous vehicle road condition identification and driving mode adjustment. The system(100) comprises an image capturing device(102) to capture an image of a road from a camera in real-time; a processing module(104) to process said captured image to generate a standardized image by means of a set of preprocessing rules; a classification module(106) to classify said standardized image into images of road conditions and generate an outcome; a driving mode adjustment module(108) to select an appropriate driving mode of a vehicle; a model training module (108a) to refine the deep learning model's accuracy by means of a set of training and validation rules; a safety optimization module (108b) utilize deep learning model and to monitor and adapt the vehicle's driving mode in accordance with real-time road conditions and external environmental factors.

No. of Pages : 24 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051300 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR A BIOMETRIC-ASSISTED ELECTRONIC HEALTH RECORD

(51) International classification	:G16H0010600000, G06Q0010100000, G06N0003040000, G16H0010650000, G06Q0040080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A SYSTEM AND A METHOD FOR A BIOMETRIC-ASSISTED ELECTRONIC HEALTH RECORD The present disclosure discloses a system (100) and a method (200) biometric-assisted electronic health record. The cloud-based server (102) implements an application-based platform (104) configured to maintain cloud-based medical history records of a patient in healthcare, wherein the cloud-based server (102) facilitates real-time data exchange. The plurality of computing devices (106) located at various hospital locations comprises a login module (108) having a user interface (108a) for successful authentication and validation of login credentials of a user, or to register a new user during a first attempt; an information extractor module (110) receives input data from the user, further configured to crawl and extract medical history records associated with the input data; a report generator module (112) medical history records and generate a report containing data regarding healthcare information of the user.

No. of Pages : 38 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051301 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR MANAGING OWNERSHIP OF PHYSICAL ASSETS USING BLOCK-CHAIN TECHNOLOGY AND NON-FUNGIBLE TOKENS

(51) International classification :H04L0009320000, G06Q0020380000, G06Q0010060000, H04W0074000000, G06Q0030060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SYSTEM AND METHOD FOR MANAGING OWNERSHIP OF PHYSICAL ASSETS USING BLOCK-CHAIN TECHNOLOGY AND NON-FUNGIBLE TOKENS The present disclosure envisages a system (100) and a method (800) for managing ownership of physical assets using block-chain technology and non-fungible tokens (NFTs). The system (100) comprises a generating module (106), a linking module (108), a recording module (110), and an enabling module (112). The generating module (106) generates a digital certificate of authenticity in the form of a non-fungible tokens for each physical asset. The linking module (108) securely links each digital certificate to a corresponding physical asset through unique identifiers. The recording module (110) records the ownership details of each digital certificate on a block-chain network to ensure immutability and transparency. The enabling module (112) enables the transfer of the ownership of the physical asset by transferring the corresponding NFT on the block-chain network.

No. of Pages : 29 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051323 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CHEMICALLY TREATED MANGO DRIED LEAVES FIBER AND GLASS FIBER REINFORCED POLYESTER HYBRID COMPOSITE

(51) International classification :C08J0005080000, B29C0070300000, C08K0007140000, C08K0003340000, D21F0011000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT CHEMICALLY TREATED MANGO DRIED LEAVES FIBER AND GLASS FIBER REINFORCED POLYESTER HYBRID COMPOSITE The invention relates to method for fabricating hybrid composite material using chemically treated mango dry leaves (1) and glass fiber reinforcement. Mango dry leaves treated with solution of 5 wt.% NaOH, NaCl, and CaCO3 in distilled water (2), then washed, dried (3), and ground (4) to 90-100 microns, creating a filler (5). 12.5 wt.% of dried-leaves filler mixed with 89.2 wt.% polyester resin, 2.3 wt.% accelerator, catalyst (6). Composite (9) formed by layering 24 cm x 24 cm woven glass fiber sheets (7) with the mixture (8) between layers, compressed with 35 kg weight, cured at room temperature for 24 hours, and post-cured at 120 °C for 16 hours. The resulting material exhibits tensile strength of 217.25 MPa, Young's modulus of 15.75 GPa, impact strength of 202.67 kJ/m², and density of 2175 kg/m³. This approach combines natural and synthetic materials to create composite with enhanced mechanical properties for automotive applications. FIG. 1

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051335 A
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(54) Title of the invention : LIGHTWEIGHT POLYESTER HYBRID COMPOSITE REINFORCED WITH CHEMICALLY TREATED STERCULIA FOETIDA, STEEL PARTICLES, AND S-GLASS FABRICS

(51) International classification :A61K0036185000, C08J0009000000, C08J0003220000, B29L0031300000, C08K0003220000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT LIGHTWEIGHT POLYESTER HYBRID COMPOSITE REINFORCED WITH CHEMICALLY TREATED STERCULIA FOETIDA, STEEL PARTICLES, AND S-GLASS FABRICS The invention relates to method for fabricating polyester hybrid composite reinforced with Sterculia Foetida fillers, mild steel particles, and S-glass fabrics. The process involves chemically treating Sterculia Foetida shells (1) through steps including washing (2), drying (3), and immersion in HNO3, NaHCO3, and CaCO3 solutions (4) (5) (6). The treated shells are ground into filler particles (8) and mixed with mild steel particles (9) in polyester resin. A curing agent is added, and mixture layered with chopped strand mat S-glass fabric (11) in wooden mold. The composite compressed with 28 kg, cured, and post-cured in heating furnace at 100 °C for 8 hours. The resulting composite (14) exhibits 1214 kg/m³ density, 275.67 MPa tensile strength, 11.27 GPa flexural modulus, 31.25 kJ/m² impact strength, and 395 °C degradation temperature. This fabrication method ensures uniform distribution of fillers within polyester matrix, creating lightweight composite suitable for structural applications. FIG. 1 and FIG. 2

No. of Pages : 14 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/07/2024

(21) Application No.202441051336 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : SORPTION BASED SOLAR DESALINATION SYSTEM WITHTHERMOELECTRIC DEHUMIDIFICATION UNIT.

(51) International classification :B01D1/14, B01D1/22, C02F1/08, C02F1/10, C02F1/14, C02F1/18, F24F3/14
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
Title: Sorption Based Solar Desalination System with Thermoelectric Dehumidification Unit. A sorption based solar desalination system with thermoelectric dehumidification unit comprising of a single bed sorption desalination system and a humidification-dehumidification unit, wherein cooling fins are attached to the cold side of the thermoelectric coolers to create a dehumidifier unit adapted to produce desalinated water is disclosed. Said system comprises of an evaporator (1), sorption bed (2) or thermal compressor, and an air-cooled condenser (3), wherein the thermoelectric dehumidification unit is adapted to operate at an elevated evaporator temperature (35°C to 60°C) by connecting the hot side of the thermoelectric dehumidifier to the evaporator unit of adsorption desalination system, therein fundamentally altering the character of the adsorption desalination cycle. FIG.1

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(22) Date of filing of Application :04/07/2024
(21) Application No.202441051355 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD AND APPARATUS FOR REAL-TIME THERMAL IMAGING IN MANUFACTURING PROCESSES

(51) International classification	:H04N0005330000, G06N0020000000, G01J0005000000, G01N0025720000, G01J0005020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a method and apparatus for real-time thermal imaging in manufacturing processes. The invention includes a high-resolution thermal imaging camera equipped with an array of infrared sensors to capture thermal images at high frame rates, ensuring precise and continuous monitoring of temperature variations. These images are transmitted to a data processing unit that utilizes image processing and machine learning techniques to analyze the data, identify temperature anomalies, and generate real-time thermal maps. A high-resolution display interface provides operators with intuitive visualizations of the thermal data, facilitating prompt and informed decision-making.

No. of Pages : 20 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051378 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : POLYESTER HYBRID COMPOSITE REINFORCED WITH CHEMICALLY TREATED SUGARCANE BAGASSE, SILICON CARBIDE, AND GLASS FABRICS

(51) International classification :D21H0011120000, C03C0025400000, C08J0005080000, C08K0009020000, B29K0309080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT POLYESTER HYBRID COMPOSITE REINFORCED WITH CHEMICALLY TREATED SUGARCANE BAGASSE, SILICON CARBIDE, AND GLASS FABRICS The invention relates to a method for fabricating a polyester hybrid composite reinforced with sugarcane bagasse, silicon carbide fillers, and glass fabrics. The process involves chemically treating sugarcane bagasse (2) with various solutions (NaOH, NaCl, and CaCO3), drying, and grinding it into particles (3). These particles of 5.6 wt.% are then mixed with 4.4 wt.% of silicon carbide fillers (4) and polyester resin, along with a curing agent. The mixture is layered with chopped strand mat of glass fabrics (7) in die mould, compressed, and post-cured in heating furnace. The resulting composite (8) is characterized by a tensile strength of 276.58 MPa, Young's modulus of 19.25 GPa, coefficient of thermal expansion of 6.18 x 10-7 K-1, and density of 2447 kg/m3. The incorporation of sugarcane bagasse, an agricultural byproduct, contributes to the sustainability of the composite, while the silicon carbide fillers and glass fabrics enhance its strength and thermal stability. FIG. 1

No. of Pages : 11 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/07/2024

(21) Application No.202441051413 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : AI-POWERED INNOVATIVE AND EXPONENTIAL LEARNING IN LEGAL EDUCATION

(51) International classification :G09B0007020000, G09B0007000000, G06Q0050180000, G09B0007040000, G09B0019000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention deals with an innovative approach to legal education by leveraging AI to create an exponential and adaptive learning experience. It offers a more efficient and effective method for users to improve their legal knowledge and skills. The technology has the potential to amplify processes, improve legal research and analysis, increase access to justice, and enhance the overall practice of law. The invention discloses an AI-driven legal data process that provides questionnaires to users. The difficulty level of questions adapts based on the user's answering level, advancing to more complex inquiries as proficiency increases. An Adaptive Difficulty Adjustment is developed by the AI through algorithms and analysis of user performance on previous questions. This algorithm incrementally increases question complexity and depth. The system dynamically selects subsequent questions based on user proficiency and provides evaluation and reading recommendations to the user.

No. of Pages : 20 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051417 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR AI-BASED SOIL ANALYSIS AND CROP RECOMMENDATION

(51) International classification :A01B0079000000, G01N0033240000, G06Q0050020000, A01C0021000000, A01G0025160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an AI-based system and method for soil analysis and crop recommendation, designed to enhance agricultural productivity through precise and data-driven decisions. This system integrates various advanced technologies including machine learning, remote sensing, and geographic information systems (GIS) to analyze soil properties and recommend optimal crops. Soil data is collected using sensors and satellite imagery, which is then processed by the AI model to determine key soil characteristics such as pH, moisture content, nutrient levels, and texture. The AI system uses this information to predict soil fertility and suitability for different crops. Additionally, it incorporates historical weather data, crop yield records, and pest prevalence to enhance the accuracy of its recommendations. Farmers can access the analysis and recommendations through a user-friendly mobile or web application, allowing them to make informed decisions on crop selection, irrigation, fertilization, and pest control. The system also provides real-time alerts and updates on soil conditions and potential issues. By leveraging AI technology, this invention aims to optimize resource usage, improve crop yields, and promote sustainable farming practices.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051425 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM FOR ENERGY GENERATION USING RENEWABLE SOURCE

(51) International classification :F03B0013180000, H02J0003380000, H02K0007180000, F03D0009000000, F03B0013140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: A SYSTEM FOR ENERGY GENERATION USING RENEWABLE SOURCE Advances in renewable energy such as wave energy technologies are revolutionizing the industry. Floating wave energy converters are gaining popularity due to their ability to harness energy in deeper waters. Wave energy farms, integrating multiple converters, are being developed and integrated into the grid to provide a reliable source of electricity. An energy generation system has been proposed in the present invention using renewable energy source. The main float (1A) and secondary float (2A) are used to generate relative differential motion. This linear motion between the floats is transmitted through the connected ropes that activates the pulley system, causing it to rotate. The rotation of the pulleys translates the linear movement into rotary motion of the shaft. A spiral spring (1S) is employed to store and release rotational energy in the form of torque. The spiral spring (1S) one end (1S1) is connected to the shaft (1D) and another end (1S2) of spiral spring (1S) is connected with the bearing frame (1F) generate torque for power conversion and ensuring a reliable energy output from the system.

No. of Pages : 17 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051427 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : VEHICULAR CONTROL INTERNET OF THING (VCIOT)

(51) International classification :H04N0007180000, G01S0005000000, G06N0005020000, F16M0011080000, B65F0001140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The main contribution of our project is an improved method for control a mini-bot with manually by our mobile or it can also work automatically without our knowledge . It can controlled by Wi-Fi control, automatically worked by infrared sensors. We used one IR sensor, Arduino Uno, Driver,12 volt battery, Arduino programming board MUC, CHN808, 2 gear motor 2,9 volt battery, power connector ,12v charger. We used 2 wheels and one ball wheel for moving purpose. This Mini-bot is used for factory , patrol and rescue purpose. We can control this mini-bot via mobile when rescuing purpose. In patrol purpose it can use for watching terrorist activity, in industrial purpose when it turns into automatic mode it works with the help of IR sensors. It identifies the obstacles and move away from that. Drive the mini-bot with the proper command which are programmed in controller.

No. of Pages : 6 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051440 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FLIGHT DYNAMICS AND CONTROL STUDY OF CO-AXIAL ROTOR

(51) International classification	:G06F0030150000, G05B0011420000, B64C0027100000, G16H0050500000, B64C0039020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This work involves designing, simulating, manufacturing, and controlling a co-axial rotor aircraft. This text outlines a co-axial rotor aircraft's design process, focusing on improving the existing works. The system primarily comprises a co-axial motor mounted on a gimbal system, which adjusts the propeller angle to generate the desired moments. The fuselage of an coaxial copter contains essential components such as the ESC, battery, and other accessories necessary for the system's proper operation. The landing gears are installed to ensure a smooth touchdown. The research focuses on the critical task of managing the co-axial rotor system, achieved by implementing a PID controller. The control algorithm that was designed is applied to the co-axial rotor system that was also designed. The intended system was simulated and the simulation results were obtained.

No. of Pages : 9 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/07/2024

(21) Application No.202441051451 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : ADVANCED ELECTRODEPOSITION METHOD FOR THE CONTROLLED GROWTH OF ZNO NANORODS AND ZNO/CUO HYBRID NANOSTRUCTURES

(51) International classification :B82Y0030000000, C23C0014280000, C01G0009020000, B82Y0040000000, A01G0009240000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :
The proposed invention introduces an advanced electrodeposition method for the controlled growth of Zinc Oxide (ZnO) nanorods and hybrid ZnO/Copper Oxide (CuO) nanostructures. This method optimizes deposition parameters such as voltage, current density, and electrolyte composition to ensure uniform and reproducible growth. The use of seed layers or surface treatments enhances nucleation, while sequential electrodeposition facilitates the integration of ZnO and CuO, forming well-defined hybrid structures. This environmentally friendly and cost-effective method allows for the scalable production of high-quality nanostructures with tailored properties, suitable for various applications in electronics, optoelectronics, energy storage, sensors, and catalysis. The invention represents a significant advancement in nanotechnology, providing a versatile and efficient approach for fabricating nanostructured materials with potential for widespread commercial and technological applications.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051453 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTONOMOUS OBSTACLE AVOIDANCE SYSTEM FOR ROBOTIC VEHICLES UTILIZING ULTRASONIC SENSORS AND ARDUINO CONTROLLER

(51) International classification :G05D0001020000, G05D0001000000, G01S0015931000, G05D0001100000, G08G0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Autonomous Obstacle Avoidance System for Robotic Vehicles Utilizing Ultrasonic Sensors and Arduino Controller ABSTRACT In the rapidly advancing field of robotics, the development of autonomous systems capable of navigating complex environments is of significant interest. This patent introduces an innovative design and implementation of an autonomous obstacle-avoiding robotic vehicle, leveraging ultrasonic wave sensors and an Arduino microcontroller unit (MCU). The system is engineered to intelligently cover the maximum area of a given space by detecting and avoiding obstacles in real-time. The autonomous obstacle avoidance system employs ultrasonic sensors to emit pulses and measure the distance to potential obstructions. This data enables the precise control of the vehicle's steering mechanisms, ensuring effective obstacle avoidance. The robot car features a front axle steering and rear-wheel drive configuration. It is powered by two direct current (DC) motors equipped with gear reduction mechanisms, which drive the rear wheels. The core of the robotic vehicle's control system is an Arduino MCU, which integrates the hardware and software components to achieve seamless operation. The design encompasses both the electronic circuitry and the programming logic required for autonomous navigation. The system's efficacy has been validated through extensive experimental testing, demonstrating reliable obstacle avoidance and efficient area coverage. This patent outlines the detailed architecture of the autonomous obstacle avoidance system, highlighting the integration of ultrasonic sensors with the Arduino controller, the mechanical design of the robotic vehicle, and the algorithmic strategies employed for navigation and control. The result is a robust and adaptable platform suitable for various applications in robotics, from industrial automation to personal assistance devices. By advancing the capabilities of autonomous robotic vehicles, this innovation contributes to the broader field of robotics and opens new avenues for research and development in intelligent systems.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051457 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FE3O4@SIO2-PMA-CU NANOPARTICLES: A GREEN CATALYST FOR TRIAZOLE SYNTHESIS

(51) International classification	:B01J0035000000, B82Y0030000000, C02F0001300000, B82Y0040000000, B01J0035060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The proposed invention focuses on Fe3O4@SiO2-PMA-Cu nanoparticles as a green catalyst for triazole synthesis. These multifunctional nanocatalysts combine the magnetic properties of Fe3O4, the stability of SiO2, the acidic and oxidative properties of phosphomolybdic acid (PMA), and the catalytic activity of copper (Cu). This innovative approach enhances catalytic efficiency, recyclability, and environmental sustainability. The nanocatalyst facilitates azide-alkyne cycloaddition reactions under mild conditions, offering an eco-friendly and cost-effective alternative to traditional methods. The Fe3O4 core allows easy recovery using an external magnet, while the SiO2 shell ensures nanoparticle stability. PMA and Cu provide catalytic sites that improve reaction rates and yields. This invention holds significant potential for applications in pharmaceuticals, agrochemicals, and materials science, promoting advancements in green chemistry and nanotechnology.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202441051474 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DUAL-CHAIN ENABLED SECURE IOT HANDOVER AUTHENTICATION WITH ENCAPSULATION MECHANISM FOR SMART HEALTHCARE 4.0

(51) International classification	:G16H0010600000, H04L0009320000, H04L0009080000, H04W0004700000, H04L0009060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract: The Internet of Things (IoT) is revolutionizing the healthcare industry by enabling real-time health monitoring and data collection. However, the proliferation of IoT devices introduces significant security challenges, particularly during the handover authentication process when devices move between networks. This paper proposes a dual-chain enabled secure IoT handover authentication mechanism designed for Smart Healthcare 4.0. The system leverages two interconnected blockchain networks—a primary blockchain for secure storage and management of patient health records, and a secondary blockchain for managing IoT device data and interactions. An encapsulation mechanism is introduced to facilitate secure communication between the two blockchains, ensuring data integrity and enhanced security. The proposed method involves encrypting patient data using a symmetric key, further encrypting with the receiver's public key, and storing it on the InterPlanetary File System (IPFS). Experimental results demonstrate the system's efficiency in terms of hash generation, encryption/decryption times, and transaction throughput. By integrating blockchain technology, this dual-chain approach provides a robust, scalable solution for secure IoT device authentication in smart healthcare environments, thereby improving patient care, data security, and overall healthcare processes.

No. of Pages : 10 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051480 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CHLOROBUTYL RUBBER NANOCOMPOSITE INCORPORATING BORON NITRIDE AND METHOD OF PRODUCTION THEREOF

(51) International classification :C08K0003340000, C08K0009040000, C08L0009000000, C01B0021064000, C22C0038540000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
CHLOROBUTYL RUBBER NANOCOMPOSITE INCORPORATING BORON NITRIDE AND METHOD OF PRODUCTION THEREOF ABSTRACT A nanocomposite (100) for use as reusable protective clothing or for oil water separation and method of fabrication thereof, are disclosed. The nanocomposite comprises tannic acid (102) exfoliated hexagonal-boron nitride (h-BN) (104) as nanofiller (h-BN:TA) (106), incorporated into a chlorine isobutylene isoprene rubber (CIIR) (101) matrix and the ratio of h-BN:TA varies from 1:1 to 1:4. The method includes dispersing (202) tannic acid in water and adding h-BN, obtaining uniform dispersion by bath ultrasonication (204) for one hour and oven drying (206) for 24 hours at a temperature of 75°C to obtain h-BN:TA nanofillers. The nanofiller is dispersed in hexane and mixed with rubber. The method includes casting (210) on a petri dish at room temperature to obtain a thin film. The cast film is mixed with CIIR and compounded (214) using stearic acid, Zinc oxide, TMTD, magnesium oxide, and sulphur and moulding (216) at 150°C to obtain h-BN:TA/CIIR nanocomposite. FIG. 1A

No. of Pages : 26 No. of Claims : 17

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051481 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PREDICTIVE MAINTENANCE OF INDUSTRIAL PUMPS USING MACHINE LEARNING

(51) International classification	:G06N0020000000, G05B0023020000, G06N0003040000, G05B0019418000, G06N0003080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention pertains to a system and method for predictive maintenance of industrial pumps utilizing machine learning techniques. Industrial pumps play an important role in various sectors, including manufacturing, oil and gas, and water treatment, where their reliable operation is essential for continuous production processes. The system comprises sensor technology and machine learning techniques to monitor real-time operational data from industrial pumps. By analyzing data patterns indicative of potential failures or performance degradation, the system generates proactive maintenance alerts, and provides timely interventions to prevent costly disruptions and optimize equipment performance.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051484 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TITLE OF INVENTION: CHARANA CHAKSHOE – IOT BASED EMBEDDED WEARABLE DEVICE SMART SHOE FOR VISUALLY IMPAIRED

(51) International classification	:G09B0021000000, A61H0003060000, G08B0021040000, H04N0005225000, G02C0011000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract People with visual impairments encounter numerous challenges in their daily lives, often leading to accidents and difficulties navigating their environment. This project aims to explore innovative solutions using wearable technology to address these complex challenges by providing assistive devices in the form of everyday wearables. The primary goal is to mitigate the lack of independence experienced by the visually impaired. These devices prioritize safety and health, incorporating features and backup attributes to improve system efficiency and reduce risks. The model consists of three units: a shoe unit equipped with sensors for real-time assistance, a phone application unit called the 'Charana Chakshoe App' developed for caregivers, which monitors the user's real-time location and health aspects, and a cap unit with a camera module as input and audio as output. This unit utilizes image processing to offer the user a brief overview of their surroundings. The primary objective of this prototype is to be cost-effective, stable, and reliable, offering various accessories like shoes and caps for different purposes such as obstacle detection, moisture detection, fall detection, image processing, navigation, etc.

No. of Pages : 12 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202441051493 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "FORMULATION AND EVALUATION OF BOSWELLIC ACID (AKBA) LOADED NANOSTRUCTURED LIPID CARRIER (NLC'S) ALOE BASED GEL FOR THE MANAGEMENT OF GOUT"

(51) International classification :A61K0036886000, A61P0019060000, A61K0031190000, A61K0009107000, A61K0036896000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention work aims to formulate, optimize and evaluate Boswellic acid loaded Nanostructured Lipid Carrier (NLC's) Aloe based Gel for the Effective management of Gout.

No. of Pages : 28 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051494 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PROTECTED DOCUMENT ENCRYPTION FOR BRINGING AND CONTRASTING INFORMATION BASED ON AES

(51) International classification :G06N0020000000, H04L0041082300, G06N0003080000, G16Y0030000000, H04B0017345000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Edge computing provides a promising paradigm to support the implementation of industrial Internet of Things (IIoT) by offloading computational-intensive tasks from resource limited machine-type devices (MTDs) to powerful edge servers. However, the performance gain of edge computing may be severely compromised due to limited spectrum resources, capacity-constrained batteries, and context unawareness. In this paper, we consider the optimization of channel selection which is critical for efficient and reliable task delivery. We aim at maximizing the long-term throughput subject to longterm constraints of energy budget and service reliability. We propose a learning-based channel selection framework with service reliability awareness, energy awareness, backlog awareness, and conflict awareness, by leveraging the combined power of machine learning, Lyapunov optimization, and matching theory. We provide rigorous theoretical analysis, and prove that the proposed framework can achieve guaranteed performance with a bounded deviation from the optimal performance with global state information (GSI) based on only local and causal information. Finally, simulations are conducted under both single MTD and multi-MTD scenarios to verify the effectiveness and reliability of the proposed framework.

No. of Pages : 7 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202441051495 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "NARINGENIN-LOADED NIOSOMAL VAGINAL IN-SITU GEL FOR POLYCYSTIC OVARY SYNDROME"

(51) International classification	:G06Q0010060000, A61K0031704800, G11C0007100000, G06F0012100900, C12M0001340000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The current study aims to investigate the effectiveness of Niosomal formulation of Naringenin for the effective management of PCOS. .

No. of Pages : 29 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051496 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : VEHICLE ACCIDENT DETECTION BASED ON THE INTERNET OF THINGS USING SENSOR FUSION

(51) International classification :G06F0016953500, G06F0016951000, H04L0067306000, G06F0021620000, G06Q0030020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Searching is one of the usual task performed on the Internet. Search engines are the fundamental tool of the internet, from where one can collect related information and searched according to the particular keyword given by the user. The information on the web is growing rapidly. The user has to spend more time in the web in order to find the particular information they preferred. Existing web search engines do not consider specific necessities of client and serve each client similarly. For this ambiguous query, various reports on unmistakable subjects are returned via web search tools. Hence it gets hard for the client to get the specified content. Additionally it likewise requires some investment of time in looking through an appropriate content. Privacy based Personalized Web Search Engine is considered as a promising solution for handle these issues, since various list items can be given depending upon the choice and information needs of clients. It exploits client data and search context to learning in which sense a query refer. To perform Personalized Web search it is essential to show User's interest. Client profiles are developed to demonstrate client's need dependent on his/her web utilization information. This Enhanced User Profile will help the client to retrieve concentrated data. This undertaking proposes engineering for building client profile and improves the client profile utilizing foundation information. It can be used for suggesting good web pages to the client based on his search query and background knowledge. And also implement the pruning algorithm to eliminate the client details from anonymous person for preserve the key word privacy. On other side we need to hide the privacy contents existing in the client profile to place the privacy risk under control. User privacy can be given in form of protection like without compromising the personalized search quality.. Through this project work, it was attained PO1 to PO12 and also gained PSO1,PSO2 and PSO3.

No. of Pages : 7 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051502 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATIC TUMOUR CROPPING AND STAGE IDENTIFICATION USING COMPONENT ANALYSIS BASED ON KERNEL PRINCIPLE AND RECURRENT NEURAL NETWORK

(51) International classification	:G06N0003040000, G06N0003080000, G06K0009620000, G06T0007000000, C12Q0001688600
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
A brain tumor need to be identified in its early stage, otherwise it may cause severe condition that cannot be cured once it is progressed. A precise diagnosis of brain tumor can play an important role to start the proper treatment, which eventually reduces the survival rate of patient. Recently, deep learning based classification method is popularly used for brain tumor detection from 2D Magnetic Resonance (MR) images. Deep convolutional neural network (CNN) ResNet50 base model is fine-tuned with our proposed layers to efficiently classify and detect brain tumor images.The performance of the deep learning models is evaluated using performance metrics such as accuracy, sensitivity, precision, specificity and F1-score. From the experimental results, our proposed CNN model based on the deep architecture using classification optimizer is better than the other models.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051503 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : VEHICLE CLASSIFICATION AND AVOIDANCE IN HILL STATION USING CNN ALGORITHM

(51) International classification :G06N0003080000, G06K0009620000, G06N0003040000, G08G0001160000, B60W0030095000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Vehicle classification and avoidance in hill stations is na important problem that can be solved using computer vision techniques and machine learning algorithms. The proposed system consists of na intelligent camera system that can classify vehicles based on their type and detect potential collisions with other vehicles or obstacles on the road. The system is built using a Convolutional Neural Network (CNN) algorithm for vehicle classification, (RF) encoder and decoder for feature extraction, and na Arduino Uno microcontroller for Alerting the vehicle.In the existing system, vehicle classification and avoidance are typically done manually by the driver, which is not always reliable, especially in hilly terrain. The proposed system overcomes this limitation by automating the process using advanced computer vision and deep learning algorithms. The proposed system uses a web camera using vehicle images in the mountainto capture real-time images of the road ahead. Then processed using a CNN algorithm for vehicle classification, which can identify various types of vehicles, such as cars, buses. The system uses na RF encoder and decoder to extract features from the images and classify the vehicles accurately.Once a vehicle is classified, the system checks for potential collisions with other vehicles or obstacles on the road. If a potential collision is detected, the system sends a signal to the Arduino Uno microcontroller, which alert the vehicle to avoid the collision.

No. of Pages : 9 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051504 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT-ENABLED LANDSLIDE MONITORING SYSTEM USING LORA TECHNOLOGY

(51) International classification :A61B0005000000, H04W0004380000, G01V0001000000, H04L0067120000, A61B0005021000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Slope collapses are a serious hazard to human beings and civilization because they are frequently caused by events like intense rain, seismic activity, or human interference. On the other hand, because of their shortcomings with regard to cost-effectiveness, real-time data collecting, and coverage, conventional monitoring techniques frequently fail. In terms of an early warning system for landslides, monitoring sloping areas involves long-term interactions, little human intervention, and a climate devoid of resources. Depending on the characteristics of the climate, information changes in the checking region may not be noticeable for several days, months, or years. As a result, it is not anticipated that a massive amount of data from the monitored region will be sent to a cloud server in one go. Additionally, long-term correspondence provided low power consumption and lower information rates with a full range correspondence convention. We designed an adjusted device network and passage network to monitor the progressions sporadically while using less energy thanks to LoRa innovation. We evaluated the measurable metrics of the sensor and door hubs, including transmitting element, alertness, time-live, power consumption, connect expenditure schedule, and the lifespan of batteries. Finally, this study concludes with issues that were gradually examined in which the sensor data was obtained via a modified device network and doorway on the web server. Finally, this study concludes with issues that were continually investigated and in which sensor data was obtained via an altered gauges network and gateway on the internet-based server.

No. of Pages : 10 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051505 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : POST SURGERY ANGLE KNEE IMPLANT MONITORING SYSTEM

(51) International classification :A61B5/00, G16H40/67, A61B5/11, A61F2/38
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Post-surgery ankle and knee monitoring revolves around the current limitations in post-operative care for patients who have undergone ankle and knee surgeries. Presently, there is a lack of effective and comprehensive monitoring systems tailored to the specific needs of ankle and knee surgery patients. In this system leverages Internet of Things (IoT) sensors to collect real-time data from implanted devices, enabling remote monitoring and early detection of potential issues or complications. By providing healthcare professionals with valuable insights into patients' post-surgery conditions, this system aims to improve patient outcomes, reduce complications, and ultimately enhance the quality of post-surgery care. This abstract encapsulates the significance of this research in the healthcare field, offering a glimpse into the transformative potential of IoT technology in post-surgery monitoring. the results underscore the system's potential to revolutionize post-surgery care for ankle and knee implant patients, offering substantial benefits in terms of patient well-being and healthcare efficiency.

No. of Pages : 9 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/07/2024

(21) Application No.202441051506 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : DEVELOPMENT OF FABRICATION AND CHARCATERIZATION OF SAW DUST POLYMER COMPOSITE FOR MECHANICAL APPLICATIONS

(51) International classification	:C08L0023060000, B29K0033000000, C08L0097020000, G01N0003040000, B27N0003000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

The research aimed to transform sawdust and polymer wastes such as high-density polyethylene (HDPE) and low-density polyethylene (LDPE) into valuable materials. The study used HDPE and LDPE granules as matrix phase material, and sawdust as a reinforcing material. The different combination of matrix materials and reinforcing material blending was done using a twin-screw extruder. The extruded mixture was turned into pellets and then injection moulded to create composite specimens. The mechanical properties of the fabricated specimens were evaluated through tensile, hardness, flexural resistance, and water absorption tests. The outcome of the research shows that the 80% HDPE and 20% sawdust demonstrated marginally better tensile strength. The 40% HDPE, 40% LDPE, and 20% sawdust composite showed higher hardness values compared to other combinations. The study offers a practical result for reprocessing and handling timber waste from furniture manufacturers and timber industries. The test results suggest that treated sawdust had better mechanical properties than untreated sawdust. The composite with the highest proportion of HDPE and sawdust showed the most favorable mechanical properties, followed by HLSC, while the LSC composite had the least desirable performance.

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051523 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEVELOPMENT OF ECOFRIENDLY PACKAGING MATERIAL FROM COCONUT SHELL POWDER

(51) International classification	:B65D0065460000, C08J0005180000, C08L0097020000, C08L0099000000, C08L0067040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The development of eco-friendly packaging material from coconut shell powder represents a significant advancement in sustainable materials. This research focuses on utilizing the abundant and renewable resource of coconut shells to create biodegradable packaging. The process involves grinding coconut shells into fine powder and integrating it with natural binders to form a composite material. This material is then molded into various packaging forms. The resulting packaging demonstrates excellent mechanical properties, such as strength and durability, while being entirely biodegradable. The innovation not only addresses the environmental concerns associated with conventional plastic packaging but also provides a value-added use for agricultural waste. This study highlights the material's potential in reducing plastic pollution and promoting a circular economy by turning waste into a valuable resource. The eco-friendly packaging developed from coconut shell powder offers a sustainable alternative for various industries, contributing to environmental conservation and resource efficiency.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051527 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM TO RECOGNIZE NUMBER PLATE AND ALLOW ENTRY OF A VEHICLE

(51) International classification :G06F0003010000, H04N0005225000, H04N0005232000, A61B0008080000, A61B0090000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system 100 to recognise a vehicle 102 can include a camera module 106 to capture real-time images 202 of a security number plate 104 mounted on the vehicle 102; and a microcontroller 110, and at least one processor to perform operations to receive, from the camera module 106, real-time image 202 of the security number plate 104; process the captured image 202 to extract texts using at least one library; determine entry of the vehicle 102 by matching extracted data; and transmit command, if data matched 208, to a display unit 112 and simultaneously open a physical barrier 114 to allow entry of the vehicle 102. The library used to extract security plate images 202 is EasyOCR library. An ultrasonic sensor 116 configured to sense proximity of the vehicle 102 from the barrier 114 in a network interface enabling the barrier 114 to connect to the external network 120.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051528 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEVICE TO MEASURE FUEL REFILL LEVEL IN VEHICLES

(51) International classification :B60K0015040000, B60K0015035000, B67D0007080000, B67D0007040000, H04L0043000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
A device (100) for automobiles to facilitate precise measurement and monitoring of fuel refilling processes. The device (100) includes a funnel-shaped body (102) with a first tube (102A) that receives fuel from an inlet gun, and a second tube (102B) fluidically coupled to facilitate fuel flow into the vehicle's fuel tank. A flow meter (106) integrated into the first tube (102A) accurately measures the rate of fuel flow during refilling, displaying real-time refill amounts. The device includes a cap (108) to control the opening of the first tube, a supporting member (104) for stability on fuel tank nozzle, a handle (112) for ease of use, and an auto cut-off mechanism to prevent overfilling. Additionally, real-time refill amount is transmitted to a computing device (142), providing users with immediate updates through a dedicated mobile application. This device (100) ensures transparent fuel management, enhancing user convenience and operational safety at fuel stations.

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051529 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SMART STICK FOR GUIDING USERS WITH VISUAL DISABILITIES, AND METHOD THEREOF

(51) International classification	:H04W0004020000, G06N0020000000, G06Q0010060000, G06Q0030000000, G06Q0010080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Present disclosure relates a smart stick (102) for guiding users with visual disabilities, and method thereof. System (102) receives an input data from at least one of one or more sensors (118) and at least one image capturing unit (108), where the input data pertains to presence of one or more obstacles nearby the user. Further, system (102) extracts one or more features from the received input data to identify a type of the one or more obstacles based on one or more parameters. System (102) process the one or more features to generate at least one audio instruction pertaining the one or more obstacles nearby the user. Finally, the system (102) generate one or more vibrations based on the at least one audio instruction when the one or more obstacles are detected to guide users with visual disabilities.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051539 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADVANCED DIABETES CARE INTEGRATING MACHINE LEARNING WITH IOT FOR NON-INVASIVE GLUCOSE TRACKING SYSTEM USING GLUCO WAVE TM SENSORS AND METHOD EMPLOYED THEREOF

(51) International classification	:A61B0005145000, A61B0005000000, A61B0005145500, G06N0020000000, A61P0003100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards an advanced diabetes care system integrating machine learning with IoT for non-invasive Glucose tracking system using Gluco wave TM sensors and method employed thereof. The innovative system combines machine learning algorithms with IoT technology to enable non-invasive glucose monitoring through advanced Gluco Wave TM sensors, with the primary goal of revolutionizing diabetes management. These sensors allow continuous, real-time monitoring of glucose levels without the need for blood samples, offering relief from frequent finger prick pain for individuals with diabetes. The Gluco WaveTM sensors, in conjunction with the Gluco SenseTM algorithm, utilize advanced machine-learning techniques to predict and monitor glucose levels, generate updated trend reports, and customize diabetes management strategies. Central to the system is the Diab Net™ Hub, which serves as the IoT central hub, facilitating connectivity between sensors and user interfaces such as the Gluco Track™ Interface and the GlucoSync™ App. Fig. 1

No. of Pages : 22 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051542 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IDENTIFYING AND FILTERING THE SEA AND RIVER WATER WASTES BY USING AI (CNN) AND GPS TECHNOLOGY

(51) International classification	:G06K0009620000, G06N0003040000, G06F0012020000, B65F0001000000, G06N0003080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Abstract: Nowadays, seas and rivers are continuously being polluted, to their maximum levels, by various human activities. For effective Solid Waste Management of the Sea, and to ensure Efficient Environmental Monitoring of the Seas and the Feeding Rivers, we have designed a Unique Artificial Intelligence Robot to filter Solid Waste from Sea and River Water using innovative Machine Learning Techniques. Here we propose to use Hybrid Sensor and AI camera to Capture the Waste Image, and this image information will be forwarded to the Micro-Controller Input Unit, and, at the same time, the location of the garbage will also be forwarded to the Micro Controller using GPS input. This Micro Controller, in turn, will forward the collected information to the GSM transmitter. As a whole, this whole configuration is called a Sensor Unit. This sensor unit is fixed on a drone or ship. This GSM transmitter information is further transmitted to the GSM Receiver in the Centralized Data Storage System. Here the Centralized Data Storage System acts as a Master Controller, and transfers the information of the garbage location to the Garbage Collection System. This Garbage Collection System is a robot which effectively retrieves garbage such as plastic, metal, and organic materials from the Sea Water or River Water, using hybrid sensor and Convolutional Neural Network (CNN) algorithm. In this CNN technique, we can perform image scanning, image recognition and image classification and finally filter the waste objects from the sea or river using Gadgets commanded and monitored by, Machine Learning. The image is captured capture through the camera in the garbage collection system and it is compared with an already existing image through the Convolutional Neural Network (CNN) algorithm so that the waste objects such as, plastic, metal, and other dust particles are segregated and collected in the corresponding garbage box. Furthermore, Wastages of the Sea and River Water are retrieved through the Artificial Intelligence and Machine Learning Techniques using innovative GPS and GSM systems.

No. of Pages : 19 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051553 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HEALTHCARE SYSTEM AND METHOD FOR REAL-TIME PHYSIOLOGICAL DATA MONITORING AND AUTOMATED TREATMENT MODULATION

(51) International classification	:A61B0005000000, A61B0005020500, A61B0005024000, G16H0040670000, A61B0005145000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards healthcare system for real-time physiological monitoring and automated treatment modulation comprising a healthcare device configured to collect health parameters of a patient or individual using biosensors, temperature sensors, electrodes, and an optical sensor. The health care device comprises a processing device, a memory and a treatment modulation module, whereby the processing device through a treatment modulation module configured to receive, process, and analyze the health parameters using artificial intelligence (AI) and machine learning. A computing device receives the health parameters and updates from the healthcare device, the healthcare device securely transmits the health parameters and updates to a computing device operated by healthcare providers via the network; and the treatment modulation module adapted to perform real-time data analysis and adaptive treatment protocols, including medication dispensing, based on the detected health parameter deviations, thereby providing personalized healthcare management and improving patient outcomes.
FIG. 1.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051561 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A WIND PROFILING RADAR

(51) International classification	:G01S0013950000, H01Q0021000000, F41G0003080000, G06K0007100000, H01Q0001220000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A wind profiling radar (100) comprising an array of antennas (110) configured for collecting wind profile signal data, a solid-state Transmit-Receive (TR) module (120) for each antenna group (110G) configured for supplying power to a corresponding antenna group (110G-C, 110G-2, 110G-3, 110G-4) in the array of antennas (110), an exciter module (130) configured for generating TX-RF signals, a multi-channel receiver system (140) comprising a dedicated receive channel (140RC) configured for receiving, during a receive mode, the wind profile signal data collected by each antenna group (110G), and a processing module (150) configured for processing the wind profile signal data related to the wind profile and for determining wind parameters, based upon the processed wind profile signal data, for wind profiling.

No. of Pages : 41 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051573 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ANTIMICROBIAL ECO-FRIENDLY MATERIAL USING BANANA LEAVES, TAMARIND KERNEL PASTE, AND CURCUMIN COATING

(51) International classification	:A61K0031120000, B32B0005020000, C08L0069000000, A61K0036480000, A61L0027580000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT ANTIMICROBIAL ECO-FRIENDLY MATERIAL USING BANANA LEAVES, TAMARIND KERNEL PASTE, AND CURCUMIN COATING The invention relates to an antimicrobial eco-friendly material fabricated from banana leaves (2) and tamarind kernel paste (3). The material is prepared by layering banana leaves (2) with tamarind kernel paste (3), which is made from finely powdered tamarind kernel mixed with distilled water. The layered structure is pressed in a hydraulic hot press at 145-170°C and sun-dried. A curcumin-ethanol coating is applied to enhance antimicrobial properties. The process involves collecting and cleaning banana leaves (2), preparing tamarind kernel paste (3) through a series of steps including oven-drying and powdering, layering the leaves with the paste, pressing, drying, and applying the curcumin coating. The resulting material (5), measuring 11 cm x 11 cm x 2 mm, is biodegradable and offers a sustainable alternative to synthetic materials, potentially suitable for various applications requiring antimicrobial and biodegradable characteristics. FIG. 1 and FIG. 2

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051618 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NEXT-GEN CAMPUS COMMUTES TRANSFORMING COLLEGE TRANSPORTATION WITH REAL-TIME BUS TRACKING TECHNOLOGY

(51) International classification :G06Q0050200000, G06Q0010060000, G06Q0050300000, H04W0004029000, G06Q0010040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Modern educational institutions encounter various challenges in ensuring effective transportation for students while giving importance to their safety. The implementation of the College Bus Tracking System (CBTS) emerges as a technological remedy that tackles these issues by providing real-time monitoring, tracking, and management of college bus fleets. This paper examines the fundamental features and advantages of CBTS, emphasizing its potential to transform the approach colleges adopt in managing their transportation operations. The College Bus Tracking System utilizes advanced GPS (Global Positioning System) and mobile communication technologies to provide colleges with a comprehensive platform for overseeing their bus fleets. Through CBTS, colleges have the capability to monitor the current location of buses, trace their routes, and anticipate arrival times with a high level of precision. This data can be accessed by students, parents, and college staff through designated mobile apps and web interfaces, promoting transparency and alleviating concerns related to bus timetables. An essential benefit of CBTS is its capacity to enhance student safety. By establishing a constant connection with each bus, colleges can ensure the secure transportation of students to and from the campus. In cases of unforeseen events such as breakdowns or accidents, CBTS enables immediate intervention and support. Furthermore, the system facilitates communication among drivers, students, and college authorities, fostering a safer environment. Efficiency improvements represent another significant advantage of CBTS. Colleges can optimize bus routes using real-time data, leading to reduced fuel consumption and travel time. This contributes to a more environmentally friendly transportation system while also cutting costs for the institution. Additionally, the system allows colleges to efficiently handle maintenance schedules and driver assignments, thus streamlining their operations and enhancing overall efficiency. CBTS extends beyond mere real-time tracking; it also provides in-depth reporting and analytics capabilities. Colleges can gain insights into bus usage, punctuality, and other crucial metrics, assisting in data-informed decision-making. These insights can steer ongoing enhancements in transportation services, ultimately resulting in heightened levels of student contentment.

No. of Pages : 14 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051665 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BLOCKCHAIN-BASED CERTIFICATE VERIFICATION SYSTEM

(51) International classification :H04L0009320000, G06F0021640000, H04L0009060000, G06Q0020380000, G06F0021620000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is the blockchain-based certification verification system (100) relates to ensure the integrity and authenticity of certifications and credentials by leveraging blockchain technology comprising a decentralized blockchain network (102) configured to store and manage a distributed ledger of certified data, wherein said data corresponds to one or more certificates associated with a variety of domains. A consensus mechanism (104) facilitating agreement among the nodes to validate and record certification transactions on the blockchain, ensuring a transparent, tamper-resistant, and immutable record of certified data. A cryptographic hashing mechanism (106) configured for securing the integrity of certified information stored on the blockchain, providing resistance against unauthorized alterations. A smart contract (108) module executed within the blockchain network, governing the certification and verification processes, including but not limited to, the issuance, revocation, and verification of certificates across diverse industries. A user interfaces (110) enabling participants to interact with the blockchain-based system.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051666 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LOCALIZED FOOD AND NUTRIENT INFORMATION SYSTEM

(51) International classification	:G06Q0030020000, G16H0020600000, G06Q0010100000, G06F0016953500, G16H0010600000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a localized food and nutrient information system (100) comprising a user interface (102) for easy navigation, accessibility, and user interaction, a global positioning system (104) integrated into the database for determining user's geographical location, a local food database (106) providing information about locally available food items, a plurality of nutritional databases (108) providing detailed nutritional information for various food items, a community-driven review unit (110) allowing users to contribute reviews, ratings, and comments on local food items, an algorithm for personalized recommendations (112) that analyses user preferences and behavior to offer personalized food recommendations, a security framework (114) implementing encryption protocols, access controls, and privacy measures to ensure security and privacy of user data, a notification unit (116) for sending notifications to users about new local food items, updates, and community activities, a data analytics dashboard (118) offering insights into user behavior, preferences.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051670 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SWITCHED INDUCTOR WITH CURRENT SHARED NETWORK DC-DC CONVERTER FOR ON-BOARD ELECTRIC VEHICLE CHARGER

(51) International classification :B60L53/20, B60L53/22, H02M3/158, H02M1/14, H02J7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: Title: A Switched Inductor with Current Shared Network DC-DC Converter for On-board Electric Vehicle Charger The present disclosure proposes a switched inductor DC-DC converter (100). The SICSN DC-DC converter (100) is configure for providing power from a rectifying unit (104) to a battery unit (126). The SICSN DC-DC converter (100) comprises a first switching element (110), a first inductor (112), a first diode (114), a second switching element (116), a second inductor (118), a second diode (120), and a capacitor (122). The proposed SICSN DC-DC converter (100) is characterised with enhanced efficiency, compact design, reduced cost, high step-down ratio, simplified design, and proven performance. The proposed SICSN DC-DC converter (100) provides faster charging times and reduced energy consumption. A more compact and lightweight on-board charger able to be achieved with the proposed SICSN DC-DC converter (100), which is a critical benefit for space-limited vehicle designs.

No. of Pages : 23 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051671 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A MULTI-LAYERED GRAPHENE ENCAPSULATED HIGH-ENTROPY ALLOY REINFORCED METAL MATRIX COMPOSITE AND METHODS OF FABRICATION THEREOF

(51) International classification	:C22C0030000000, H01M0004020000, F16D0069020000, C08K0005053000, C08K0003040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT: Title: A Multi-Layered Graphene Encapsulated High-Entropy Alloy Reinforced Metal matrix composite and Methods of Fabrication Thereof The present disclosure proposes a multi-layer graphene-encapsulated high-entropy alloy (HEA) reinforced aluminum alloy composite is disclosed with enhanced tensile strength, impact strength, wear resistance, thermal stability, and corrosion resistance. The MLG-HEA reinforced AA7075 composite demonstrates superior mechanical properties, making it ideal for high-stress applications, particularly in aerospace structures. This leads to an extended lifespan of products and reduced maintenance costs. Unlike traditional AA7075 composites that enhance specific properties, the MLG-HEA reinforced AA7075 composite improves tensile strength, impact resistance, wear resistance, corrosion resistance, thermal stability, and electrical conductivity, making it a versatile solution for various applications.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/07/2024

(21) Application No.202441051672 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : SYNTHETIC INTELLIGENCE –BASED SCRIPTING SYSTEM FOR HEALTH SERVICE WASTE IDENTITY AND REMOVAL

(51) International classification	:G16H0040200000, G06Q0010060000, A61G0003000000, G06Q0010040000, G08G0001096500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The advanced ambulance tracking system leverages cutting-edge technologies to enhance the efficiency and responsiveness of emergency medical services. This system integrates precise GPS tracking to provide real-time monitoring and optimal route planning for ambulances. Through predictive analytics and dynamic resource allocation, it anticipates demand and ensures timely dispatch and arrival of emergency vehicles. The robust communication infrastructure facilitates seamless data exchange between ambulances, control centres, and hospitals, ensuring coordinated and effective responses. This comprehensive approach not only improves operational efficiency but also plays a crucial role in saving lives by minimizing response times and optimizing resource utilization in critical situations. Predictive analytics and dynamic resource allocation ensure that emergency vehicles are dispatched promptly and arrive swiftly, enhancing overall response times. A robust communication infrastructure supports seamless data exchange between ambulances, control centres, and hospitals, facilitating coordinated and effective emergency responses. This innovative system not only boosts operational efficiency but also plays a vital role in saving lives by optimizing resource use and reducing critical response times.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051674 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM FOR CONTINUOUS RISK ASSESSMENT AND DECEPTIVE CREDENTIAL MANAGEMENT IN CYBER SECURITY

(51) International classification	:H04W0012060000, G16H0050300000, G06Q0010060000, G06F0021310000, G07C0009000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT: Title: A System for Continuous Risk Assessment and Deceptive Credential Management in Cyber Security The present disclosure proposes a system (100) for continuous risk assessment and deceptive credential management in cyber security. The system (100) for continuous risk assessment and deceptive credential management comprises a computing device (102) having a processor (104) and a memory (106) for storing one or more instructions executable by the processor (104). In addition, the processor (104) is configured to execute plurality of modules (108) for performing multiple operations. The plurality of modules (108) comprises a data acquisition module (110), a processing module (112), a verification module (114) and a tracking module (116). The processor (104) is in communication with an application server (118) through a network (120).

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051715 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HIGH PROTEIN, HIGH FIBER, LOW FAT, LOW CALORIE VEGETARIAN HEALTH MIX

(51) International classification :A23L31/00, A23L7/10, A23L11/00, A23L19/00, A23L33/105, A23L5/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
HIGH PROTEIN, HIGH FIBER, LOW FAT, LOW CALORIE, VEGETARIAN HEALTH MIX is a nutritional supplement made from a combination of fruits, vegetables, and herbal agricultural products. It is designed to provide a balanced source of essential nutrients, with high protein and fiber content. The mix is made from natural ingredients, grown in organic conditions, and processed under laboratory conditions to ensure quality and nutritional value. It serves as a convenient and effective remedy for malnutrition and supports overall health and well-being.

No. of Pages : 6 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051716 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BIO-EPOXY HYBRID COMPOSITE REINFORCED WITH CHEMICALLY TREATED TABEBUIA ROSEA, SIC, AL2O3, TIO2, AND GLASS FABRIC

(51) International classification :C08K0003220000, B29K0105120000, C08K0003340000, C08L0027160000, C08L0007020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT BIO-EPOXY HYBRID COMPOSITE REINFORCED WITH CHEMICALLY TREATED TABEBUIA ROSEA, SIC, AL2O3, TIO2, AND GLASS FABRIC The invention relates to method for fabricating bio-epoxy hybrid composite reinforced with Tabebuia rosea fibers, inorganic fillers, and glass fabrics. The process involves chemically treating Tabebuia rosea fibers (1) with NaOH and CaCO3 solutions (2), drying (3), and grinding them into powder (4). This powder is mixed with SiC (5), Al2O3 (6), and TiO2 (7) fillers in LB2 bio-epoxy polymer. An Ultrasonicator probe (8) ensures uniform dispersion of particles within the matrix. The mixture mechanically stirred with hardener, then layered with four layers of glass fabric (9) in a die. A 52 kg weight applied for compression, followed by initial curing in a horizontal position. The composite is post-cured at 95°C for 24 hours in a heating furnace. The resulting bio-epoxy hybrid composite (11) exhibits flexural strength of 345.24 MPa, density of 1925.47 kg/m³, and coefficient of thermal expansion of 2.17 x 10?8 K?¹, making it suitable for high-performance applications. FIG. 1 and FIG. 2

No. of Pages : 14 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051722 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR INTEGRATED ANIMAL AND BIRD CARE AND INFORMATION

(51) International classification	:G16H0040200000, A01K0013000000, G06Q0030060000, G16H0010600000, G06Q0030020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A system (100) for integrated animal and bird care and information is disclosed. A receiving module (120) receive user information for registering a user. An information provider module (125) provides information about a plurality of veterinary hospitals, doctors, and compounders, provide information about the hospitals that offer rabies vaccinations, antivenom for specific snake bites, and medication for animal bites, provide information about snake catchers and forest department staff, provide information about the medication of the animals and birds. A complaint module (130) enables the user to raise a complaint request about animal issues. A notification module (135) notifies the user about the competition of the animal, type of animal competition, list of participants, and win or loss history of animal and owner. A zoo module (140) provides a plurality of information about the zoo. A sale module (145) provides information regarding the sale of animals and birds to the user. FIG. 1

No. of Pages : 34 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051730 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FARM PRODUCE SELLING ASSISTIVE SYSTEM

(51) International classification	:H04N0021472000, G06F0001320600, B65D0088120000, G03B0015000000, G03G0015000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A farm produce selling assistive system, comprising multiple cuboidal bodies 101, developed to be positioned at different locations with a pair of chambers 102 having multiple compartments 103 to store different farm produce, a screen 104 for enabling vendor to give input commands for arranging farm produce on bodies 101 as per quality along with respective prices, a pair of motorized sliding units 105 translate chambers 102 out from body 101, a link 106 lifts compartments 103, an imaging unit 107 detects type of produce stored in compartments 103, a gripper 108 transfers produce to a container 117 , a imaging unit 110 detects quality of produce, a celluveyor 111 arranges produce as per qualities, a plate 112 for transferring produce separately, a user-interface to give input commands regarding type and quality of farm produce to be bought, a GPS module detects real-time location of bodies 101.

No. of Pages : 23 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202441051731 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HEALTH MONITORING AND ASSISTIVE SYSTEM FOR TWO-WHEELER RIDERS

(51) International classification	:B62L0003020000, A61B0005000000, H04N0007180000, G06Q0010100000, A47F0013000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A health monitoring and assistive system for two-wheeler riders, comprises of elongated body 101 carved with plurality of holes 102, installed with a member 103 in front of brake lever of two-wheeler vehicle, a microphone 104 for enabling a rider to give voice commands, a C-shaped motorized clamp 105 for gripping handlebar, an imaging unit 106 for detecting aligning of member 103 with respect to brake lever, a motorized slider 107 for aligning member 103 in front of brake lever, a pin 108 to lock member 103, a rubberized unit 201 engaged on throttle of vehicle, plurality of LED lights 109 for notifying regarding abnormality in health parameters, a display screen 110 to aid rider in reaching health care center, a robotic arm 111 for accommodating C-shaped attachment 112 on throttle, plurality of motorized rollers 113 integrated on attachment 112, each via a link 114 for regulating speed of vehicle.

No. of Pages : 25 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051732 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MULTI-NODAL ELECTROCHEMICAL BATTERY CHARGING DEVICE

(51) International classification :H02J7/00, G05B19/02, B25J9/00, H02J7/00, G05B19/02, B25J9/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
A multi-nodal electrochemical battery charging device, comprising a body 101 designed to accommodate electrochemical battery, an imaging unit 102 installed on the body 101 determining the batteries position, a conveyer belt 103 arranged with the body 101 for translating battery towards an electrolyte testing section 104 arranged inside the body 101, a motorized gripper 201 integrated in the section 104 for opening battery's caps, a hydrometer 202 configured within the section 104 via an extendable link 203 for dipping hydrometer inside the battery, a display panel 105 arranged on the body 101 to display alert notification to the user, plurality of bars 106 suspended from ceiling of the body 101 for aligning an extendable slider 107 integrated with the bars 106 and configured with a pair of motorized clamps 108 to grip the terminals and a voltmeter 109 integrated with the clamps 108 for determining charging status of the battery.

No. of Pages : 23 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051733 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADJUSTABLE POD VEGETABLE HARVESTING DEVICE

(51) International classification :A23N15/00, A23N15/10, G06T7/00, B25J19/02, B25J15/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
An adjustable pod vegetable harvesting device, comprising a cuboidal frame 101 positioned towards podded vegetables bearing shrubs, an imaging unit 102 installed on the frame 101 to determine shrub's position, multiple motorized sliding units 103 arranged inside the frame 101 for translating horizontal bars 104 for allowing the shrubs to pass through the frame 101, plurality of motorized clamps 105 arranged on the bars 104 for gripping the bark, multiple vibrating units integrated in the clamps 105 for shaking the shrubs, a linear actuator integrated in between bars 104 and clamps 105 for applying force on the pods for detaching the pods from the shrubs, a V-shaped platform 106 arranged underneath the structure for accommodating the detached pods, plurality of electronically controlled nozzles 201 integrated on the platform 106 to dispense water for cleaning the pods and an air blower 202 installed on the platform 106 for drying the pods.

No. of Pages : 25 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051734 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BIRDHOUSE AND BIRD FEEDER DEVICE

(51) International classification :A01K0031140000, A01K0039012000, H04N0007180000, G05D0001020000, G06F0003010000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
A birdhouse and bird feeder device, comprises of a cylindrical housing 101 positioned over a ground surface segregated into sections 102 that accommodate feed, an cylindrical hollow body 103 regulates height of the body 103, plurality of motorized vertical sliding units 104 mimics branches of a tree, an imaging unit 105 captures images of birds, a hydraulic link 202 positions particular chamber in proximity to a tray 108, an iris aperture open to dispense feed and water, plurality of electronic atomizers 110 regulate humidity to be maintained, a semi-spherical shaped members 111 provides space for bird to nest, a camera 301 monitors presence of nestlings in the members' 111, a motorized circular slider 302 translates a flap 304 in front of the nestlings for creating a barrier, an sensing module monitors sunlight, wind speed and rain in the surroundings.

No. of Pages : 29 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051735 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SLEEP MANAGEMENT SYSTEM

(51) International classification	:A61B0005000000, A61B0005020500, G02B0027010000, G01S0017931000, A47C0027100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A sleep management system, comprises of a plurality of rectangular plates 101 arranged in a grid formation by means of hinges 102 developed to be positioned on a ground surface, an primary cushion 103 on a rectangular flap 104 on each plates 101 by means of a pneumatic pin 105, a rectangular inflatable secondary cushion 108 connected with inflation unit 107, for resting head portion of user, a pressure sensor detects pressure applied by user in a resting state, an angle sensor detects an angle of flap 104 with respect to plates 101, an inverted U-shaped telescopic member 109 with a dual-axis lead screw mechanism 110 having a rectangular tray 115 containing LIDAR sensor, a microphone 121 for capturing sleep related data of user, a wristband 201 containing FBG sensor 203 for tracking and recording of vitals of the user during sleep.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051736 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SOLAR PANEL CLEANING DEVICE

(51) International classification	:H02S0040100000, B08B0001040000, B08B0001000000, B08B0001020000, F24S0040200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A solar panel cleaning device, comprising a rectangular frame 101 with four clamps 102 installed at four corners of the frame 101 for attaching onto a solar panel, an artificial intelligence-based imaging unit 112 determine the presence of dust/debris over the panel, a dual-axis lead screw mechanism 104 translates a cleaning assembly 103 over the determined location of dust/debris, a pair of circular motorized brushes 107 for brushing of dust and debris on the panel towards a motorized roller 108 that further convey the dust and debris onto a rectangular flap 109 with a hinge joint 110 for collection of the dust/debris in inner bottom region of the housing 105, a primary suction unit 301 directs dust particles towards an electrostatic precipitator unit, a sieve 302 for negatively charging dust particles, multiple rectangular vertical plates 201 for collecting the dust, a dust collection receptacle 202 for collecting the dust particles.

No. of Pages : 25 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051737 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CHITOSAN-ALGINATE-SILVER NANOGEL FORMULATION AND METHOD FOR SYNTHESIS THEREOF

(51) International classification :C08J0003075000, C08J0003240000, A61N0001372000, A01N0043160000, C08L0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A chitosan-alginate-silver nanogel formulation comprises of (i) 0.2-0.5% w/v chitosan, 28-32% v/v of 1% acetic acid, (iii) 0.2-0.5% w/v alginate, (iv) 28-32% w/v of 20mM silver nitrate, (v) 4-5% v/v cross-linking agent and (vi) 28-32% v/v distilled water. A method for synthesis of chitosan-alginate-silver nanogel formulation comprises steps of dissolving chitosan in acetic acid to obtain chitosan solution, dissolving alginate in distilled water to obtain alginate solution, adding obtained alginate solution in chitosan solution to obtain homogenous solution treating homogenous solution with silver nitrate and adjusting pH to 10-11 to obtain chitosan-alginate-silver nitrate solution, adding cross-linking agent in chitosan-alginate-silver nitrate solution and stirring at temperature of 50-70oC for time duration 50-70 minutes, sonication for time duration of 50-70 minutes in order to obtain gel and subjecting gel to centrifugation at 5000-15000 rpm for time duration of 10-20 minutes, washing three times with 90% ethanol, drying at room temperature, and lyophilizing.

No. of Pages : 25 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202441051738 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART MULTIPURPOSE COOKWARE DEVICE

(51) International classification	:H05B0006640000, A47J0036020000, G01K0001140000, H01L0027092000, H05B0001020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure relates generally to the field of household devices. More specifically the present disclosure relates to a smart multipurpose cookware device. The device (100) includes a base (102), a set of copper strips (104), a handle (106), a temperature indicator (108) and a probe. The base (102) includes the set of copper strips (104) configured to record temperature of food. The set of copper strips (104) are arranged like rings around the base (102). The handle (106) includes the temperature indicator (108) configured to display the recorded temperature. The probe is configured to connect the copper strips (104) with the temperature indicator (108) internally. Advantageously, the present invention relates to a smart multipurpose cookware device with a set of copper strips and temperature indicator to record and display temperature of food during cooking, baking or serving for identifying undercooked and overcooked food.

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051739 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN APPARATUS AND METHOD FOR REMOVING INSECT NESTS

(51) International classification :A01M0001020000, A01M0001100000, B41J0002175000, A22B0003000000, A01M0001080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Present invention discloses an apparatus (100) and method (200) for removing insect nests. The apparatus (100) includes a telescopic arm (102) with a funnel-shaped unit (108) for scraping insect nests. A trapping chamber (114) is provided that contains a detachable pouch (116) filled with non-poisonous gas, released via a gas chamber valve activation. The telescopic arm (102) includes a first hollow tube (120) that directs the non-poisonous gas to render insects of the insect nest unconscious. A second hollow tube (122) collects the unconscious insects in the trapping chamber (114). The trapping chamber (114) includes a slit (128) controlled by an in-built timer. The timer is to control the slit (128) to open upon completion of a predetermined time and enable to release the one or more insects from the trapping chamber (114).

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051774 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PROCESS FOR PREPARATION OF HETEROCYCLIC COMPOUNDS AND ITS APPLICATION AS ANTIBIOTICS

(51) International classification	:A61P0011000000, A61K0045060000, A61P0001040000, A61P0009120000, A61P0003000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A PROCESS FOR PREPARATION OF HETEROCYCLIC COMPOUNDS AND ITS APPLICATION AS ANTIBIOTICS The present disclosure provides a process for preparation of compound of Formula 5 I, its pharmaceutically acceptable salts, stereoisomers, tautomers, polymorphs, solvates, intermediates, and metabolites thereof, the process comprising: reacting a heterocyclyl compound or heteroaryl compound of Formula II with a carbonyl compound of Formula III in presence of a catalyst to obtain the compound of Formula I, wherein LG is selected from hydrogen, halogen, hydroxy, C6-15 aryloxy, 10 C1-10 alkoxy, or optionally protected amines; the catalyst is metal doped molybdenum sulphide, and the metal is selected from cobalt, nickel, iron, or lead. Further, the present disclosure provides a process for preparation of a compound of Formula Ia. Furthermore, the present disclosure provides a pharmaceutical composition and a method of treating a disease or a condition to a subject in need 15 thereof.

No. of Pages : 67 No. of Claims : 21

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051795 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A cooling system for an electric vehicle

(51) International classification :B60H0001000000, H05K0007200000, H01L0023473000, H01M0010625000, B60K0011020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A cooling system for an electric vehicle [0031] The present invention discloses a cooling system for an electric vehicle designed to optimize thermal management of high-power electrical components. The cooling system (100) features a three-loop parallel cooling circuit (101), with each loop dedicated to specific components: a first loop (101a) for the motor (102), and second (101b) and third (101c) loops for motor controllers (103, 104) and high voltage components (105, 110). A flow control unit (106) strategically regulates coolant flow, maintaining a higher flow rate in the loop connected to the motor (102), thereby ensuring efficient cooling. Additionally, a radiator (107) facilitates heat exchange, while a pump (108) circulates the coolant through the system (100). A controller (109) dynamically adjusts the pump (108) and flow control unit (106) based on real-time cooling needs. (Figure 1)

No. of Pages : 17 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202441051808 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PRECISION AGRICULTURE SYSTEM AND METHOD USING IOT SENSORS

(51) International classification :G06Q0050020000, G06Q0010060000, H04L0067120000, G06N0005040000, A01G0025160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention introduces a precision agriculture system leveraging Internet of Things (IoT) sensors to enhance agricultural efficiency and productivity. Traditional farming practices often overlook variability in soil and crop conditions, leading to suboptimal resource utilization and environmental impact. This novel system addresses these challenges by deploying IoT sensors across agricultural fields to monitor key parameters such as soil moisture, temperature, humidity, and nutrient levels in real-time. Data collected from these sensors is transmitted via a wireless network to a central processing unit equipped with advanced algorithms. These algorithms analyze the data to generate actionable insights and recommendations for farmers. A user-friendly interface facilitates intuitive access to these insights, empowering farmers to make informed decisions on irrigation scheduling, fertilization, and pest management. By optimizing resource allocation and enhancing crop health, the proposed system aims to significantly improve agricultural yield while minimizing environmental footprint. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051809 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PROBABILISTIC METHOD IN APPLIED MATHEMATICS FOR RECONSTRUCTING POWER SYSTEM

(51) International classification :G06N0007000000, H02J0013000000, H02J0003380000, G06F0011140000, H02J0003000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention introduces a probabilistic method for reconstructing power systems, leveraging advanced techniques in applied mathematics to enhance the accuracy and efficiency of system reconstruction processes. Traditional methods often face challenges in handling uncertainties inherent in power grid operations, leading to limitations in reliability and resilience during disruptions. The proposed method addresses these challenges by integrating probabilistic models with real-time data from sensors and devices within the power system. Key components include data collection and preprocessing, development of probabilistic models using Bayesian networks and Monte Carlo simulations, state estimation, fault detection and isolation, system restoration guidance, and continuous optimization. By incorporating probabilistic approaches, the invention improves system stability, reliability, and resilience, thereby supporting enhanced operational integrity and reduced downtime in power grid management. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202441051813 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR REAL-TIME CONSTRUCTION AND CIVIL ENGINEERING INTERFACES FOR BUILDING SIMULATOR GENERATOR AND INTERIOR DISPLAY

(51) International classification :G06F0030200000, G06T0019000000, G06T0017000000, G06Q0010060000, H04W0004029000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system and method for real-time construction and civil engineering interfaces designed to work with building simulator generators and interior displays. The system comprises a data processing unit that integrates and processes data from various sources, real-time data acquisition modules that collect environmental and structural information, and advanced simulation software that generates real-time simulations of building structures and environments. The interior display interfaces present these simulations through high-resolution displays and interactive devices, enabling users to interact with and visualize the simulated environments. This system enhances planning, design, and decision-making processes by providing accurate, up-to-date simulations and interactive displays, thereby addressing the deficiencies of existing systems that lack real-time capabilities and comprehensive integration. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/07/2024

(21) Application No.202441051814 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : A NETWORK-BASED VIRTUAL RESEARCH LABORATORY ANDCOLLABORATION PORTAL WITH WHICH BIOLOGICAL AND LIFESCIENCES RESEARCH

(51) International classification	:G16B0050000000, G16H0040670000, B01L0003020000, B01L0009020000, G16H0010400000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

ABSTRACT A NETWORK-BASED VIRTUAL RESEARCH LABORATORY AND COLLABORATION PORTAL WITH WHICH BIOLOGICAL AND LIFE SCIENCES RESEARCH The method for the development of the use of 5 a virtual laboratory, scientists from various physical places, each with their own specialization, data, and/or computer power, might effectively cooperate on ongoing projects rather than just during meetings. In practice, this kind of initiative would increase and combine resources, promote organized dialogue, and advance common objectives. We found 26 papers that were exclusively about the use of 10 virtual labs in biology teaching after doing a thorough review. Overall, the results of the literature analysis showed that virtual laboratories are frequently employed for subjects that appear abstract. These cover themes related to cell and molecular biology, microbiology, genetics, and other useful subjects including anatomy and biotechnology. Thanks to virtual labs, remote learning has progressed from theoretical to practical sciences. While students 15 can perform their experiments remotely with virtual laboratories, assessing student achievement and cooperation with learning analytics presents a difficulty. FIG.1

No. of Pages : 16 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202441051816 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DETECTION OF HARASSMENT AND FRAUD IN DIGITAL COMMUNICATIONS THROUGH INTEGRATION OF EMOTION AND LINGUISTIC ANALYSIS

(51) International classification :G10L0015260000, G06F0040300000, G10L0025630000, G06K0009620000, G10L0015180000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract This work develops an innovative system aimed at mitigating harassment and fraudulent communications, particularly focused on protecting vulnerable groups. It integrates an advanced emotion detection tool, to analyse voice signals for distress or malintent. Post emotional cue identification, the system employs speech recognition technology, advancing to convert voice to text. The transcribed data undergoes analysis employing cutting-edge techniques in Natural Language Processing (NLP) and Machine Learning (ML) algorithms such as Decision Trees, Random Forest, Logistic Regression, and Naive Bayes for comprehensive analysis. The combination of emotional and linguistic analysis significantly boosts the system's ability to detect harmful communications, allowing for timely alerts to authorities or guardians in potential harassment or fraud cases. This system represents a significant step towards improving communication safety and fostering a more secure environment. The results demonstrate its effectiveness in identifying threatening communications, offering a promising solution to a critical societal issue.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/07/2024

(21) Application No.202441051817 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : ENHANCING WELLNESS WITH IAHN INTEGRATION: THE PRECISION HEALTH APPROACH

(51) International classification	:G16H0050300000, G16H0050200000, A61B0005000000, G16H0010600000, G16H0015000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

The Precision health, is now an emerging trend in the healthcare, tailoring medical care and interventions to the individual characteristics of patient, that result maximizing well-being as health outcome. The design of personalized care and medicine is a time consuming process using conventional processes due to lack of personal care. One more contributing factor in conventional process is no proper monitoring on further disease recovery status and self patient discipline. In proposed approach, each patient is to be monitored and a eco-friendly medicine is prepared as per the symptoms of disease using Improved adaptive health navigator. The process adopted would recommend precision medicine based on many factors such as lifestyle factors, genomic information, family history, and other influencing parameters. The precision medicine provides accurate and result oriented output in terms of speed recovery. The proactive approach involved in this would benefit the patient in terms of early detection, illness reduction, motivates the quality of life, and optimize the resource allocation. The proposed IAHN leads to precision medicine by following up of medicine development by continuously monitoring health, and conditions, motivates the doctors, diagnostic tools to take decisions for prevention of disease.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202441051819 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LEARNING TO GENERATE: TEXT GUIDED VISUAL FEATURE EXTRACTION FOR IMAGE CAPTIONING USING JOINT TWO-PHASE LEARNING

(51) International classification :G06N0003040000, G06N0003080000, G06K0009620000, G06N0020000000, H04N0021488000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In the domain of image captioning and its associated challenges, the demand for expansive training datasets poses significant obstacles due to the cost and time associated with collecting human-annotated images. This paper introduced a novel image captioning methodology that leverages both real and synthetic data, mitigating the need for extensive human-generated annotations. Addressing issues of sample imbalance and missing concepts, the proposed approach employs a concept detection mechanism to identify semantic concepts accurately. This abundance of concepts is then fed into a caption generator 102, implementing an automated selection process for more precise captions. The methodology integrates a Joint Two-Phase Learning Model 101,102 Algorithm, emphasizing automatic feature extraction, yielding state-of-the-art performance in deep learning, and enhancing model accessibility. The proposed architecture includes modules for exploratory data analysis and preprocessing, feature maps with a multi-level attention mechanism, and image captioning with a multi-layer neural network, providing a comprehensive framework for advancing image captioning. Additionally, attention-based Generative Adversarial Networks (GAN) is incorporated, offering a nuanced approach to image generation 101. The synergistic integration of these components forms a holistic methodology, promising advancements in the synthesis of textual descriptions for images.

No. of Pages : 9 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202441051840 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SECURITY ENHANCED SMART PACKAGE DELIVERY BOX AND METHOD THEREOF

(51) International classification :G06Q0010080000, H04N0007180000, G07C0009000000, A47G0029140000, E05B0047000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Title: A Security Enhanced Smart Package Delivery Box and Method Thereof The invention discloses a security enhanced smart package delivery box and its operational methodology. The device addresses the need for security measures in package delivery systems. The smart package delivery box encompasses a package storage unit (10), a mail/newspaper storage unit (20) a general-purpose storage unit (30) LED indication system, LCD display (92), start button (91), keypad (80) integrated with an electronic control unit (70). Notably, security enhancements are achieved through OTP generation for unlocking an electromagnetic door lock (20) and an alert system equipped with a camera (90), weight sensor (40), ultrasonic sensor (50), vibration sensor and GPS modules. The invention encompasses a method detailing the operational framework of the smart package delivery box. The advantages include its simplicity in design, cost-effectiveness, versatility, user-friendliness, real-time monitoring capabilities, security and safety features. Figure 1

No. of Pages : 27 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/07/2024

(21) Application No.202441051844 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : EFFECT OF ECCENTRICITY RATIO ON JOURNAL TRAJECTORY IN THREE-LOBE JOURNAL BEARING

(51) International classification :F04C0002080000, F16C0017020000, F16C0033100000, F04C0014220000, F16C0033140000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Fluid film bearings are used in heavy machinery for supporting loads which are subjected to either static or dynamic. Due to this load the rotating shafts centres move away from the centre of the bearing. Due to this deviation of the journal axis from the bearing centre eccentricity is developed. This pulls the journal near to the bearing surface by decreasing the film thickness between the journal and bearing during relative motion. The film pressure is increased to at an edge, which leads to vibrations of the journal. The uneven pressure distribution can be reduced by dividing the projected area of the bearing into lobes. These lobes create film pressure which supports the journal during loading. In this paper three lobe journal bearing characteristics have been investigated for different eccentricity ratios. The journal trajectory is plotted for eccentricity ratio considered from the experimental investigation. The effect of eccentricity ratio on the journal centre trajectory is studied.

No. of Pages : 6 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024

(21) Application No.202441051848 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : Sensor based railroad automated crossing gate

(51) International classification :B61L0029280000, H04B0007260000, B61L0029220000, F21S0008080000, B61L0029320000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present innovation is related to designing and developing a sensor-based automatic gate controlling system for rail road level crossing applications to prevent accidents. The disclosed invention uses sensors to detect the speed of the train when it is far away from the level crossing gate and the time required to reach the gates is calculated by a controller. The controller displays the pre-determined time and automatically closes the gates before the train reaches the gates. Another sensor which detects the train when it passes through the gates provides the information to the controller and then the controller opens the gates automatically.

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202441051855 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CRYOGENIC TREATMENT FOR ENHANCED WEAR RESISTANCE AND HARDNESS OF HIGH-SPEED STEEL CUTTING TOOLS: A METHOD FOR MINIMIZING TOOL WEAR AND IMPROVING MACHINING EFFICIENCY

(51) International classification	:C21D0006040000, C23C0014060000, B23Q0017090000, G05B0019406500, C23C0014320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Abstract Cryogenic Treatment for Enhanced Wear Resistance and Hardness of High-Speed Steel Cutting Tools: A Method for Minimizing Tool Wear and Improving Machining Efficiency The present invention discloses a method for enhancing the wear resistance and hardness of cutting tools, particularly high-speed steel tools, through deep cryogenic treatment. By immersing the cutting tools in a cryogenic solution, such as liquid nitrogen, at sub-zero temperatures, the method aims to improve tool longevity, reduce tool wear, and enhance machining efficiency. Experimental evidence supports the effectiveness of cryogenic treatment in enhancing the wear properties of cutting tools, leading to improved tool performance during machining operations.

No. of Pages : 21 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202441051856 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD AND SYSTEM FOR AUGMENTING WIRELESS SENSOR NETWORK LONGEVITY VIA HIERARCHICAL ROUTING AND PARTITIONING TECHNIQUES

(51) International classification	:H04W0084180000, H04W0040100000, H04L0045000000, H04W0052020000, H04W0040320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
7. Abstract: The present invention introduces an innovative method and system for enhancing the longevity and energy efficiency of wireless sensor networks (WSNs) through advanced hierarchical routing protocols, chain-structured algorithms, and strategic network partitioning techniques. This invention optimizes energy consumption by organizing sensor nodes into hierarchical clusters with designated cluster heads based on their energy reserves and proximity to a base station. Within each cluster, nodes are arranged in a chain structure to minimize energy use during data transmission. Additionally, the network is partitioned into smaller segments to reduce communication distances, further conserving energy. The use of Prim's Algorithm for forming Minimum Spanning Trees (MST) within each cluster ensures optimal data transmission paths are utilized, reducing overall energy expenditure. This system is designed to improve network reliability and operational efficiency, significantly extending the usable life of sensor networks in various applications.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/07/2024

(21) Application No.202441051857 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : AI BASED SMART WATER AND NUTRIENT RECYCLING SYSTEM IN AEROPONICS FOR REAL-TIME GROWTH MONITORING AND ADJUSTMENT FOR AUTONOMOUS PLANT CULTIVATION USING DEEP LEARNING ALGORITHMS

(51) International classification	:A01G0031020000, G06N0003080000, A01G0031000000, G06Q0050020000, G06N0003040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

AI based Smart Water and Nutrient Recycling System in Aeroponics for Real-Time Growth Monitoring and Adjustment for Autonomous Plant Cultivation using Deep Learning Algorithms ABSTRACT: Given the rising global population, shrinking arable land, and growing need for organic food, it is crucial to develop novel farming systems. Conventional agriculture, which involves the excessive use of chemicals, presents health and environmental risks. This research presents a complex system that combines image processing, deep learning, and precise nutrient dosing to enhance the efficiency of soil-less farming, addressing the issues associated with it. The IoT architecture being suggested comprises of four distinct layers: the device layer, fog layer, cloud layer, and application layer. After the sensors in the device layer collect data on the monitored variables, the fog layer analyzes and transmits the information to the Thingspeak and Firebase servers. Within the cloud layer, Thingspeak utilizes its IoT analytic tools to examine the data collected from the monitored variables in the greenhouse. This analysis results in the creation of historical data and visual representations of the variables' behavior, along with an assessment of the system's operational condition. Firebase serves as a database for storing the processed photos captured in the fog layer, which are utilized for monitoring the condition of the leaves and roots. The app presents the results of the analysis of monitored variables and image processing. Its purpose is to visualize the crop's condition and understand the monitoring system's role in case of power outage or service line failure in the fog layer, in order to prevent information loss.

No. of Pages : 10 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202441051871 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SECURE IOT DATA TRANSMISSION USING BLOCKCHAIN AND AI

(51) International classification :H04L0009320000, G06F0021640000, H04L0067120000, H04L0009060000, G06Q0030000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
SECURE IOT DATA TRANSMISSION USING BLOCKCHAIN AND AI ABSTRACT This invention introduces a revolutionary solution to secure IoT data transmission that integrates artificial intelligence and blockchain technology. The primary objective is to address the vulnerabilities of IoT systems by utilising a decentralised and intelligent framework to guarantee data integrity, secrecy, and authenticity. This invention generates and accumulates data through the use of IoT devices, which are subsequently encrypted and transmitted to a blockchain network. The blockchain functions as a secure, immutable ledger that maintains a record of all data transactions. This decentralised approach reduces the likelihood of a single point of failure, thereby enhancing the overall security of the IoT ecosystem. A robust security mechanism is established by the integration of AI and blockchain. The invention's capacity to detect and mitigate threats in real time is enhanced by AI, while blockchain renders data tamper-proof and traceable. This dual approach not only ensures the security of data transmission but also cultivates trust between IoT devices and networks. In summary, this invention offers a comprehensive solution to secure IoT data transmission, guaranteeing data integrity, secrecy, and authenticity by utilising blockchain technology and artificial intelligence in conjunction.

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202441051876 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR TIMELINE GENERATION OF RECORDS

(51) International classification	:G06T0005000000, H04N0005232000, H04N0021472000, G06T0019000000, G06F0003010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A SYSTEM AND A METHOD FOR TIMELINE GENERATION OF RECORDS The present disclosure discloses a system(100) and a method(200) for timeline generation of records. The system(100) comprises a capturing device(102) mounted on the entrance and exit of an area to capture low-quality input video containing one or more users; an enhancing module(104) to enhance said low-quality input video to generate an enhanced video streaming; a frame extractor module(106) to convert said enhanced video streaming into one or more image frames; a registration module(108) to create a new Face ID when the user's face being detected for a first time and store said Face ID in a repository(112); a feature extractor module(110) to extract the user's in-time, user details, and said Face ID from said repository(112) on successful detection of the user's face by means of OCR and track said user's face to detect out-time of the user, and to generate a timeline generation record for each user in real-time.

No. of Pages : 25 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202441051889 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SUPPLY CHAIN RESILIENCE AND RISK MANAGEMENT: STRATEGIES FOR MITIGATING GLOBAL SUPPLY CHAIN DISRUPTIONS

(51) International classification :G06Q0010060000, G16H0050300000, G16H0020100000, G06Q0010080000, G06Q0040080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention presents a robust framework designed to enhance the resilience and risk management capabilities of global supply chains in the face of disruptions. Leveraging advanced technologies including predictive analytics, IoT, and automated decision-making, the framework integrates a predictive analytics module for preemptive risk assessment, real-time monitoring systems for continuous operational oversight, and dynamic response mechanisms for agile mitigation strategies. A user-friendly risk management dashboard consolidates real-time data and actionable insights, empowering supply chain managers to proactively identify and mitigate potential disruptions, optimize resource allocation, and maintain operational continuity. By facilitating transparency, efficiency, and responsiveness across supply chain networks, this invention offers a transformative approach to navigating the complexities of modern supply chain dynamics effectively.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024

(21) Application No.202441051892 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN AND FABRICATION OF AUTOMATED WEIGHING AND PACKING DEVICE

(51) International classification	:B65B0025060000, B65B0001320000, B65B0005040000, G05B0019418000, B65B0051020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This research delves into the pioneering domain of automated packaging, particularly tailored to the intricate needs of small-scale stores and local enterprises. The packaging landscape is presently catered predominantly to large-scale manufacturing, with the tailored needs of smaller entities being neglected. The current packaging scenario consists of keeping edible goods in open storage, which raises concerns about hygiene. The compromise between hygiene and customer freedom in current retail practices is highlighted, emphasizing the necessity for controlled, automated packaging systems in small-scale environments. Departing from conventional methods prevalent in larger manufacturing, an innovative system centered around servo motors as primary actuators and an Arduino UNO microcontroller for precise control is introduced in this study. Contrary to traditional conveyor based systems, a stationary workflow is embraced, with human intervention seamlessly integrated into each packaging stage. A paradigm shift in industrial automation, extending its scope to smaller enterprises, is underscored by the literature review. Control systems are redefined and sensor-based feedback is integrated, harmonizing human ingenuity with automated precision. Crucially, hygiene concerns prevalent in supermarket practices are addressed, with standards elevated by minimizing direct human contact with unpackaged items, thus ensuring a more sanitized packaging environment. The weighing and packing mechanism are achieved using a series of servo motors and a load cell for the weighing process. The packing process is carried out using a heat sealer along with a solenoid actuator. The process is controlled by an Arduino UNO microcontroller. User interaction with the automatic weighing and packing device is provided by an LCD display and tactile push buttons

No. of Pages : 7 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024

(21) Application No.202441051902 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN AND IMPLIMENTATION OF AI-POWERED HUMANOID SERVICE ROBOT

(51) International classification :B25J0009160000, G06F0003010000, G05D0001020000, B25J0011000000, G06N0020000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Implement advanced machine learning algorithms for real-time decision-making and learning capabilities. Develop a robust perception system using computer vision and sensor fusion for environmental awareness. Integrate natural language processing (NLP) to enable effective communication with humans. To Create a reliable navigation system for the robot, for allowing it to navigate and move in dynamic environments autonomously. Implement obstacle detection and avoidance. mechanisms for safe and efficient movement. Develop a responsive and natural human-robot interaction system, including facial recognition, gesture recognition, and emotion detection. Implement recognition for effective communication with users. Implement safety features to ensure the robot's actions are within prede fined ethical and safety boundaries. speech synthesis and develop fail-safe mechanisms and emergency protocols to handle unexpected situations. By addressing these objectives, the AI-powered humanoid robot project aims to create an intelligent and versatile robotic platform capable of interacting with the environment and humans in a safe, efficient, and adaptive manner.

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202441051904 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PRESA RAKSHA - THE DAM MONITORING SYSTEM

(51) International classification :G06N0020000000, G06N0003080000, G16H0040670000, G01W0001100000, G01W0001020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
We incorporate external meteorological data from IMD, including wind speed, direction, and sunshine duration, enriching our environmental analysis. The Arduino Mega 2560 serves as a central hub, receiving data from sensors, acting as a slave unit for initial processing before preparing data for advanced analysis. Processed data from Arduino is transmitted to Raspberry Pi 4, marking the shift from data collection to intelligent ML-based analysis.

No. of Pages : 5 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024
(21) Application No.202441051916 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MULTIRESONATOR CONFIGURATIONS FOR CHIPLESS RFID

(51) International classification :G06K0019067000, H01Q0001220000, H01P0001203000, G06K0007100000, G06K0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to the configuration of multiresonator for chipless RFID tag. The multiresonator as configured provide enhanced surface encoding capacity by changing pattern and dimension of the resonator structure. The I-shaped Stepped Impedance Resonators (SIRs) designed with adjustable dimensions to achieve distinct resonating frequencies. The multiresonators use Absence and Presence Coding (APC) and Frequency Shift Coding (FSC) techniques for encoding of the Chipless RFID tag identity. Multiresonators with adjustable dimension by employing Frequency Shifting Coding can indeed generate a higher number of logic states compared to Absence and Presence Coding in chipless RFID multiresonators.

No. of Pages : 19 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024
(21) Application No.202441051918 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A COMPREHENSIVE IOT- INTEGRATED MEDICINE VENDING SYSTEM

(51) International classification :G06Q0030020000, G07F0009000000, G07F0009020000, G07F0011000000, G07F0013060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Recognizing the challenges faced by consumers in traditional retail settings, where long lines, negotiations, and physical contact are prevalent, our engineering initiative aims to enhance convenience and comfort. Introducing vending machines as a solution addresses these issues, especially pertinent during the ongoing pandemic. The growth projections for the vending machine industry, expected to reach $146.6 billion by 2027, underscore its significance. Despite global setbacks from the pandemic, the retail vending machine market is thriving with a projected CAGR of 10.7% from 2022 to 2030, valued at $51.91 billion in 2021. This growth is fueled by increasing consumer demand for on-the-go snacks and beverages, aligning with hectic lifestyles. Vending machines offer quick and convenient access to products, from offices to high-end restaurants and public places. In 2021, the offices segment dominated, holding a substantial 42.7% revenue share and poised to maintain this dominance. Vending machines in workplaces provide employees with an accessible, affordable, and swift option for purchasing food items. This innovative approach not only caters to current challenges but also aligns with the evolving consumer preferences for efficient and contactless retail experiences, positioning vending machines as an indispensable component of the modern retail landscape.

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024
(21) Application No.202441051919 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN OF ROBOTIC ARM FOR RELOCATING HAZARDOUS MATERIALS IN CHEMICAL INDUSTRY

(51) International classification	:B25J0009160000, B25J0015000000, B25J0011000000, G05B0019418000, B25J0015060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Robotic arm has become popular in the world of robotics. The essential part of the robotic arm is a programmable microcontroller-based brick capable of driving basically 3 stepper motors designs to form an anthropomorphic structure. In this anticipates an automated arm with four degrees of opportunity is composed and can pick the items with a particular weight and place them in a sought area. To encourage the lifting of the items, motors are utilized. This abstract explains the method of interfacing the robotic arm motor with the programmed A based microcontroller which is used to control the robot operations. A sample robot which can grab and release small objects is built to demonstrate the method explained. In our project, the important application is to control multiple operations and movement of arm using time-based Microcontroller. in the first phase, the project focuses on giving the inputs to the microcontroller so as to detect the number of different workstations available in the industry which are specified by the user. Automated pick and place a framework comprise of a preparing station, testing station, and sorting station.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024
(21) Application No.202441051920 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A NEW CLASSIFICATION FOR TEMPOROMANDIBULAR DISORDERS BASED ON ALGOMETER READINGS

(51) International classification	:A61B0005000000, G16H0010200000, A61P0025240000, C07D0487040000, A61K0031415000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Temporomandibular joint disorder (TMDs) pain intensity has mostly been a subjective study of pain experienced by the patients. There are studies evaluating pain perception in TMD patients but limited literature is present quantifying the pain perception. It has been proposed that TMD may be a part of generalized pain condition. There is a need for a study investigating the general pain perception in TMD patients order to understand the underlying mechanism of TMD. The readings determined by algometer gives valuable proposition to adjust the dosage of analgesics before any treatment is initiated and also if any behavioural / psychosocial therapy needs to be provided. An algometer is used to measure the general pain pressure threshold (GPPT) at hypothenar region of healthy individuals and TMD patients three times. Mean T score was considered the GPPT of the subject. Upon analysis higher mean T score was recorded in healthy subjects compared to TMD subjects and the difference between them was found to be statistically significant ($P<0.001$). The mean T score was higher in males compared to females but the difference between them was not statistically significant ($P>0.05$). Temporomandibular disorders (TMD) tend to exhibit a lower pain threshold compared to those without the condition. This paper aids in providing a framework for classification of TMD on the basis of readings of pain pressure threshold on algometer. The classification aims at categorizing the treatment modality for TMD based on the reading considering if any behavioural / psychosocial therapy needs to be provided.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024

(21) Application No.202441051933 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : NAKAZA – AN AUTOMATED WATER HYACINTH REMOVAL ROVER

(51) International classification :B33Y0010000000, B33Y0080000000, H01L0021306500, A61K0036480000, C02F0009000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
NAKAZA: Automated IoT based floating rover for water hyacinth removal. Advanced sensors detect obstacles, monitor environment, and apply herbicide precisely. User-friendly 3D-printed controller and Hawk Eye app. Adaptive design for diverse water conditions, eco-friendly with minimal impact on ecosystems.

No. of Pages : 5 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024

(21) Application No.202441051936 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MICRO PLASTIC INFUSED POLYBENZOXAZINE COATINGS FOR ENHANCED PIPELINE CORROSION PROTECTION

(51) International classification	:G08B0013196000, B32B0001080000, B01J0037340000, B23K0001000000, B32B0027080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The proposed invention relates to microplastic-infused polybenzoxazine coatings designed to enhance pipeline corrosion protection. These advanced coatings leverage the superior thermal stability, mechanical strength, and chemical resistance of polybenzoxazine polymers, combined with the reinforcing properties of microplastics. The resulting composite material provides an effective barrier against corrosive agents, significantly extending the service life of pipelines in harsh industrial environments. The development process includes uniform dispersion of microplastics within the polybenzoxazine matrix, followed by application using standard industrial techniques. Rigorous testing demonstrates the coatings' ability to withstand mechanical stress, high temperatures, and chemical exposure, offering substantial economic and environmental benefits. This innovative approach addresses the limitations of traditional corrosion protection methods, providing a robust and sustainable solution for industries such as oil and gas, chemical processing, and water treatment.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024

(21) Application No.202441051942 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR WASTEWATER TREATMENT USING MICROBIAL FUEL CELL TECHNOLOGY

(51) International classification	:H01M0008160000, C02F0003000000, C02F0003340000, C02F0009000000, C02F0101300000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention discloses a system and method for wastewater treatment using microbial fuel cell (MFC) technology. The system integrates a primary treatment unit to remove large solids, followed by an innovative MFC unit comprising anode and cathode chambers separated by a proton exchange membrane (PEM). Electroactive microorganisms in the anode chamber oxidize organic pollutants in wastewater, releasing electrons and protons. These electrons flow through an external circuit, generating electricity, while protons transfer through the PEM to the cathode chamber where they combine with oxygen to form water. A power management unit stores and regulates the generated electricity. The treated water undergoes secondary treatment before discharge. This invention aims to enhance treatment efficiency, maximize electricity generation, ensure scalability, and provide operational stability in wastewater treatment processes. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 24 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024

(21) Application No.202441051943 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN ACCESSIBLE SYSTEM AND METHOD FOR WATER DISPENSING TO INDIVIDUALS WITH VISUAL IMPAIRMENTS

(51) International classification :G09B0021000000, A61H0003060000, G10L0015220000, B66F0009060000, A47J0031440000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention relates to a smart water dispenser designed to enhance accessibility for visually impaired individuals. The dispenser comprises features such as container detection, container fill detection, water level monitoring, speech commands, and automated port control. The container detection system ensures the presence of a container before dispensing water, incorporating LED feedback for the hearing impaired to minimize wastage. The container fill detection system utilizes buzzers and LEDs to prevent overflow, while low water levels are indicated by red LEDs and buzzers. The speech interface aids users in locating the dispenser and managing power usage by controlling the LEDs. Automated port control facilitates easy access by automating the opening and closing of ports, thereby reducing water wastage. The integration of LEDs and buzzers enhances overall accessibility for individuals with impairments and absent-minded users, promoting independence and inclusivity in water access for visually impaired individuals.

No. of Pages : 12 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024

(21) Application No.202441051946 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A CUSTOMIZABLE AI BASED LEATHER QUALITY PREDICTION SYSTEM

(51) International classification :G06Q0010040000, H04B0017373000, G06N0003040000, G06Q0010100000, H04W0024080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: Title: A Customizable AI Based Leather Quality Prediction System The present disclosure proposes a customizable AI based leather quality prediction system. The customizable AI based leather quality prediction system (100) comprises an input module (102), a training module (104), and a prediction module (106). The customizable AI based leather quality prediction system (100) is automatic and is cost efficient with high productivity. The customizable AI based leather quality prediction system (100) utilizes advanced machine learning techniques to make accurate predictions about leather quality. The customizable AI based leather quality prediction system (100) is a flexible and efficient solution for leather quality assessment.

No. of Pages : 10 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024
(21) Application No.202441051947 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A KIT AND COMPOSITION FOR TREATING EDEMA IN PATIENTS AND METHOD OF USE

(51) International classification :A61K0045060000, A61P0019080000, C07K0016180000, A61B0017132000, A61P0007100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: Title: A Kit and Composition for Treating Edema in Patients and Method of Use The present disclosure proposes a kit (100) and composition for treating edema, necrotizing fasciitis, restoring muscle perfusion, and limiting bacterial spread. The kit (100) comprises a topical antibiotic cream (102), plurality of antiseptic gauzes (104), an ordho cloth roller bandage (106), a crepe roller (108), a super absorbent gamjee roller (110), and a pair of surgical gloves (112). The proposed kit (100) treat edema of any type, including prevention of death through early intervention, avoiding surgery, minimizing morbidity, and reducing patient expenditure. The proposed kit (100) decreases muscle compartment pressure, increases blood flow to affected muscles, and prevents tissue necrosis. The proposed kit (100) significantly reduces patient expenditure compared to conventional treatments, making it affordable for a broader population.

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024

(21) Application No.202441051949 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EDGE AI-DRIVEN PREDICTIVE MAINTENANCE SYSTEM FOR AUTOMOTIVE VEHICLES

(51) International classification :G06N0020000000, G06Q0010000000, G06Q0030020000, H04L0067120000, G06N0005040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system (100) for automotive vehicles integrating large language models (LLMs) (102), machine learning (ML) (106), artificial intelligence (AI), and Internet of Things (IoT) (102) technologies to enhance predictive maintenance, support, and automation capabilities. By embedding IoT-based LLMs (102) directly within the vehicle's computational infrastructure and utilizing local data storage, the system improves failure prediction accuracy to ensure continuous functionality during network disruptions, and enables autonomous responses to emergencies. The integration of ML (106) algorithms and AI (108) systems enables real-time analysis of vehicle data for predictive maintenance and optimal performance scheduling, while in emergency scenarios, the system autonomously triggers safety protocols and adjusts vehicle conditions to enhance passenger safety. The system (100) enhances vehicle reliability and safety across various applications, including commercial trucks, buses, industrial machinery, and agricultural vehicles. The figure associated with the abstract is Fig. 1.

No. of Pages : 22 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024
(21) Application No.202441051950 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : TRANSFORMATIVE APPLICATIONS OF AI AND ML IN AGRICULTURE: REVOLUTIONIZING FARMING PRACTICES FOR SUSTAINABILITY

(51) International classification	:G06Q0050020000, G06N0020000000, G06Q0010040000, G06N0005040000, G06N0003040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT This paper explores the transformative potential of artificial intelligence (AI) and machine learning (ML) in the agricultural sector. It highlights the challenges faced by modern agriculture, including food security, climate change, resource scarcity, and socioeconomic factors. The paper emphasizes the need for technological advancements to address these challenges and ensure a sustainable future for agriculture. A key focus is on the applications of AI and ML, showcasing how these technologies can revolutionize farming practices. The paper details how AI and ML can be used for crop and soil monitoring, insect and disease detection, livestock health monitoring, precision agriculture, yield prediction, and improved decision-making. By leveraging data-driven insights, AI and ML empower farmers to optimize resource use, increase yields, and minimize environmental impact.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024

(21) Application No.202441051952 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD OF SOCIAL MEDIA MARKETING INFLUENCES CONSUMER PERCEPTIONS AND BRAND LOYALTY

(51) International classification	:G06Q0030020000, G06N0020000000, G06F0011340000, G06N0005040000, G06Q0010000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
This system and method leverage social media marketing to influence consumer perceptions and build brand loyalty through a multi-faceted approach. It integrates real-time data collection, advanced analytics, and predictive modeling to understand and anticipate consumer behavior. The system optimizes content distribution across platforms, engages consumers through personalized interactions, and collaborates with key influencers for authentic promotion. It incorporates dynamic loyalty programs, robust performance monitoring, and continuous optimization via A/B testing. The use of AI and machine learning enhances automation and personalization, while cloud-based infrastructure ensures scalability and flexibility. By seamlessly integrating with existing marketing tools and employing a feedback-driven improvement process, this system effectively enhances brand perception, increases consumer loyalty, and drives sales.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441051955 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CLIORIA TERNATEA POWDER AS FOOD ADDITIVE /FOOD COLORANT

(51) International classification :A23L5/43, A61K36/48, A23L33/105, C09B61/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Rapid urbanisation appears to have a great impact on crucial aspect of food consumption in both developing and developed countries. Industrialisation leads to availability of more processes foods, food markets have become an important source of affordable food for many millions of people. With an increase in urbanisation, industrialisation and changes in lifestyle there is a great demand for convenience, comfortable as well as nutritious food products. The increased health concerns have made available more health-promoting products in the market. A variety of processed and coloured products were available in the market to attract the consumers. The colors and additives were frequently used in the processed foods.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441051956 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BLOCKCHAIN-BASED ACCOUNTING AND AUDIT PLATFORM USING ARTIFICIAL INTELLIGENCE

(51) International classification	:H04L0009320000, G06Q0030020000, G06Q0040000000, G06Q0020400000, H04L0009060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
A blockchain-based accounting and audit platform that revolutionizes energy credit management through the integration of secure ledger technology and artificial intelligence. The platform provides an end-to-end solution for energy-related credits, offering transparency, automation, and enhanced data analysis capabilities. By leveraging smart contracts and AI algorithms, the system streamlines credit generation, trading, and retirement processes, while ensuring an immutable and verifiable audit trail. This innovative approach reduces costs, improves efficiency, and provides valuable insights for informed decision-making in the energy credit domain.

No. of Pages : 8 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202441051965 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A GANTRY ROBOTIC PRINTING SYSTEM FOR DIRECT-TO-SHAPE PRINTING

(51) International classification	:B33Y0050020000, B33Y0030000000, B41J0002175000, B33Y0010000000, B29C0064393000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
7. ABSTRACT A gantry robotic printing system designed for direct-to-shape printing is disclosed. The system comprises a gantry structure with a base frame, two vertical columns, and a mobile horizontal beam, supporting precise movements facilitated by linear actuators or motors along X, Y, and Z axes. Affixed to the gantry structure is a printhead capable of dispensing printing materials onto three-dimensional surfaces. The system incorporates a 6-axis mobility system with rotary axes A, B, and C, enabling the printhead to maintain a consistent orientation relative to the target surface. An integrated ink supply system ensures static and regulated ink flow, comprising ink reservoirs, pumps, filters, dampers, pressure sensors, and an inlet tank. A control system manages movement of linear and rotary axes, printing process, and includes a motion controller, print head controller, software interface, and sensors providing real-time feedback on operational parameters. Additional features include precise movements with a precision of less than 0.1 millimeters, encoders for position control, a printhead cleaning mechanism, a fluid level sensor, and a feedback loop for adjusting printing parameters based on real-time sensor data. The figure associated with the abstract is Fig. 1.

No. of Pages : 20 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024

(21) Application No.202441051976 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT BASED AGRICULTURAL DISEASE DETECTION SYSTEM

(51) International classification	:G06Q0050020000, H04L0067520000, H04W0012060000, H04L0067120000, G06T0007000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The IOT based agricultural disease detection system uses AI/ML technology to predict disease in agricultural corps and deliver results to the users by mobile application.

No. of Pages : 6 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024

(21) Application No.202441051980 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ENERGY DEMAND FORECASTING SYSTEM

(51) International classification	:G06N0003040000, G06N0003080000, G06Q0010040000, G06Q0010060000, G06Q0050060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Accurately predicting energy demand is crucial for grid stability, sustainability, and cost reduction. This work explores the application of Long Short-Term Memory (LSTM) and Gated Recurrent Unit (GRU) neural networks for energy demand forecasting. We highlight best practices for data preparation, model architecture, training, and evaluation. Additionally, we showcase the significant industrial applicability of such models across various sectors like utilities, manufacturing, and smart cities. Our findings suggest that LSTM/GRU-based forecasting offers improved reliability, environmental benefits, and personalized customer experiences, paving the way for a more efficient and sustainable energy future.We showcase the potential for industrial applications in various sectors, including utilities, manufacturing, and smart cities, emphasizing improved grid optimization, renewable integration, cost management, and environmental impact

No. of Pages : 9 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441051985 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EVENT EXTRACTION SYSTEM FROM NEWS ARTICLES

(51) International classification :G06F0040295000, G06F0040300000, G06N0020000000, G06F0040205000, G06F0040284000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Event Extraction is the process of gathering knowledge about periodical incidents found in texts, automatically identifying information about what happened and when it happened. In this event extraction we mainly use Named Entity Recognition. Named Entity Recognition is essential for some Natural Language Processing tasks. Named Entity Recognition is sometimes referred to as entity extraction, or identification is the task of identifying and categorizing key information in the text. An entity can be any word or series of words that consistently refers to the same thing. Every detected entity is classified into a predetermined category. NER is a form of natural language processing a subfield of artificial intelligence. NLP is concerned with computer processing and analyzing natural language any language that has developed naturally, rather than artificially such as with computer coding languages. NER is suited to any situation in which a high- level overview of a large quantity of text is helpful. With NER, we can have a glance and understand what the subject or theme of a body of the text and quickly texts based on their relevancy or similarity. But before we begin using one of these libraries to build a model, we need to produce a relevant labelled dataset to train the model.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441051988 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ROULETTE PREDICTION SYSTEM

(51) International classification :G06N0020000000, G06K0009620000, G07F0017320000, G06N0005000000, G06N0020200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Roulette Prediction System aims to develop a predictive model for the roulette game, a popular casino game. This project involves data analysis and various types of machine learning algorithms to predict the outcome of the roulette spins. This involves historical spin data and relevant game parameters in continuous model training. The project begins with the collection of dataset manually from a reference roulette game. This dataset is carefully cleaned and segregated based on the various features like color, odd or even, columns, rows and blocks. In this dynamic nature of roulette, where each spin data will be stored in the database. The machine learning algorithms are used to build this predictive model which is capable of predicting the outcome of roulette spin. Various libraries like matplotlib, pandas and numpy are used for the data visualization like plotting the scattered data and bar graphs. Various classification algorithms like Random Forest algorithm, Decision Tree algorithm are used and evaluated for their predictive performance. Model evaluation is conducted through various metrics like accuracy, precision to ensure the readability. Gaussian NB algorithm resulted with highest accuracy which is of 88% than the other algorithms. Finally, “Roulette Prediction System” project combine data analysis, machine learning to create an innovative tool for predicting roulette spin outcomes

No. of Pages : 9 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441051990 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTERNET OF THINGS BASED CIVIC INFRASTRUCTURE OVERSIGHT AND CONTROL PLATFORM

(51) International classification :H04L0067120000, H04W0084180000, G06Q0050100000, H04W0088160000, G08B0021180000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system and method for monitoring and controlling civic infrastructure using an Internet of Things (IoT) platform. The system includes a network of IoT sensors and actuators deployed across various civic infrastructure components such as roads, bridges, water/sewage systems, public buildings, and other public assets. The sensor data is aggregated and analyzed by a central control platform to provide real-time monitoring and predictive maintenance of the infrastructure. The platform also enables remote control and adjustment of infrastructure components to optimize performance and respond to changing conditions. The invention provides civic authorities with enhanced visibility, control, and efficiency in managing critical public assets and services.

No. of Pages : 8 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441051993 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PIBGYOR FINANCIAL LITERACY ACCOUNTING LEARNING CANVAS

(51) International classification :G06Q0040000000, G06Q0040060000, G09B0019180000, G06Q0040020000, G06T0011200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
PIBGYOR FINANCIAL LITERACY ACCOUNTING CANVAS The PIBGYOR Financial Literacy Accounting Canvas is an innovative framework designed to enhance financial literacy by integrating key accounting principles with practical financial management strategies. This canvas serves as a comprehensive tool for individuals and businesses to systematically understand and apply core financial concepts, enabling better decision-making and financial planning. By categorizing financial elements into distinct sections such as assets, liabilities, income, expenses, and equity, the PIBGYOR canvas simplifies complex financial data into manageable segments. This structured approach not only aids in the clear visualization of financial health but also fosters a deeper comprehension of financial statements and their implications. The canvas incorporates interactive elements and visual aids, making it accessible to users with varying levels of financial expertise. It emphasizes the importance of budgeting, saving, investing, and debt management, providing practical tips and techniques to achieve financial goals. Moreover, the PIBGYOR Financial Literacy Accounting Canvas encourages proactive financial behavior by highlighting the impact of financial decisions on long-term wealth and stability.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441051994 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PROCESS FOR THE PREPARATION OF CRYSTALLINE FORM-A OF SUCCINIC ACID SALT OF 7-CYCLOPENTYL-N, N-DIMETHYL-2-((5-(PIPERAZIN-1-YL) PYRIDIN-2-YL) AMINO)-7H-PYRROLO[2,3-D] PYRIMIDINE-6-CARBOXAMIDE.

(51) International classification	:C07D0487040000, A61K0031519000, C12P0007460000, C07D0471040000, C07D0403060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT An improved process for preparing a crystalline Form-A of succinic acid salt of 7-Cyclopentyl-N, N-dimethyl-2-((5-(piperazin-1-yl) pyridin-2-yl) amino)-7H-pyrrolo[2,3-d] pyrimidine-6- carboxamide. Ribociclib succinate Form-A obtained by the present invention has content of Impurity-D less than about 0.05% by HPLC. (Ribociclib Impurity-D)

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052002 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MOLECULAR SELF-ASSEMBLY AND NANOCHEMISTRY FOR CHEMICAL STRATEGY FOR THE SYNTHESIS OF NANOSTRUCTURES

(51) International classification :B82Y0030000000, B82Y0040000000, B82Y0010000000, B82Y0005000000, C30B0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
[033] The present invention discloses a chemical strategy for synthesizing nanostructures through molecular self-assembly, offering a significant advancement in nanotechnology and nanochemistry. The method involves designing precursor molecules with specific functional groups that facilitate non-covalent interactions, such as hydrogen bonding, van der Waals forces, and p-p stacking. These precursor molecules are dissolved in a suitable solvent and subjected to controlled conditions of temperature, concentration, and pH to promote self-assembly into desired nanostructures. The invention enables precise control over nanostructure formation, with applications spanning electronics, medicine, and materials science. Experimental validation demonstrates the efficacy of the method in producing nanostructures like gold nanorods, polymeric nanocapsules, and carbon nanotubes, characterized by techniques including spectroscopy and microscopy. This innovation opens new avenues for developing advanced nanomaterials with tailored properties for diverse technological applications. Accompanied Drawing [FIGS. 1-3]

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052006 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEEP LEARNING MODEL FOR CLASSIFICATION OF PULMONARY DISEASES (COPD, BRONCHIOLITIS AND HEALTHY CONDITION)

(51) International classification :G06N0003040000, G06N0003080000, G10L0025240000, A61P0011000000, C12Q0001688300
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Respiratory related issues are now-a-days on a rise. This is mainly due to increase in air pollution, sometimes it is also related to the profession of a person or sometimes genetic as well. Exact diagnosis of the disorder depends on the expertise of the doctor which can sometimes come along with a human error. In this approach a cost-effective deep learning model is designed which can classify pulmonary diseases (Chronic Obstructive Pulmonary Disease - COPD and Bronchiolitis) and the model also identifies a healthy person without any human error. The model uses a Convolutional Neural Network (CNN) in TensorFlow/Keras for processing Mel-frequency cepstral coefficients (MFCC) on the input data which is an audio signal of the patient's breath sound. Later this data is fed to a Gated Recurrent Unit (GRU) model to exactly diagnose the disease that the patient is suffering from. The model gives an accuracy of 98.55% and loss of 0.059%. This cost-effective model eliminates the human error due to fatigue or lack of expertise and also helps in quick diagnosis.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052007 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN OF AI BASED REAL-TIME CLASS COMMITMENT EMOTIONS MONITORING SYSTEM

(51) International classification :G06F0021320000, G08B0013196000, G06K0009000000, G06T0013400000, G06N0020100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A technique for using computer vision to detect a human face is called emotional recognition. Facial recognition has gained appeal among academics due to the improvement of cameras and the ubiquity of smart gadgets. Commercial facial recognition systems have gained popularity recently as a means of detecting emotional states in addition to the usual facial data collected by surveillance systems. These systems, which are frequently AI-based, face traits and gestures from an image or from a live feed using biometrics and facial recognition algorithms. Humans have complex personalities, which are frequently expressed through our facial expressions, which may or may not be emotional in nature. People with personality problems don't look like the general public when they make facial expressions. AI uses facial recognition software to identify minute variations in facial features and micro expressions. As a result, AI can now recognize feelings including joy, sorrow, rage, and surprise.

No. of Pages : 10 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052023 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEEP LEARNING BASED TECHNIQUE FOR ANALYZING THE IMPACT OF VARIOUS FACTORS ON HYDROGEOCHEMISTRY OF GROUNDWATER

(51) International classification :A61K0033140000, C02F0103060000, A61K0008200000, A61K0033060000, C02F0001440000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The study employs the PHREEQC model to analyze hydrogeochemical characteristics of groundwater in Sohag City, Egypt, focusing on physico-chemical properties and rock-water interactions. Fifteen samples from groundwater wells were analyzed, spatially depicting variations in pH, EC, TDS, and major ions (Na+, K+, Ca2+, Mg2+, SO42-, CO32-, HCO3-, Cl-). Groundwater quality assessment indicated elevated levels of TDS, EC, HCO3-, and Na+ beyond permissible limits, indicating deteriorating water quality. Positive correlations were observed between HCO3- and Ca2+ (r?=?0.62), Mg2+ and HCO3- (r?=?0.63), Ca2+ and Mg2+ (r?=?0.66), and K+ and HCO3- (r?=?0.66), suggesting precipitation processes. A strong correlation between Cl- and Na+ (r?=?0.89) indicated dissolution of halite minerals, findings supported by the PHREEQC model results.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052056 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ERGONOMIC MULTIPURPOSE PATIENT GOWN

(51) International classification :A41D0013120000, A61F0007000000, G16H0040200000, A41D0001215000, A61F0007020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to an Ergonomic Multipurpose Patient Gown (100) designed specifically for perioperative patient care, offering enhanced safety, convenience, and privacy throughout the hospitalization process. The gown (100) comprises a back portion (101) divided into right and left segments, a front portion (102) connected to sleeves, and a V-shaped neck (105) for easy neck movement. Multiple back strings (106) facilitate a wrap-around pattern covering the patient's back, while shoulder strings (107, 108) secure the gown in place. Velcro openings (111) on both sides allow for easy access, and pockets (109) with small square openings (110) accommodate drainage bags and tubing. The gown's polyblend cotton fabric ensures reduced transparency and a calming effect on patients. The Ergonomic Multipurpose Patient Gown (100) represents a significant advancement in hospital gown technology, promoting patient comfort, dignity, and autonomy during medical procedures and examinations.

No. of Pages : 21 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052082 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLIGENT CONTENT RECOMMENDATION SYSTEM USING MACHINE LEARNING ALGORITHMS

(51) International classification	:G06F0016953500, G06N0020000000, G06Q0030060000, G06Q0030020000, H04N0021466000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
[035] The present invention discloses an intelligent content recommendation system leveraging machine learning algorithms to enhance user experience by delivering personalized content recommendations. Traditional content recommendation systems often fail to meet user expectations for relevance and personalization. The disclosed system addresses this challenge by collecting and analyzing user interactions, preferences, and feedback to train machine learning models. These models utilize collaborative filtering, content-based filtering, and hybrid approaches to generate tailored content recommendations from a diverse content database. Continuous refinement through user feedback ensures the system adapts dynamically to user preferences, thereby improving engagement and satisfaction. Applications span across e-commerce, media, and educational domains, offering scalable solutions for delivering relevant content in today's digital landscape. Accompanied Drawing [FIGS. 1-4]

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052083 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WHEEL FLANGE POWER GENERATION SYSTEM

(51) International classification :H02J0007000000, A61N0002020000, B61K0003000000, H02J0007020000, H02K0016000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a power generation system (100) for utilizing kinetic energy from train wheel flanges (102), comprising train wheel flanges (102) configured to rotate along a railway track. A plurality of electromagnetic coils (112a, 112b, 112c) strategically positioned in proximity to the train wheel flanges for generating electrical current. A magnetic field generator (108) generating a magnetic field through which the electromagnetic coils (112a, 112b, 112c) move, inducing an electrical current. A stator member (106) housing the plurality of electromagnetic coils (112a, 112b, 112c) providing a stationary reference for the rotating rotor (104). A rotor member (104) connected to the train wheel flange (102) for rotation therewith. A sensor (110) for monitoring wheel rotation speed, magnetic field strength, and electrical current output. A power converter (116) for converting the generated alternating current (AC) electricity into direct current (DC). An energy storage unit (120) storing the converted DC electricity.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052087 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MACHINE LEARNING-BASED SYSTEM FOR AUTOMATED CUSTOMER SERVICE RESPONSE GENERATION

(51) International classification	:G06N0020000000, G10L0015220000, G10L0015260000, G06F0016332000, G06Q0030000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
[035] The present invention discloses a machine learning-based system designed for the automated generation of customer service responses. The system utilizes advanced natural language processing (NLP) and machine learning (ML) techniques to accurately understand the context and intent behind customer queries received through various channels such as email, chat, and social media. It includes an input module for receiving queries, a preprocessing module for data cleaning, a natural language understanding module for intent analysis, a response generation module for formulating responses, and a feedback module for collecting and incorporating customer feedback. Additionally, the system features a training module that continuously updates the machine learning models based on feedback, ensuring ongoing improvement in response accuracy and relevance. This innovative approach significantly enhances customer service efficiency and satisfaction by providing timely and contextually appropriate automated responses. Accompanied Drawing [FIGS. 1-3]

No. of Pages : 23 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052090 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTEGRATED HEALTH INFORMATION MANAGEMENT SYSTEM FOR ELECTRONIC DEVICES

(51) International classification	:G16H0010600000, G16H0040670000, G16H0050200000, G16H0040630000, G16H0050300000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
[037] The Integrated Health Information Management System (IHIMS) for Electronic Devices presents a comprehensive solution to streamline health information management in modern healthcare settings. IHIMS leverages the capabilities of electronic devices, including smartphones, tablets, and wearable technology, to capture, store, and securely manage patient health data. Key components include a robust data capture module utilizing device sensors and inputs, encrypted storage compliant with healthcare data regulations, seamless integration with existing electronic health record systems, and personalized health record management for patients. The system employs advanced analytics and decision support tools to enhance clinical decision-making and patient engagement. IHIMS aims to improve healthcare efficiency, promote interoperability, and empower patients in managing their health through innovative technology integration. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 20 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052094 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTIVE MACHINE LEARNING SYSTEM FOR PREDICTIVE ANALYTICS

(51) International classification	:G06N0020000000, G06N0005040000, G06Q0010060000, G06N0005020000, G06N0003080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
[037] The Adaptive Machine Learning System for Predictive Analytics introduces a novel approach to enhance the accuracy and reliability of predictive analytics in dynamic data environments. Traditional predictive models often struggle to maintain effectiveness as data patterns evolve over time. This patent proposes a sophisticated system that integrates advanced machine learning algorithms with real-time data processing capabilities. Key components include a robust data integration module that harmonizes diverse data sources and an adaptive learning engine that continuously updates predictive models based on incoming data streams. By employing anomaly detection techniques and automated model adjustments, the system ensures optimal predictive performance, scalability, and efficiency. The Predictive Analytics Dashboard provides intuitive visualization tools for stakeholders to access real-time insights and trend forecasts. This innovation finds application across various domains including finance, marketing, healthcare, and beyond, offering organizations unparalleled decision-making support through adaptive predictive analytics. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052097 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR ENHANCED IMAGE PROCESSING USING NEURAL NETWORKS

(51) International classification	:G06N0003040000, G06N0003080000, G06T0005000000, G06K0009620000, G05D0001000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
[034] The present invention discloses a system and method for enhanced image processing utilizing advanced neural network architectures. Traditional image processing methods often face limitations in accurately extracting complex features and classifying diverse visual data. To overcome these challenges, the disclosed system integrates state-of-the-art neural networks with innovative preprocessing techniques. Key components include convolutional layers for feature extraction, adaptive filtering for noise reduction, and softmax regression for precise label assignment. The method optimizes network parameters through rigorous training using labeled datasets, ensuring robust performance across various applications. Applications include medical imaging diagnostics, autonomous vehicle navigation, and surveillance systems, showcasing significant advancements in accuracy, efficiency, and adaptability. This invention establishes a new paradigm in image processing technology, promising superior results and broader applicability in diverse fields. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024

(21) Application No.202441052108 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD FOR DETECTION OF MOONLIGHTING

(51) International classification	:G06N0003040000, G06N0003080000, G06K0009620000, G06T0007000000, G06K0009000000
(86) International Application No Filing Date	:NA :NA
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(57) Abstract :
The present invention provides a method for detection of moonlighting that discloses a novel method for keyboard dynamics analysis and deep learning techniques for moonlighting identification. Keystroke dynamics, the study of keyboard usage, can reveal tiny patterns that set apart routine work tasks from side-hustle behavior. This study examines the usage of deep learning models using a broad dataset that includes a variety of typing circumstances. A single layer of a convolutional neural network (CNN) is used specifically for the initial feature extraction, and two layers of LSTM networks are used for the sequence analysis. Transfer learning techniques are used to speed up model training and improve accuracy. Using the keyboard dynamics dataset to refine pre-trained neural network architectures, moonlighting detection performance is improved. Figure 1

No. of Pages : 17 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052128 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT-BASED EARLY WARNING SYSTEM FOR AUTOMATED HAZARD DETECTION IN THE OIL AND GAS INDUSTRY

(51) International classification :G08B0025100000, G08B0021120000, G08B0023000000, G08B0021180000, G08B0021040000
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention relates to an Internet of Things (IoT)-based early warning system designed for automated hazard detection in the oil and gas industry. The system is equipped with multiple sensors, including a methane sensor(1), a hydrogen sulfide sensor(2), a pressure sensor(3), and a temperature sensor(4), which continuously monitor environmental conditions for potential gas leaks and anomalies. The collected sensor data is aggregated and processed by a NodeMCU microcontroller(5), which then transmits the data to a cloud-based platform using a wireless communication module(wi-fi modem(6). The cloud platform, specifically the ThingSpeak server, provides real-time monitoring and analysis of the sensor data. In the event of detecting hazardous conditions, such as elevated gas levels or abnormal pressure/temperature changes, the system triggers automated alerts through an alarm device (7), which can include audible to relevant personnel. This automated alert mechanism enhances safety and responsiveness, allowing for prompt action to mitigate potential dangers. The system's power is managed by an AC to DC converter(8), including the IC7805(9) voltage regulator, ensuring reliable and stable operation. The invention significantly improves operational safety and efficiency in the oil and gas industry by providing real-time, automated hazard detection and alerting capabilities.

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052132 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED TIMETABLE GENERATOR USING GENERATIVE ALGORITHMS AND WEB TECHNOLOGIES

(51) International classification :G06N0003120000, G06Q0050200000, G06K0009620000, H04L0067040000, G06Q0010060000
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Teacher's Automatic Timetable Generator using JAVA is a system designed to automate the process of generating timetables for teachers. The system is built using JAVA programming language and provides an easy-to-use interface for teachers to input their availability, subjects, and classes. At present we are using the manual system to create timetable which is very time-consuming process and requires a lot of efforts. In the manual system the teacher must create the timetable manually. As a result, the automatic timetable generator can reduce both the time and effort of the teacher. In this system we will send a reminder to the teacher via SMS so that they don't have to keep the track of all the classes they have. Using this system, we can also create a timetable if the teacher is absent. Central to the efficiency of our system is the integration of a genetic algorithm, a powerful optimization technique inspired by the process of natural selection. The genetic algorithm intelligently searches for the most optimal timetable configuration by iteratively refining a population of potential solutions. Through a process of selection, crossover, and mutation, the algorithm evolves increasingly better timetables over successive generations, ultimately converging on an optimal or near-optimal solution. This adaptive approach ensures that the generated timetables adhere to various constraints and preferences, such as teacher availability, classroom capacity, and subject requirements.

No. of Pages : 10 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052134 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD OF IMAGE PROCESSING AND ANALYTICS FOR CROP MONITORING AND PRECISION AGRICULTURE

(51) International classification :G06T0007110000, G16H0050200000, A61B0005026000, G06T0007000000, G06T0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The system 100 includes a sensor integrated module (104), a control server (106) and a user interactive device (108). The control server (106) includes a data receiving module (204), an image processing and analytics module (206) and a user interface module (208). The image processing and analytics module (206) includes an image preprocessing module (302), a feature extraction module (304), an image segmentation module (306) and an analytics and interpretation module (308). The image preprocessing module (302) is configured to perform initial processing on the received images to enhance the quality of the received image. The user interactive device (108) is configured to display the result of the processed image of the crops. This invention facilitates weather monitoring with crop imaging for comprehensive insights, automating analysis for early problem detection and improved crop management.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052138 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD FOR DETECTION OF THE VITAMIN B12 PRODUCING PSEUDOMONAS SPECIES FROM NATURAL BACTERIAL ISOLATES

(51) International classification :A61K0031714000, C12Q0001689500, A01N0063270000, C12P0019420000, C12N0001200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Method for detection of the Vitamin B12 Producing PSEUDOMONAS SPECIES from natural bacterial isolates The method for detecting Vitamin B12 producing Pseudomonas species from natural bacterial isolates involves subjecting a suspected sample containing the fungus Pseudomonas to polymerase chain reaction amplification using a selection of primers. These primers encompass base sequences such as 5'TCATCACGGTCAAGGGCCAGCG3',5'ATCTGCTCGCCGATGGCGCCGTACA3',5’GCTCTGGTTGCGGTACACCAG3',5’ATCAGCGACTTCTACGAC3',5’ TCGGTGTGATTGCTGAT3’and 5’ATGAACCCGGTGCTGCTCA3'. Additionally, the method involves detecting the Pseudomonas bacteria species by visualizing the polymerase chain reaction product.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024

(21) Application No.202441052140 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT BASED SMART MONITORING AND CONTROL OF SMART CITY

(51) International classification :G06Q0050260000, H04L0067120000, G06Q0010040000, G06Q0010000000, H04W0004380000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention is a comprehensive IoT-based framework for monitoring and controlling smart city infrastructure. Leveraging cutting-edge sensors and hardware, our system integrates real-time data from various urban parameters, including air quality (PM2.5, NO2, CO), noise pollution, traffic flow, energy consumption, waste management, and weather conditions. The network consists of Edge devices: NVIDIA Jetson Modules for data processing and analysis, Sensors: Libelium's Smart City Sensor Platform, comprising gas sensors, noise sensors, and environmental sensors, Communication: LoRaWAN technology for low-power wide-area networking, Cloud platform: AWS IoT Core for data storage, processing, and visualization. This system enables a real-time monitoring and analytics, predictive maintenance and fault detection, smart decision-making for optimized resource allocation, citizen engagement through mobile applications, scalability and adaptability for future smart city expansions. This invention aims to create a sustainable, efficient, and citizen-centric smart city ecosystem, showcasing the potential of IoT technology in urban development.

No. of Pages : 9 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052192 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PREDICTIVE MAINTENANCE USING MACHINE LEARNING ALGORITHMS

(51) International classification	:G06N0020000000, G05B0023020000, G06Q0010000000, G06N0005040000, G06K0009620000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
[037] The present invention discloses a system and method for predictive maintenance utilizing machine learning algorithms. The system integrates real-time sensor data, historical maintenance records, and advanced machine learning models to predict equipment failures before they occur. By analyzing data patterns and anomalies, the system generates actionable insights that enable proactive maintenance scheduling, thereby reducing downtime and operational costs. Key components include data preprocessing, feature engineering, model training, and predictive alerting mechanisms. This innovation aims to optimize maintenance strategies through predictive analytics, ensuring enhanced equipment reliability and operational efficiency in various industrial applications. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052202 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SMART PENCIL DETONATOR ENABLING SECURING AND STORING WRITING IMPLEMENTS, AND METHOD THEREOF

(51) International classification	:G06F0021620000, G06Q0030020000, A45C0011340000, G06Q0050140000, H04L0009080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Present disclosure relates to smart pencil detonator (102) enabling securing and storing writing implements, and method thereof. Smart pencil detonator (102) receives an input data from the at least one computing device (108) associated with at least one user (106). The input data pertains to presence of one or more writing implements associated with one or more parameters. Further, the smart pencil detonator (102) can be configured to activate a digital locking mechanism to secure one or more writing implements, where the digital locking mechanism pertains to providing a digital lock to the smart pencil detonator (102). Furthermore, the smart pencil detonator (102) can be configured to enable a Global Positioning System (GPS) tracking mechanism to monitor at least one location of the smart pencil detonator (102) in real-time.

No. of Pages : 27 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052203 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CILNIDIPINE LOADED NANOSUSPENSION IN ORO-MUCOSAL FILM AND PREPARATION METHOD THEREOF

(51) International classification :A61K0009000000, A61K0009100000, A61K0009107000, A61K0047260000, A61K0048000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to the preparation of cilnidipine (CLD) nanosuspension (NS) which increases its solubility and bioavailability and thus exerts significant therapeutic effect. The composition comprises of surfactants and a therapeutic agent. The preparation method involves high speed homogenization and probe sonication. Furthermore, the incorporation of CLD NS into a rapidly dissolving oro-mucosal film translocates the active substance across the oral mucosa which is highly vascularized thereby allowing rapid entry of the drug into the bloodstream and an early onset action. Described here are oro-mucosal films wherein CLD-NS is dispersed.

No. of Pages : 36 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052204 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR MONITORING METABOLIC PARAMETERS OF A USER

(51) International classification	:G06N0020000000, G16H0050300000, G06N0003040000, A61B0005318000, G06N0007000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Embodiments of the present disclosure relates to a system (102) and a method (400) for monitoring metabolic parameters of a user. The system (102) includes a processor (202) and a memory (204). The processor (202) is configured to obtain input data and metabolic parameters from a user (108) through a computing device (106) or during a baseline visit. The obtained input data and metabolic parameters are analysed by applying machine learning and artificial intelligence techniques. An alarm is triggered or a pop up is indicated, if the current status of the metabolic parameters of the user is beyond preset levels. The level of the risk factor for metabolic syndrome is identified for the user. The user is provided with personalized treatment for metabolic syndrome and corresponding next visit date.

No. of Pages : 22 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052205 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FACILITATING SAFETY TO USERS FROM BALL COLLISIONS DURING GAMES

(51) International classification	:A61B0034000000, C02F0001000000, A63B0071060000, G08G0005000000, A63F0013870000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
Present invention discloses a system and method facilitating safety to users from ball collisions during games. The system (100) includes a ball (104) comprising one or more sensors consisting of one or more detachable parts and coupled with an actuator (106) and at least one sensor (108) and operatively coupled to a control unit (118). One or more sensors (108) measure a real-time data of the ball and transmit to a central base station (114). The central base station (114) determines one or more parameters associated with the ball (104) based on the real-time data and provides at least one signal to the ball (104) to split into one or more detachable parts by employing an actuator (106) to reduce the risks of a collision with at least one user (112) during a game. The system (100) tracks the trajectory of the ball in real-time and takes preventive action.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052211 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INDIGENOUS DIAPHRAGM AND NON-NOBLE BI-FUNCTIONAL CATALYSTS BASED ALKALINE WASTEWATERS ELECTROLYZER

(51) International classification :H01M0008100000, H01M0008100400, C01B0021064000, H01M0008021000, H01M0008102300
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Indigenous diaphragm and Non-noble Bi-functional Catalysts Based Alkaline Wastewaters Electrolyzer The present invention provides electrolyzer system that comprises of a membrane electrode assembly, and an electrolyte; wherein the membrane electrode assembly comprises of the anode, cathode, and a separator membrane; characterized in that the separator membrane is a hexagonal boron nitride (HBN) coated chitosan-based diaphragm. Further the present invention provides an HBN dispersed chitosan-based indigenous diaphragm membrane and a method of preparation thereof. Furthermore, the present invention provides catalysts and a method of preparation thereof.

No. of Pages : 34 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052228 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PROCESS FOR PREPARATION OF MOLYBDENUM TRIOXIDE NANOPARTICLES BASED COMPOSITES

(51) International classification	:H01M0010052500, H01M0004360000, H01M0004620000, B82Y0040000000, H01M0004020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A PROCESS FOR PREPARATION OF MOLYBDENUM TRIOXIDE NANOPARTICLES BASED COMPOSITES The present disclosure relates to a process for the preparation of molybdenum trioxide nanoparticles based composites. The nanoparticles based composites have excellent electrochemical performance, high specific, capacity values, and high rate capability. These unique properties make them suitable to be used as an anode material. The nanoparticles based composite, as an anode material, showcases exceptional characteristics that include high energy density, improved cyclability, enhanced electrochemical performance, stability, and versatility, making it a promising candidate for advanced energy storage technologies/applications. The present disclosure provides a simple, economical, and environment friendly process for the preparation of molybdenum trioxide nanoparticles based composites.

No. of Pages : 31 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052274 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD AND SYSTEM FOR ADAPTIVELY CONTROLLING STEERING OF A REAR AXLE OF A VEHICLE

(51) International classification	:H04W0004020000, B62D0007150000, H04L0001000000, B60W0030095000, H04N0019103000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract “METHOD AND SYSTEM FOR ADAPTIVELY CONTROLLING STEERING OF A REAR AXLE OF A VEHICLE” 5 Disclosed herein is a method and system for controlling steering of a rear axle of a vehicle. The method comprises detecting that one or more SRUs are within at least one zone of a plurality of zones defined in a vicinity of the vehicle. The method further comprises determining that the vehicle intends to take a turn, based at least on one or more inputs. Thereafter, the method determines that the one or more SRUs 10 unable to move out of the plurality of zones before performing a lateral sweep of the rear axle. Furthermore, the method determines a type of the at least one zone in which the one or more SRUs and selects a type of warning profile from a plurality of warning profiles, based on the type of the zone. Finally, the method comprises controlling steering of the rear axle based on the selected warning profile.

No. of Pages : 32 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024

(21) Application No.202441052288 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : IOT AND BLOCKCHAIN BASED ELECTRONIC HEALTH RECORD DEVICE AND INFORMATION MANAGEMENT

(51) International classification	:G16H0010600000, G16H0050200000, H04L0009060000, G16H0040670000, G16H0010200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
IoT and Blockchain Based Electronic Health Record Device and Information management ABSTRACT: User medical data is frequently stored in centralized repositories or cloud settings as a result of the limited processing and storage capabilities of Internet of Things (IoT) devices. Regrettably, this centralized approach reduces the capacity to regulate data, resulting in the establishment of vulnerable points and the emergence of security risks. It is essential to implement an innovative solution in order to enhance the security of data exchange. The medical industry has substantial potential as a result of the convergence of blockchain technology and the Internet of Things in the healthcare sector. This combination has the potential to improve economic opportunities, as well as clarity, safety, and effectiveness. This integration has the potential to improve treatment protocols, increase diagnostic precision, and protect patient data by facilitating the efficient exchange of electronic health records (EHRs). Additionally, the research includes a comprehensive evaluation of previous studies that have investigated the integration of blockchain-based Internet of Things in electronic healthcare. In conclusion, this paper provides a thorough analysis of the obstacles and potential solutions associated with the integration of blockchain technology in the eHealth sector, with a particular emphasis on the Internet of Things. The purpose of this exhaustive survey is to furnish stakeholders with valuable information that will enable them to improve patient care in a profession that is constantly changing.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052289 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LIGHTWEIGHT AND CORROSION-RESISTANT METAL MATRIX COMPOSITE FOR VEHICLE SUSPENSION CONTROL ARMS

(51) International classification :G06F0030230000, B60G0007000000, B60G0021050000, F16D0065120000, B60G0003200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Abstract Lightweight and Corrosion-Resistant Metal Matrix Composite for Vehicle Suspension Control Arms A new lightweight composite material called LM25-6%SiC is disclosed in this invention and is intended for use in automobile suspension control arms. Using LM25 aluminum alloy as the base metal and 6% weight fraction of silicon carbide (SiC) microparticles for reinforcement, the composite is created by stir casting. In mechanical and tribological tests, this particular mixture performs better than composites with less SiC. Due to its high strength and attractive characteristics, the LM25-6%SiC composite is a good substitute for traditional steel control arms. Moreover, the composite material provides a considerable reduction in weight, which enhances fuel efficiency without sacrificing structural integrity. The ANSYS software's finite element stress study verifies the LM25-6%SiC composite control arm design's functional capacity. By addressing the drawbacks of both heavy steel and weak aluminum alloys for control arms, this invention offers the car industry a fresh material alternative.

No. of Pages : 29 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052290 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR ADJUSTING FOOTREST TO OPTIMIZE COMFORT AND SAFETY FOR PILLION RIDERS

(51) International classification :B62J0025000000, B62J0001140000, G11B0005550000, A61G0005120000, B62J0027000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system for adjusting footrest to optimize comfort and safety for pillion riders is provided. The system 100 includes a wedge-shaped stand 102, a footrest 104, a sensor unit 106 that includes first sensor 106A, a microcontroller 108, and one or more adjusting mechanisms 110 that includes a linear actuator 110A, a DC motor 110B, and a servo motor 110C. The wedge-shaped stand 102 is mounted on vehicle. The first sensor 106A measures a round-trip time based on a pillion rider's feet to generate a first data when the pillion rider is seated on the vehicle. The microcontroller 108 (i) calculates a footrest adjustment distance based on the first data, upon receiving the first data from the sensor unit 106; and (ii) generates a first control signal to control one or more adjusting mechanisms for translating the footrest 104 based on the to position the footrest 104. FIG. 1

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024

(21) Application No.202441052294 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A wind deflector device for a vehicle

(51) International classification :B62D0035000000, B60J0007220000, B62D0035020000, B62D0037020000, A61P0001040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
A wind deflector device for a vehicle [0031] The present invention discloses a wind deflector device for a vehicle, designed to reduce air resistance and improve fuel efficiency. The device (100) comprises a deflector body (101) having a length less than the cabin length of the vehicle, a single position mounting arrangement (102) on the top of the vehicle cabin and a pair of supporting brackets (103) configured to mount the deflector body (101) on the cabin roof. The angle (107) of the deflector is based on an object (108) disposed above the cabin of the vehicle, providing versatility in different load conditions. Additionally, the device (100) include a framed structure to support and mount the deflector body (101) on the cabin roof, enhancing the overall robustness of the mounting system, and a side profile for streamlining airflow to enhance the aerodynamic performance of the vehicle. (Figure 1)

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/07/2024

(21) Application No.202441052303 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : SIGN LANGUAGE TO TEXT AND SPEECH TRANSLATION

(51) International classification :G06F0003010000, G09B0021000000, G06F0001160000, G06F0003030000, G09B0021040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(57) Abstract :
A sign language translation system using an Arduino microcontroller, LCD display, two flex sensors, a speaker, and a power supply will be designed to translate hand gestures made in sign language into text and speech in real-time. The project will utilize two flex sensors to detect the hand gestures made by the user. These sensors will be attached to a glove worn by the user. The flex sensors will measure the bending of the fingers and transmit this data to the Arduino microcontroller. The microcontroller will then process this data and interpret the gestures made by the user. The interpreted gestures will be displayed on an LCD screen, and the system will also produce speech output using a speaker. The system will be powered using a power supply. The proposed system will be particularly useful for individuals who are deaf or hard of hearing and rely on sign language to communicate. The system will enable them to communicate more easily with individuals who do not understand sign language, allowing for greater inclusion and accessibility. The project will involve designing and building the hardware components, programming the microcontroller, and testing the system's functionality. Overall, this project will contribute to the development of assistive technologies that can enhance communication and promote accessibility for individuals with disabilities.

No. of Pages : 11 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052313 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EFFICIENT AND SCALABLE DEEP LEARNING MODELS FOR REAL-TIME EPILEPTIC SEIZURE DETECTION USING EEG

(51) International classification	:A61B0005000000, G06N0003040000, A61B0005369000, G06N0003080000, A61B0005291000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The proposed invention is a novel system for detecting epileptic seizures using EEG signals, leveraging advanced deep learning techniques for improved accuracy and efficiency. The system utilizes convolutional neural networks (CNNs) and long short-term memory networks (LSTMs) to capture spatial and temporal features of EEG data, ensuring robust seizure detection. Simplified from the ONASNet architecture, the model enhances computational efficiency, making it suitable for real-time applications in wearable devices. Transfer learning improves model generalization on small datasets, while patient-specific models cater to individual EEG patterns. The system features advanced signal preprocessing to filter out noise and artifacts, ensuring high-quality input data. Designed for continuous monitoring, it offers real-time alerts via a mobile application, providing a practical, scalable solution for managing epilepsy and enhancing patient care.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/07/2024

(21) Application No.202441052315 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : PHOTOVOLTAIC CELL INTEGRATION FOR ENHANCED CELLPHONE BATTERY LIFE

(51) International classification :H02J0007000000, H02J0007350000, H01L0031048000, H01L0031054000, H04W0052020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The proposed invention integrates photovoltaic (PV) cells with cellphone battery systems to extend battery life and enhance energy efficiency. High-efficiency PV cells are embedded into the cellphone's exterior, capturing solar energy to supplement conventional charging. An advanced power management unit optimizes energy flow, dynamically adjusting to sunlight intensity and battery charge. Energy storage capabilities allow excess solar energy to be stored for use during low-light periods. The system includes a user interface for monitoring energy harvesting and battery status. This innovation offers a sustainable, efficient solution to extend battery life, reduce charging frequency, and promote environmental sustainability by leveraging renewable solar energy.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/07/2024

(21) Application No.202441052316 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART RAIN – TRIGGERED WATER TANK LID: A DEVICE & METHOD FOR EFFICIENT RAIN WATER HARVESTING

(51) International classification :E03B0003020000, E03F0001000000, E03B0001040000, C02F0001280000, E03B0003030000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Smart Rain-Triggered Water Tank Lid is an advanced system designed to enhance rainwater harvesting efficiency. It integrates sensors, an automated control unit, and an actuator mechanism to autonomously manage the opening and closing of a tank lid based on detected rainfall. The system ensures optimal rainwater collection while preventing contamination and evaporation losses. Features include programmable settings, a filtration mechanism, energy-efficient operation, and remote monitoring capabilities. Adaptable to various applications, this invention supports sustainable water management practices, reduces reliance on conventional water supplies, and contributes to environmental protection by mitigating stormwater runoff.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/07/2024

(21) Application No.202441052317 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLIGENT SURVEILLANCE AND EMERGENCY RESPONSE SYSTEM FOR RETAIL AND COMPLEX SHOWROOM SECURITY

(51) International classification :G06Q0030060000, H04W0004900000, G06N0020000000, H04W0004700000, G08B0013196000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The proposed Intelligent Surveillance and Emergency Response System enhances retail and showroom security through advanced technologies. It integrates AI-equipped high-definition cameras for facial recognition and behavior analysis, IoT devices, and smart sensors to monitor environmental conditions. Real-time data analytics and machine learning enable predictive threat identification, while automated response mechanisms trigger alarms, locks, and notifications. The system facilitates seamless communication with emergency services and local law enforcement, providing real-time updates and live feeds. Scalable and adaptable, the system suits various retail environments and includes a user-friendly interface for easy operation and management, with robust data security measures ensuring compliance with privacy regulations.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202441052318 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ENHANCED DUAL SPARK PLUG AND EGR SYSTEM FOR IMPROVED TWO-STROKE ENGINE EFFICIENCY AND EMISSIONS REDUCTION

(51) International classification :F02B0075020000, F02D0041000000, F02B0029040000, F02B0001040000, C10L0010020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The proposed invention enhances two-stroke gasoline engines by integrating dual spark plug technology and an Exhaust Gas Recirculation (EGR) system, addressing inefficiencies and high emissions typical of traditional designs. Dual spark plugs positioned at opposite ends of the combustion chamber ensure rapid and complete combustion, improving thermal efficiency and reducing emissions. The system can switch between single and dual spark plug modes based on engine load and speed. The EGR system recirculates exhaust gases to lower combustion temperatures and NOx emissions. A condenser in the ignition circuit ensures consistent spark delivery, enhancing ignition reliability. Improved scavenging reduces fresh charge loss, boosting power output. This adaptable engine configuration suits various applications, offering a cost-effective, environmentally friendly solution with minimal modifications to existing designs.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052325 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DYNAMIC LANE MANAGER

(51) International classification	:G08G0001010000, G01S0013931000, G08G0001081000, G08G0001000000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a system (100) for dynamic traffic management comprising a plurality of movable road dividers (101) further comprising an actuator (102) configured to enable the physical movement of the dividers (101), a traffic sensing unit (103) to monitor real-time traffic conditions comprising a built-in camera (104), a LIDAR sensor (105), a radar sensor (106), an IoT device comprising microcontrollers (107) to process data received from the traffic sensing unit (103) and control the actuators (102), a communication module (108) utilizing Wi-Fi, for wireless communication between system components, an emergency action module (109) with GPS modules to track ambulance routes and receive signals from an ambulance application. The system (100) further comprises a power supply (110) using solar panels (111) with battery (112) storage to power the system (100) and a traffic management software (113) integrating algorithms for real-time traffic analysis, decision-making, and machine learning models to predict traffic patterns and optimize divider movements.

No. of Pages : 30 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/07/2024

(21) Application No.202441052327 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : INTELLIGENT FUEL MONITORING AND ALERT SYSTEM WITH NEARBY REFUELING STATION LOCATION

(51) International classification	:G06Q0010040000, G06Q0050060000, F02D0035020000, B67D0007140000, G21C0001080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

The invention pertains to an Intelligent Fuel Monitoring and Alert System with Nearby Refueling Station Location, designed to enhance fuel management efficiency. It employs advanced sensors for real-time fuel level measurement and IoT capabilities for remote data access and analysis. The system generates timely alerts through mobile apps or dashboards, integrates predictive analytics to forecast fuel consumption, and utilizes GPS modules to identify nearby refueling stations. It addresses fuel theft through anomaly detection and promotes environmental sustainability by optimizing fuel usage. The modular design ensures easy vehicle integration, making it suitable for diverse applications, including fleet management. This comprehensive solution revolutionizes traditional fuel management, improving operational efficiency and reducing costs.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052339 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FARM2CONNECT: A SYSTEM FOR EFFICIENT DISTRIBUTION OF VEGETABLES AND FRUITS IN INDIA

(51) International classification	:G06Q0030020000, G06Q0050020000, G06Q0010080000, G06Q0010060000, G06Q0030060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
FARM2CONNECT: A SYSTEM FOR EFFICIENT DISTRIBUTION OF VEGETABLES AND FRUITS IN INDIA The main design of present invention discloses a farm2connect: a system for the efficient distribution of vegetables and fruits in India, comprising the admin panel, farmer's panel, and Kirana stores panel. The main purpose of the present invention is to streamline the distribution of fruits and vegetables by directly connecting farmers with local Kirana stores, eliminating intermediaries and ensuring fair prices for farmers and Kirana stores, as well as consumers. Farm2connectApp uses technology to empower farmers, reduce consumer costs, and enhance transparency in the agricultural supply chain, thereby promoting socioeconomic development and food security. The invention transforms this process by enabling farmers to connect directly with Kirana stores, cutting out intermediaries. This approach ensures fair profits for farmers and offers produce at reasonable prices to Kirana stores and consumers. It also strengthens relationships between producers and retailers, contributing to growth and sustainability in the agricultural sector.

No. of Pages : 18 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052362 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A METHOD FOR DETECTING ACCIDENT PRONE AREA BASED ON POTHOLES USING IMAGE PROCESSING ALGORITHMS

(51) International classification	:G06T0007130000, E01C0023060000, E01C0011000000, H04L0067100000, E01C0007180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is related to a road damage detection system focused on identifying potholes to enhance safety for two-wheeler riders. Employing the Werner D Street algorithm for image processing, potholes are accurately identified, with Raspberry Pi, particularly the Raspberry Pi Zero 2 W, utilized for image capture. Testing across varied conditions yielded an 80% success rate in pothole detection. The system first locates roadway holes, then employs an algorithm to identify key features indicative of potholes, followed by live video capture and subsequent edge detection using the Canny method. Position information is obtained from the GPS U-block NEO-6m for precise geo-tagging, with latitude and longitude data linked to the Google Maps API script in GM Lib. Connection to Arduino and data storage in CSV files on a micro-SD card breakout board complete the process. This integrated approach offers a robust solution for real-time pothole detection and geo-tagging, contributing to road safety.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052363 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADVANCED FAKE NEWS DETECTION USING AN INTERNET-ENABLED AI AGENT

(51) International classification	:G06F0016951000, G06F0040300000, H04L0067020000, G06F0016953500, H04L0067567000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The Advanced Fake News Detection process begins with a browser plugin reading website text and extracting text from images using Tesseract.js, which is then translated to English using Google Translate API and summarized with a BERT-based tool. An ML model extracts key points from the news, searches for them on a search engine, scrapes relevant results, and generates fact checks while saving the sources for user verification. A sentiment analysis model calculates the news's risk score, and fake news domains and URLs are stored in a MongoDB database for tracking and assessing website safety. The API response indicates whether the news is true, provides the risk score, and lists references.

No. of Pages : 5 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024

(21) Application No.202441052371 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : EXPERIMENTAL STUDIES USING PULSED AND NON-PULSED CURRENT GTAW TO INVESTIGATE THE WELDING CHARACTERISTICS OF ALUMINIUM ALLOY (6082) WELDMENTS

(51) International classification	:B23K0009167000, B23K0009090000, B23K0009230000, C21D0009500000, B23K0101060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The use of aluminium and its alloy 6082 in many aerospace applications is attracting a lot of attention. Aluminium is fastened using both pulsed and non-pulsed gas tungsten arc welding. Examined were the effects of varying aluminium Al 6082 material thicknesses and pulsed frequency variations on the quality of the welded sample. Al 6082 samples with 3 mm and 6 mm thickness were welded in the current study utilising both pulsed and non-pulsed current welding techniques. During the experiment, 5Hz and 10Hz pulsed frequencies were used. When radiography, liquid penetrating test, and mechanical testing according to ASTM standards were performed on the welded samples, no faults in the welded joint were discovered. The strongest points were found in non-pulsed weldments at lower thickness and pulsed weldments at higher thickness.

No. of Pages : 5 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024

(21) Application No.202441052383 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A HANDHELD CLAW CANE DEVICE SYSTEM WITH OBSTACLE DETECTION AND HEIGHT ADJUSTMENT

(51) International classification :A61H0003020000, A61P0019020000, A61B0005000000, A61H0003060000, A61H0003040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention discloses a handheld claw cane designed to provide enhanced independence and mobility for elderly individuals, pregnant women, and people with various physical impairments such as osteoarthritis, rheumatoid arthritis, and neurological conditions. The cane features a handgrip for stable use, an adjustable shaft, and a claw mechanism at the lower end for picking up objects from the ground. The claw is operated via a hand pulley located below the handpiece. The cane includes a biosensor that detects obstacles in the user's path and provides real-time alerts, ensuring safer navigation. Constructed from materials such as steel, aluminum, carbon fiber, or fiberglass, the cane is lightweight yet durable. Additional features include a push button mechanism for height adjustment, a spring mechanism to assist claw manipulation, and a rubber ferrule for improved ground grip. The invention aims to enhance user autonomy and well-being by combining traditional mobility aid functionality with advanced assistive technology.

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052384 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DEEP LEARNING BASED PREDICTIVE FRAMEWORK FOR PROCESS CONTROL IN INDUSTRY 5.0

(51) International classification	:G06N0003040000, G06N0003080000, G05B0019418000, G06N0020000000, G05B0023020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses a system and method for real-time process monitoring and control using deep learning models. Traditional process control systems often rely on static models and predefined rules, which may not adequately capture the complex and dynamic nature of industrial processes. In contrast, the proposed system integrates deep learning techniques, such as convolutional neural networks (CNNs) and recurrent neural networks (RNNs), to continuously analyze real-time sensor data and learn patterns indicative of process conditions. The system comprises a data acquisition module configured to collect sensor data from various points within the industrial process. A preprocessing module preprocesses the acquired data to enhance signal quality and reduce noise. A deep learning model, trained on historical data and updated in real-time, processes the preprocessed data to extract relevant features and make predictions about process variables, anomalies, or failures. Furthermore, the system includes a control module that utilizes the predictions from the deep learning model to adjust process parameters and optimize operations in real-time. Feedback loops ensure continuous adaptation and improvement of the deep learning model's accuracy and effectiveness. The system's architecture supports scalability and integration with existing process control infrastructure, facilitating seamless deployment across different industrial sectors. In summary, the disclosed system and method enable enhanced process monitoring, proactive maintenance, and adaptive control strategies through the application of deep learning models. By leveraging real-time data analytics and machine learning capabilities, industrial processes can achieve higher efficiency, reliability, and resilience in dynamic operating environments. This abstract summarizes the innovation of using deep learning models for real-time process monitoring and control, highlighting its advantages over traditional methods and its potential impact on industrial efficiency and reliability.

No. of Pages : 7 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052437 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MACHINE LEARNING APPROACHES FOR RAINFALL PREDICTION AND CROP HEALTH MANAGEMENT IN INTELLIGENT AGRICULTURE

(51) International classification :G06Q0010060000, G06N0020000000, G06Q0050020000, G01W0001100000, A01G0025160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention relates to an intelligent agricultural system integrating machine learning for rainfall prediction and crop health management. Utilizing satellite imagery, ground-based sensors, and historical weather data, it offers precise, localized rainfall forecasts and real-time crop health assessments. By processing multispectral and hyperspectral data, the system detects early signs of stress, nutrient deficiencies, and pest infestations. Predictive analytics forecast potential issues, enabling proactive interventions. The user-friendly interface provides actionable insights through mobile applications, supporting timely decision-making. Scalable and adaptable, the system optimizes water usage, reduces chemical inputs, and promotes sustainable farming practices, enhancing agricultural productivity and global food security.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/07/2024

(21) Application No.202441052477 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : UFAI -SMART SHOE: A USER-FRIENDLY ARTIFICIAL INTELLIGENT BASED SMART SHOE TO PROTECT DIABETIC PATIENTS FROM FOOT DAMAGE AND ILLNESS

(51) International classification	:A61B0005103000, A61B0005000000, A61P0003100000, A61B0005110000, A43B0007145500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

UFAI -Smart Shoe: A user-friendly artificial intelligent based smart shoe to protect diabetic patients from foot damage and illness. Abstract: Foot problems are prevalent and exacerbated by the patient's diabetes. Examples include diabetic foot ulcers, plantar corns, and agonizing foot discomfort. Our multi-material insole for in-shoe pressure sensing addresses these issues through plantar pressure. This insole is an innovative footwear solution designed to monitor diabetics' foot health. One of its many sensors is the plantar pressure sensor, which helps identify the parts of the foot that feel greater pressure when walking or standing. The device primarily aids in pain alleviation and the diagnosis of diabetes ulcers and recurrence. Keywords—plantar pressure; in-shoe; diabetes; diabetic ulcer; foot complications; sensors

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024

(21) Application No.202441052478 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : "ROLL FLEXIBLE METAL WIRE DIAPHRAGM CONTROL VALVE WITH LEAK PROOF CONNECTORS AND THEREOF"

(51) International classification	:G01M0003280000, F16K0027020000, G06F0009520000, F16K0007140000, A47G0019220000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Roll Flexible Metal Wire Diaphragm Control Valve with Leak Proof Connectors and thereof The present invention introduces an advanced roll flexible metal wire diaphragm control valve, featuring a roll flexible metal wire diaphragm engineered for superior durability and precision in fluid control applications. This innovative valve significantly outperforms traditional roll diaphragm control valves by incorporating leak-proof connectors, which guarantees secure and reliable connections to various fluid flow systems. The enhanced design boosts the valve's performance and lifespan, ensuring high-precision control and preventing leakage in both high and low-pressure environments.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052494 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A MUCOADHESIVE MULTI-LAYERED NANOFIBER-BASED DRUG DELIVERY SYSTEM AND METHOD OF SYNTHESIS THEREOF

(51) International classification	:A61K0009000000, A61K0009060000, A61K0047100000, A61K0047320000, A61P0015020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a mucoadhesive multi-layered nanofiber-based drug delivery system specifically designed for vaginal applications, featuring a unique three-layer structure. The outer layer is engineered with mucoadhesive properties to ensure effective adherence to the vaginal mucosa, enhancing drug retention and localized treatment. The middle layer encapsulates the therapeutic agent, providing a reservoir for controlled drug release. The inner layer is designed to regulate the release rate, ensuring a steady and sustained delivery of the drug over an extended period. Also, the present invention relates to a method for the synthesis of mucoadhesive multi-layered nanofiber-based drug delivery systems. The present invention provides a significant leap forward in the field of vaginal drug delivery, offering improved efficacy, user compliance, and potential for broader application in various therapeutic areas.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052497 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR SLEEP ENHANCEMENT IN VEHICLES

(51) International classification :B64D0011060000, A61M0021020000, B60N0002900000, B64D0011000000, A61P0025200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system (100) and method (400) for sleep enhancement in vehicles is provided. The system (100) involves an adjustable, darkened cocoon enclosure (102) that provides passengers with a secluded space, shielding them from external disturbances such as light and noise, ensuring a more restful sleep experience. The system (100) includes integrated heating and cooling mechanisms which allow passengers to control the internal temperature of the cocoon enclosure (102), ensuring optimal comfort regardless of external weather conditions. Additionally, an adaptive belt support system (202) offers personalized and adaptive support, dynamically adjusting tension based on passenger movements to promote a stable sleeping position and reduce restlessness. The system (100) promotes a more restful sleep, enhancing overall comfort and well-being. The system (100) is user-friendly, allowing passengers to easily deploy the cocoon enclosure (102) and the adaptive belt support system (202), making it a versatile and convenient solution for different modes of transportation.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052498 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND DEVICE ENABLING MARITIME COMMUNICATION BASED ON GEO-FENCING MECHANISM, AND METHOD THEREOF

(51) International classification :H04W0004021000, H04L0009060000, G01S0005000000, H04W0004020000, G08B0025010000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The disclosed device (102) enhances maritime communication through a geofencing mechanism, utilizing advanced technical components for robust operational capabilities. A processor (202) of the device (200) plots a geo-fence from a terrestrial network (104) using angular measurements derived from Global Positioning System (GPS) data, defining operational zones based on latitude and longitude coordinates. A system (200) associated with the device (102) detects one or more maritime vessel (108) locations within this boundary and utilizes a radio wave communication channel (110) to establish connectivity with the terrestrial network (104). Upon detecting violation of the pre-defined geo-fence by the one or more maritime vessels (108), the system (200) generates alert signals, facilitating real-time notifications to notify the one or more maritime vessels (108) about its violation of the geo-fence. The system (200) uses AES encryption to secure data transmitted via these channels during distress signal transmissions.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052499 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR EMOTIONS READING PROVIDING PATH FOR SELF-CARE

(51) International classification	:G06N0003080000, G06N0003040000, A61B0005000000, A61B0005160000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
A system 100 to read and analyse emotional data of a subject 102 can include a plurality of sensors 104 configured with an article 200 worn by the subject 102; and a cloud server in communication with the system 100 in a network 150, and at least one processor perform operations to receive a plurality of signals from the plurality of sensors 104 corresponding to a first emotional state and a second emotional state to detect physiological and neurological changes of the subject 102. In an embodiment, extract features to detect changes from the first emotional state and the second emotional state; encrypt dataset before transmission to the cloud server to perform real-time analysis using one or more machine learning algorithm; and generate real-time feedback on a computing device 114 to help the subject 102 to manage emotions effectively. The one or more machine learning algorithm used are large language models, generative adversarial networks, and convolutional neural network.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024

(21) Application No.202441052539 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : OTEC ASSEMBLY WITH HYBRID INTEGRATION, PIEZOELECTRIC MATERIALS, AND DIRECTIONAL SENSING TURBINES

(51) International classification	:F03G0007050000, H02N0002180000, F03B0013180000, B29C0070080000, H02S0040440000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention enhances Ocean Thermal Energy Conversion (OTEC) systems by integrating hybrid cycle technology, piezoelectric materials, and directional sensing turbines. The hybrid OTEC system combines closed and open-cycle components to improve energy efficiency and output. Piezoelectric materials capture mechanical energy from vibrations and fluid flow, while an adjustable turbine with a directional sensing unit optimizes energy capture from wind, particularly during adverse weather conditions. This comprehensive approach ensures increased efficiency, sustainable energy production, and the provision of desalinated water.
Accompanied Drawing [FIGS. 1-2]

No. of Pages : 17 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052540 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM FOR IOT-BASED SMART WATER BOTTLE FOR TRACKING AND MONITORING A USER'S HEALTH

(51) International classification	:A61B0005000000, G16H0050700000, G16H0050300000, G16H0040630000, A61B0005110000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A SYSTEM FOR IOT-BASED SMART WATER BOTTLE FOR TRACKING AND MONITORING A USER'S HEALTH The present disclosure discloses a system(100) and a method(200) IoT-based smart water bottle for tracking and monitoring a user's health. The system(100) comprises an IoT-enabled controller device(102) embedded in a water bottle(104) to collect sensor data in real time by means of an ultrasonic sensor(106); a data collector module(102a) to receive said sensor data in real time and generate a data buffer storage; a communication module(102b) to receive collected sensor data from said data buffer storage and generate at least one data packet for sensor data present in the said data buffer for transmission; a server(108) implementing a mobile application(110) to connect with said IoT-enabled controller device(102) over a wireless communication medium(116); a data processing module(108a) to process said received data packet to generate clean data; a data analyzing module(108b) to receive said clean data and analyze said clean data to track and monitor the hydration level data in real time.

No. of Pages : 27 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052541 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR HEARTBEAT CLASSIFICATION FOR ARRHYTHMIA DETECTION

(51) International classification :G06N0020000000, G06K0009620000, A61B0005000000, G16H0050200000, G06N0003080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A SYSTEM AND A METHOD FOR HEARTBEAT CLASSIFICATION FOR ARRHYTHMIA DETECTION The present disclosure discloses a system(100) and a method(200) for heartbeat classification for arrhythmia detection. The system(100) comprises a user interface module(102) to receive input data from users; a data processing module(104) to enhance quality and standardize formats of ECG images and generate a standardized image; a feature extraction module(106) to extract significant feature relevant to heartbeat classification to identify key patterns and markers in the ECG image; a training module(108) to train a machine learning model and perform parameter tuning to optimize trained model for accurate heartbeat classification and build a trained machine learning(ML) model; an evaluation module(110) to assess the performance of the trained ML model and calculate performance metrics; a prediction and classification module(112) to apply said trained machine learning model to newly inputted unseen ECG images to classify heartbeats and identify said classified heartbeats as normal and abnormal heartbeats and specify types of arrhythmias detected. Figure 1

No. of Pages : 43 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052542 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CATHODE MATERIAL AND A PROCESS FOR ITS PREPARATION

(51) International classification	:H01M0004505000, H01M0010052500, H01M0004360000, H01M0004525000, H01M0004020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT CATHODE MATERIAL AND A PROCESS FOR ITS PREPARATION The present disclosure relates to a cathode material comprising nickel (Ni) rich oxide material as a core and lithium (Li) and manganese (Mn)-rich oxide as a shell. The cathode material exhibits better performance in terms of cycling stability and rate capability. The present disclosure further relates to a process for the preparation of a cathode material that is simple, cost-effective and environment friendly.

No. of Pages : 37 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052543 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BRICK COMPOSITION AND A PROCESS FOR ITS PREPARATION

(51) International classification :H01L0023290000, C04B0028020000, E04B0002020000, C12N0009020000, A61P0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT BRICK COMPOSITION AND A PROCESS FOR ITS PREPARATION The present disclosure relates to a brick composition and a process for its preparation. The brick composition comprises cement, corn stalk and modified fly ash. The brick composition of the present disclosure utilizes the agricultural waste, thereby reducing the carbon foot-print and prevents the spread of several diseases caused by agriculture waste. The process for the preparation of the brick composition is simple and economical .

No. of Pages : 30 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052544 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A HEAT EXCHANGER

(51) International classification :F28D7/00, F28D9/00, F28D1/04, F28D1/053, F28D21/00, F28F9/02, F28F9/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A HEAT EXCHANGER The present invention envisages a heat exchanger (100). The heat exchanger (100) comprises a first section (10) and a second section (20). The first section (10) includes a plurality of first tubes (10a) to carry a first-type fluid therewithin and the second section (20) includes a plurality of second tubes (20a) to carry a second-type fluid therewithin. The plurality of second tubes (20a) is configured to encompass the plurality of first tubes (10a) to form a first heat exchanging zone between an external surface of the plurality of first tubes (10a) and an interior surface of the plurality of second tubes (20a) for exchanging heat energy between the first-type fluid within the first tubes (10a) and the second-type fluid within the second tubes (20a) to obtain heat-exchanged first-type fluid and heat-exchanged second-type fluid.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052545 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AI-BASED REAL-TIME FRAUD DETECTION AND PREVENTION SYSTEM

(51) International classification	:G06Q0020400000, G06N0020000000, G06Q0020380000, G06N0003040000, G06Q0030000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention introduces an AI-based system designed to detect and prevent fraud in financial transactions by leveraging advanced machine learning techniques. The system analyzes transaction patterns in real-time to identify anomalies and predict fraudulent activities, continuously learning from new data to enhance its accuracy. It integrates seamlessly with various financial platforms, providing a robust security layer that safeguards against financial losses. Key components include a data ingestion module, feature extraction engine, machine learning models, and a real-time monitoring dashboard, all working together to deliver a comprehensive and adaptive fraud detection solution. This innovative approach significantly improves transaction security for businesses and consumers alike.

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052572 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : MULTIFUNCTIONAL SWARMING UNMANNED AERIAL SYSTEMS

(51) International classification :B64C0039020000, G05D0001100000, G08G0005000000, A01K0057000000, G06T0017050000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention relates to a Multifunctional Swarming Unmanned Aerial System (UAS) for advanced applications in military operations, surveillance, and disaster management. The system comprises multiple UAV quadcopters (6) equipped with Pixhawk Flight Controllers (1), Raspberry Pi computers (2), LiDAR sensors (3), Infrared Cameras (4), and Zigbee communication modules (5). These drones communicate with each other (7) and ground control stations (8), sharing data via cloud communication (9). The system includes a simulation environment (23) integrating Visual Studio 2019 (22), Unreal Engine 4 (24), and AirSim (21), allowing for realistic virtual testing. A Python-based control script (26) manages drone operations, while MATLAB enables parallel processing for improved efficiency. The system features multiple visualization options (31) and enables position estimation and formation control (29) algorithm development. This innovative platform bridges the gap between theoretical algorithms and practical implementation, offering a safe, cost-effective solution for drone swarm research and development.

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052574 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : COIR-BAGASSE WOVEN GREEN COMPOSITE SANDWICH PANELS FOR SUSTAINABLE CONSTRUCTION AND AUTOMOTIVE APPLICATIONS

(51) International classification	:B32B0027120000, B32B0005020000, B29K0063000000, C08G0018480000, B29C0070020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The invention relates to a method for fabricating a coir-bagasse woven mat and chopped coir fiber reinforced epoxy sandwich panel composite. The process involves preparing coir and bagasse fibers using 2 N NaOH treatment for 40 minutes, then using processed coir fibers as warp yarn (1) and bagasse fibers as weft yarn (2) to create a hybrid mat. The sandwich panel is assembled by layering the coir-bagasse woven mat (1) (2), spreading chopped coir fiber reinforced epoxy core material (4) of 6 mm (6) thickness, and adding another woven mat layer between top (3) and bottom (5) cover sheets of 3 mm (7) thickness. The assembly is cured at room temperature for 24 hours, followed by post-curing at 80±2 °C for 8 hours. The resulting composite is sustainable, lightweight, and structurally integral, suitable for construction and automotive applications.

No. of Pages : 12 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052575 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BANANA-PINEAPPLE FIBER WOVEN EPOXY SANDWICH PANEL WITH TIB2 CORE FOR STRUCTURAL APPLICATIONS

(51) International classification	:C08J0005240000, B29K0063000000, B32B0038080000, B32B0005020000, B32B0027040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention relates to a sandwich panel composite fabricated from banana fibers, pineapple leaf fibers (PALF), and TiB2 particles reinforced epoxy resin. The composite is fabricated by weaving banana fibers as warp yarn (2) and PALF as weft yarn (1) to create a hybrid mat. TiB2 particles are mixed with epoxy resin (2) at 10% by weight to form the core material (4). The sandwich panel is assembled by impregnating the hybrid mat with epoxy resin to form 3 mm thick face sheets (3), placing a 6 mm thick TiB2-reinforced epoxy core (6) between two resin-impregnated mats (1) (2), and applying 15 MPa pressure in a 300 x 300 x 5 mm mold. The assembly is cured at room temperature, then post-cured at 85°C ± 2°C for 24 hours. The resulting composite combines natural fibers with enhanced mechanical properties, suitable for automotive, construction, and furniture applications.

No. of Pages : 12 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202441052576 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : HONEYCOMB LATTICE SANDWICH PANEL USING WARC ADDITIVE MANUFACTURING FOR LOCOMOTIVE APPLICATIONS

(51) International classification	:B33Y0010000000, B23K0009040000, B23K0009133000, B23K0009120000, B33Y0080000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The invention relates to a method for fabricating a Titanium Grade 5 honeycomb lattice structure sandwich panel using Wire Arc Additive Manufacturing (WAAM). The process utilizes a WAAM setup with a 94 kJ/m welding power source (2), wire feeder (7), welding torch (1), and computer-controlled multi-axis motion system (3). Titanium Grade 5 wire (6) is fed at 7.5 mm/s through a straightener (5) and melted using an electric arc and argon gas (4) at 0.2 m/min welding speed. The melted wire is deposited layer-by-layer to form a honeycomb lattice structure (11) with 3 mm wall thickness. The fabricated core (10) is placed between SAE 316L face sheets (8) with 50 mm row spacing. The panel undergoes surface finishing and quality control. The resulting sandwich panel offers lightweight design, high strength-to-weight ratio, excellent energy absorption, and efficient thermal management, suitable for improving locomotive component performance.

No. of Pages : 12 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/04/2023
(21) Application No.202331029191 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : CELLULOSE POROUS MATRIX-BASED DEVICE FOR ESTIMATION OF BLOOD HEMATOCRIT AND HEMOGLOBIN

(51) International classification :A61B 5/145, G01N 21/01, G01N 33/49, G01N 33/72
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT TITLE OF INVENTION: CELLULOSE POROUS MATRIX-BASED DEVICE FOR ESTIMATION OF BLOOD HEMATOCRIT AND HEMOGLOBIN A simple affordable biodegradable system for simultaneous and independent estimation of blood (HCT) and (Hb) from a drop of whole blood by measuring its spreading on absorbent cellulose porous fiber matrices(1) which excludes blood spot extraction and its elution in a solvent before analysis, avoids use of reagents/dyes, and need for advanced pre-processing the blood sample. The developed equation relating blood HCT/Hb and its spreading area allows rapid quantitative estimation of blood HCT/Hb while the readout pattern enables straightforward visual qualitative assessment.Addition of image analysis programming script eliminates the possibility of human errors in analysis. The system achieves wide detection range for Hct: 8.8-58% and for Hb: 3-18.37 g/dl the lowest reported limited of detection, is 2.17%, 1.07g/dl, respectively for HCT and Hb measurement.Economical fabrication procedure makes the system cost effective and suitable for deployment in remote locations without needing well-maintained infrastructure and trained human resources. Fig. 1

No. of Pages : 39 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2023
(21) Application No.202331042792 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : WEARABLE CONTRACTION MONITORING DEVICE

(51) International classification	:A61B0005000000, A61B0005110000, G06F0001160000, A61B0005024000, G02B0027010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
WEARABLE CONTRACTION MONITORING DEVICE A contraction monitoring device (100) for determining uterine contractions, comprises multiple electrodes (102a, 102b, and 102c), a voltage modifying unit (104), an analogue-to-digital converter (ADC) (106), and a microcontroller (108). The electrodes (102a, 102b, and 102c) are configured to attach to a body and facilitate the injection of an alternating current and measurement of a voltage response across the body. The voltage modifying unit (104) configured to modify and increase accuracy of signal associate with the voltage drop across the body in response to the injected current. The analogue-to-digital converter (ADC) (106) converts the measured analogue voltage signals into digital signals. The microcontroller (108) that is configured to: receive and process the digital signals from the ADC (106), calculate impedance using the measured voltage and known current values, and derive uterine contractions based on the calculated impedance.

No. of Pages : 49 No. of Claims : 24

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/09/2023
(21) Application No.202331058680 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SMART DEVICE FOR DIABETICS MONITORING & CONTROL USING IOT AND ARTIFICIAL INTELLIGENCE TECHNIQUES

(51) International classification	:A61B0005145000, A61B0005000000, G16H0040670000, A61B0005145500, A61B0005021000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
In recent years, the number of people with diabetes around the world has gradually increased. It may be affected by different age groups. According to current surveys, by 2045, more than 700 million cases of diabetes may be affected globally. Continuous blood glucose monitoring is essential to manage the disease and avoid long-term complications. Existing glucose levels can be monitored using finger-pricked glucometer and are widely used to measure blood glucose concentrations, which are invasive, painful and expensive. Therefore, this proposal is to develop non-invasive, painless and economical methods for monitoring, diagnosing and controlling blood glucose levels. Over the past few decades, many glucose sensing techniques have been developed. Researchers and scientists are constantly working to improve these techniques for better results. In this proposal, we analyzed three types of diabetes monitoring mechanisms are microwave, optical, electrochemical were discussed. Proposed invention is applicable to self-analytical diagnosis, monitoring and control systems for diabetic patients, and in particular relates to non-invasive blood glucose monitoring system.This invention introduces a multi-sensor-based photo acoustic acquisition probe device designed for Non-Invasive Blood Glucose Monitoring Systems (NIV-BGMS). The system establishes connections with computers, smart phones, tablets, and other mobile devices using either a USB or wireless Bluetooth interface. Within this innovation, Machine Learning (ML) algorithms are employed to construct degradation models aimed at predicting blood glucose (BG) concentrations. The proposed invention involves fabricating sensor-based detection probes using 3D printing technology and integrating multiple sensors and accessories.The sensors wirelessly transmit glucose data to a dedicated smart phone app via a compact rechargeable transmitter. This feature ensures real-time updates on glucose readings. The device conducts regular glucose measurements in human blood using 4G/5G technology and subsequently transmits the collected data to a server. Operating within the framework of the Internet of Things (IOT), this invention includes a mechanism where, in response to fluctuations in blood sugar levels, a voice notification is triggered, prompting the individual to take medication. Furthermore, based on this automated message, an alarm is raised, and a notification is sent to both a designated family member and the individual's doctor via their respective mobile phones.The implementation of this invention is anticipated to contribute positively to society by reducing the mortality rate among individuals with diabetes. The innovative approach of continuous, non-invasive blood glucose monitoring coupled with automated notifications and alerts ensures timely medical intervention and management, ultimately enhancing the well-being of diabetes patients.

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :19/09/2023

(21) Application No.202331062818 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEMATIC APPROACH TO ANALYSE THE IMPACT OF APPLYING FUZZY TIME SERIES FOR DEVELOPING AND FORECASTING ELECTRICITY DEMAND MODELS

(51) International classification :G05B13/02, G06F17/10, G06N7/02, G06Q50/06, H02J3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A systematic approach to analyse the impact of applying Fuzzy Time Series for Developing and Forecasting Electricity Demand Models is the proposed invention. The proposed invention focuses on studying the impact of applying Fuzzy Time Series. The invention focuses on analyzing the parameters of Fuzzy Time Series using algorithms of systematic approach.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/09/2023
(21) Application No.202331065075 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PRECISSION DRONE AGRICULTURE FOR HIMALAYAN DIVERSITY FARMING USING ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

(51) International classification	:G06N0020000000, G06N0005040000, G06K0009620000, G06F0021620000, G06N0007000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The development of the Himalayan Biodiversity Information System (HBIS) powered by Artificial Intelligence (AI) and Machine Learning (ML) represents a groundbreaking initiative with the potential to significantly impact the conservation of the Himalayan region. The Himalayas, known for their stunning landscapes and diverse ecosystems, face escalating threats from climate change, habitat degradation, and human activities. By harnessing AI and ML, this comprehensive system addresses key components such as data collection, preprocessing, labeling, and model development. It leverages AI for image analysis, geospatial insights, and climate modeling, and ensures data security, privacy, and ethical considerations. Collaboration with stakeholders, policymakers, and local communities is emphasized, along with continuous monitoring, updates, and rigorous validation of AI and ML models. Ultimately, the HBIS aims to revolutionize our understanding of the Himalayan ecosystem, inform conservation strategies, and contribute to global biodiversity knowledge while serving as a model for conservation efforts in ecologically sensitive areas worldwide.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/11/2023
(21) Application No.202331081547 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A thermostable composition for vaccine storage and delivery

(51) International classification :A61M37/00, A61K39/00, A61K47/50, A61M37/00, A61K39/00, A61K47/50
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT TITLE: A thermostable composition for vaccine storage and delivery A select thermostable matrix composition adapted for transdermal drug delivery matrix including microneedle based vaccine patch and the like comprising a synergistically co-acting and selective thermostability contributing combination of PVP Polymer in amounts of 48-52% w/v in TRIS buffer along with Sorbitol [2-4%] and Poly (Maleic Anhydride-Alt-1-Octadecene) substituted with 3-(Dimethylamino) Propylamine (PMAL) surfactant [0.5-1%] having thermostability of 40 Deg C for up to 16 weeks. Said thermostable matrix composition achieves stabilization and up to 80% recovery of hepatitis B antigen (HBSAg) after 48 days of storage at 40 Deg C. Fig.1

No. of Pages : 35 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/03/2024
(21) Application No.202431015315 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYSTEM AND METHOD FOR AEROBIC FITNESS POD MONITORING

(51) International classification	:G06F0003010000, A63B0071060000, A63B0024000000, A61B0005000000, A61B0005110000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed is a fitness system that includes user-interactive enclosure equipped with interior workout components, high-definition cameras for movement analysis, a microcontroller for real-time movement feedback, a display unit for workout metrics and augmented reality content, and multiple biometric sensors for real-time adjustment of workout intensity and environmental conditions. The system also includes an oxygen supply system, environmental simulation features, and a Tactile Guidance System for posture correction. The further claims describe different aspects of the system such as the configurable enclosure, camera positioning options, adaptive intelligent processing module, display unit with varying levels of interaction, extensive user health monitoring, the simulation of challenging environmental conditions using the oxygen supply and environmental control systems, tactile feedback enhancements, and social interaction features. The present disclosure also relates to a method of Fitness POD Monitoring. Figure 1 will be the reference.

No. of Pages : 27 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202431022304 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AI-DRIVEN B2B ECOMMERCE PLATFORM FOR PHARMA RETAILERS IN INDIA

(51) International classification	:G06Q0030060000, G06Q0010080000, G06Q0030020000, G06Q0010060000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT AI-DRIVEN B2B ECOMMERCE PLATFORM FOR PHARMA RETAILERS IN INDIA The present invention is related to the field of E-commerce. This invention discloses a novel B2B ecommerce platform that aims to revolutionize the pharmaceutical retail industry in India by creating a seamless, efficient, and transparent marketplace for manufacturers, traders, and retailers. Leveraging cutting-edge AI technology, the platform will optimize product sourcing, streamline inventory management, and enhance decision-making for all stakeholders. The platform works as a digital procurement partner for pharma retailers, making daily procurements from hyperlocal wholesale markets simple and efficient. The platform aims to bridge the gap between pharma companies and pharma retailers, in both metro and non-metro markets.

No. of Pages : 8 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/04/2024
(21) Application No.202431029492 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LITCHI PICKLE

(51) International classification :A23L19/00, A23L19/20, A23L27/10, A23L27/40
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABTRACT LITCHI PICKLE The present invention relates to a recipe for homemade litchi pickle, a delightful fusion of flavors and spices. The recipe includes fresh litchis, mustard oil, various aromatic spices such as turmeric, carom seeds, Nigella sativa, and others, along with vinegar and salt. The method involves preparing the litchis by washing, peeling, and deseeding, optionally cutting them, and dry roasting a blend of spices. These roasted spices are then ground into a coarse powder and combined with the pickling solution. The litchis are cooked in this mixture on low heat, with salt added to taste. After cooling, the pickled litchis are transferred into sterilized glass jars and refrigerated for at least 24 hours before consumption. The litchi pickle recipe offers a balance of tangy, spicy, and sweet flavors, making it a delectable addition to any meal.

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/04/2024
(21) Application No.202431030363 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : LOW-PROFILE PLANAR HORN ANTENNA HAVING 3-D PYRAMIDAL HORN ANTENNA-LIKE RADIATION PATTERN

(51) International classification	:H01Q1/38, H01Q13/02, H01Q13/00
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
ABSTRACT TITLE OF THE INVENTION: LOW-PROFILE PLANAR HORN ANTENNA HAVING 3-D PYRAMIDAL HORN ANTENNA-LIKE RADIATION PATTERN The present invention relates to a planar form of pyramidal horn antenna exhibiting 3-D pyramidal horn antenna-like radiation patterns having same gain and almost similar half power beamwidth (HPBW) in both the principal (E, H) planes operable in the 5G frequency range. A feeding technique involving a flag-shaped metallic strip directly connected to the inner conductor of the feeding probe fed from the back of the planar SIW horn (along the H-plane) has been proposed to excite a SIW-based planar horn antenna. The proposed antenna is easily integrable with microwave integrated circuits. Moreover, no complex feeding mechanism is used thus the antenna structure is simple to design and fabricate. The planar pyramidal horn finds numerous applications in the field of communications (5G) as well as defense owing to its high directive pyramidal radiation beam allowing for device-to-device communications with high data transfer rates without spillovers and multipath fading. Figure 2

No. of Pages : 34 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/04/2024
(21) Application No.202431030606 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PLANAR HORN ANTENNA HAVING QUASI-OMNIDIRECTIONAL RADIATION PATTERN

(51) International classification :H01Q13/02, H01Q9/04, H01Q19/08, H01Q13/08, H01Q1/38, H01Q21/06, H01Q21/00, H01Q1/50
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT TITLE OF THE INVENTION: A PLANAR HORN ANTENNA HAVING QUASI-OMNIDIRECTIONAL RADIATION PATTERN The present invention relates to a quasi-omnidirectional planar H-plane horn antenna having triple-band impedance bandwidth (IBW) characteristics; operating in the 5G frequency region centered around 28 GHz. The present antenna comprises of four coplanar H-plane horns placed orthogonal to each other. The waveguide section of four horns meets at the center location, where a simple coaxial feed is used to excite the TE10 mode in the waveguide section of all four orthogonal horns. A corrugation technique using the metallic vias has been applied in the flaring section of each horn to improve the impedance matching and get better quasi-omnidirectional radiation patterns. Further, trapezoidal-shaped dielectric loading in front of all four horn apertures helps to improve the antenna gain. The present horn is capable of transmitting data along four orthogonal directions (quasi-omnidirectional fashion) at mid-5G frequency ranges having advantage of being conformal and having greater signal coverage. Figure 2

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/04/2024
(21) Application No.202431030949 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A PLANAR VIALESS IMPLANTABLE ANTENNA FOR WIRELESS COMMUNICATION ENABLED LEADLESS CARDIAC PACEMAKER

(51) International classification :A61N0001375000, A61N0001372000, H01Q0009040000, A61N0001050000, H01Q0001380000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a leadless cardiac pacemaker (101) with a tailored implantable antenna (102) for seamless integration into a communication frequency band. Said leadless cardiac pacemaker comprises a dual T-shaped microstrip patch antenna with partial ground plane built on a flame-retardant substrate (104) is provided therein and a superstrate (106) adapted to contribute to the antenna's biocompatibility with the human body by lowering the dielectric mismatch and antenna-human body coupling. The implantable antenna utilizing superstrate structure with good gain, radiation characteristics and good SAR values for leadless pacemaker applications at 2.4 GHz frequency band. The present invention is made up of very low-cost material, easy to fabricate, relatively efficient, vialess and most importantly, compatible with existing solutions. FIGURE 2(e).

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/04/2024
(21) Application No.202431033422 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A FEED-PASTE COMPOSITION FOR ORNAMENTAL FISH AND PROCESS OF PREPARATION THEREOF

(51) International classification :A23K10/20, A23K10/30, A23K20/147, A23K20/163, A23K20/174, A23K20/20, A23K50/80, A23L33/105
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a feed-paste composition for fish comprising feed ingredients such as proteins, lipids, vitamins, carbohydrates and minerals. The present invention particularly relates to a feed-paste composition for ornamental fish. The feed-paste composition comprises carbohydrate – 50 – 55% by weight of total composition; protein – 20 – 25% by weight of total composition; lipid/fat – 3-5% by weight of total composition; minerals – 2 - 5% by weight of total composition; fibre – 3 – 5% by weight of total composition; and water – 9 – 13% by weight of total composition.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/04/2024

(21) Application No.202431033840 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A COST-EFFECTIVE AND DURABLE SYSTEM FOR CUTTING SOLID FOOD MATERIALS

(51) International classification :A47J47/00, A47J47/16, B26D3/26
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A wooden cutting-board system for cutting solid food materials which system is cheap, durable, simple, and easy to handle, still offering a variety of shapes and sizes for the cut materials.The system comprises of a wooden board, an aperture at the center thereof, two metallic platespositioned at head and tail of the aperture and fixed upon the board,four folding stands with rubber caps at their free ends, a stainless steel bladeas the cutting device mounted upon the board, and a metallic wall attached to a metallic plate which is movable on two metallic rails by the help of a screw'The open space beneath the board can accommodate a varied range of containers for collecting cut materials when the stands are unfolded and the invention is in operation.

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/05/2024

(21) Application No.202431037400 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD AND PROCEDURE FOR URINARY DETECTION OF TYROSINE AND HIPPURIC ACID IN MITHUN

(51) International classification :G01N31/02, G01N33/493, G01N33/50, G01N33/52, G01N33/68, G01N33/84
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention provides a non-invasive, method for the detection of pregnancy in Mithun on the basis of Tyrosine and Hippuric acid metabolite levels in naturally micturated urine. The present invention further provides a kit for the detection of pregnancy as well as to differentiate between pregnant and non-pregnant in Mithun using urine samples.

No. of Pages : 24 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/05/2024
(21) Application No.202431037697 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : THERMOPLASTIC MULTIPLE BRACKET REPOSITIONER

(51) International classification :A61C7/02, A61C7/12, A61C7/00, A61B90/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
&hodontic treatment frequently necessitates the repositioning of brackets to ensure optimal tooth alignment. Existing techniqrres for bracket repositioning can be inefficient, timeconsuming, and increase the risk of bracket damage or inaccuracies. This invention introduces the Thermoplastic Multiple Bracket Repositioner (TMBR), a novel device and methodology designed to streamline and enhance the precision of the bracket repositioning process. The TMBR utilizes a bioeompatible thermoplastie material that is eustom-molded direetly to the patient's dentition, encompassing the brackets targeted for repositioning. Embedded within the thermoplastic are radiopaque or visually contrasting markers that precisely indicate the desired final bracket positions. Following the setting of the thermoplastic, the brackets are carefully detached. The TMBR then functions as a template, guiding the accurate transfer and rebonding of the brackets to their newly designated locations. The Thermoplastic Multiple Bracket Repositioner presents several advantages over traditional bracket repositioning methods. It offers significant improvements in efftciency by allowing the simultaneous repositioning of multiple brackets. The use of embedded markers enhances the accuracy of bracket placement. The TMBR minimizes the risk of bracket deformation and potential damage to tooth enamel. This innovative device has the potential to optimize orthodontic treatment by reducing chair time, improving treatment outcomes, and enhancing patient comfort.

No. of Pages : 8 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/05/2024
(21) Application No.202431040115 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AN AGRICULTURAL ROBOTIC SYSTEM AND METHOD THEREOF

(51) International classification	:B25J0009160000, B25J0011000000, B25J0005000000, H04W0004120000, A01G0025060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is an agricultural robotic system (100). The system (100) comprising a robot body (102) including a controller unit (112), a soil quality monitoring unit (114), an automated irrigation and nutrient management unit (116), an integrated display and video camera unit (118), a weed removal unit (120), and a wireless connectivity module (122). The system (100) also comprising a motion mechanism (124) configured to enable motion of the robot body (102). The system (100) also comprising a communication unit (126) configured to provide wireless internet connectivity. The system (100) also comprising a central management unit (128) configured to remotely enable comprehensive farm automation and operation optimization.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :01/07/2024

(21) Application No.202431050149 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : AN IMPROVED ADAPTIVE HUMAN-COMPUTER INTERACTION SYSTEM WITH MACHINE LEARNING INTERFACE

(51) International classification :G06N0020000000, G06F0003010000, G06F0009451000, G06N0007000000, G06F0040300000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention pertains to an advanced Human-Computer Interaction (HCI) system that leverages cutting-edge machine learning algorithms to significantly enhance user experience and productivity. The system dynamically adjusts its interface and responses based on real-time analysis of user behavior, preferences, and emotional states. By integrating technologies such as natural language processing, computer vision, and predictive modeling, the system can intuitively understand and anticipate user needs, thereby reducing cognitive load and improving efficiency. Key components include a personalized interaction model, adaptive interface customization, and real-time emotional state detection. This innovative approach to HCI offers a robust solution for a wide range of applications, from personal computing to complex industrial systems, representing a substantial improvement over traditional static interfaces.

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202431050284 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ECO-FRIENDLY ANTIPARASITIC COMPOSITION FOR PISCICULTURE, AND PROCESS OF PREPARATION THEREOF

(51) International classification	:A61K0009190000, A23K0050800000, B01D0003080000, A01N0065000000, A61P0033000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a mahua oil cake extract-based antiparasitic composition for pisciculture, and process of its preparation. The process comprises steps of: pulverizing (S1) mahua oil cake (100) into powder (102) of 70-80 µm particle size; mixing (S2) the powder with water at a w/v ratio ranging from 1:10 to 1:15; keeping (S3) the mixture (104) in an incubator shaker (200) at 25-35 °C temperature under 100-150 rpm speed for 70-72 hours; heating (S4) the incubated mixture in a container (300) under 10-15 psi pressure for 10-15 minutes; filtering (S4) the heated mixture through using a muslin cloth or filter paper (500) to obtain a supernatant (106); and evaporating (S5) the supernatant in a rotary evaporator (600) at 40-45 °C temperature under 5-7 psi pressure for 10-15 minutes followed by freeze drying (700) to obtain an extract as the antiparasitic composition (108). The composition exhibits 90-96% antiparasitic efficacy within 72-96 hours at a dose of 15-20 mg/L without disturbing health of pisciculture species and human beings. Fig. 1

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202431050439 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : Optimized Energy Management in Smart Cities Through IOT & Machine Learning

(51) International classification :G06N0020000000, G06Q0050060000, G06N0003040000, H02J0003000000, H04L0067120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a system and method for optimized energy management in smart cities leveraging Internet of Things (IoT) technology and machine learning algorithms. The system comprises a network of IoT sensors distributed across diverse urban locations to continuously monitor real-time data on energy consumption, generation from renewable sources, and environmental conditions. Collected data is transmitted to a central storage system and analyzed using advanced machine learning algorithms, including regression models and neural networks, to predict energy demands, optimize energy distribution, and detect anomalies such as equipment failures or unexpected energy surges. A centralized energy management platform integrates with existing city infrastructure to implement these optimized strategies, facilitating efficient energy distribution, reducing waste, and enhancing sustainability. This innovation represents a scalable solution for addressing modern urban energy challenges, promoting cost savings, and supporting environmentally conscious practices in smart city development. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 23 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202431050464 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A HALF BRICK THICK WALL WITH INTERLOCKING LAYERS

(51) International classification :E04B0002020000, H02G0003080000, E04B0002160000, E04B0001700000, F28D0015020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to a half brick thick wall 10 with interlocking layers which is designed to prevent the formation of horizontal cracks and enhance structural integrity. The half brick thick wall 10 comprises a plurality of first bricks 1 having a first upper flat surface 3 and first lower flat surface 4 and a plurality of second bricks 2 having a second upper flat surface 5 with a rectangular slot 5A and a second lower flat surface 6. The plurality of first bricks 1 and the plurality of second bricks 2 feature protruded section 1A and cavity section 2A, respectively, allowing them to interlock both horizontally and vertically. The interlocking mechanism formed by fitting the protruded section 1A into the cavity section 2A ensures a tight bond between adjacent bricks, preventing displacement and enhancing durability.

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202431050537 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : COMPOSITION AND FORMULATION OF POLYPHENOL MODIFIED NATURAL POLYMER-BASED BIOADHESIVE HYDROGEL CROSSLINKED BY ORGANOPHOSPHORUS COMPOUND

(51) International classification :A61L27/22, A61L27/24, A61L27/52, A61L26/00, A61K38/16, A61K47/10, A61K31/05
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention discloses a bio-adhesive hydrogel composition. The said composition comprises a protein-based polymer, a polyphenol and an organophosphorus chemical capable of crosslinking with the said polymer. The protein-based polymer is selected from a group consisting of gelatin type-A, gelatin type-B, collagen, elastin, and fibrin and said polymer is present in a concentration range of about 5% to 30% (w/v). The polyphenol comprises tannin group selected from at least one of tannic acid (TA), gallotannins, ellagitannins, and epigallocatechin gallate (EGCG) and said polyphenol is present in a concentration range of about 0.1 mM to 4.8 mM. The organophosphorus chemical is selected from at least one of Tetrakis (hydroxymethyl) phosphonium chloride (THPC), Tetrakis (hydroxymethyl) phosphonium sulphate (THPS), and tris (hydroxymethyl) phosphine and said organophosphorus present at a concentration range of about 5 mM to 25 mM.

No. of Pages : 42 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024
(21) Application No.202431050538 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD AND SYSTEM FOR DETECTING AND QUANTIFYING ADULTERATION IN FOOD STUFF

(51) International classification :G06N20/00, G06F18/20, G06N3/02, G01N21/35, G01N33/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
The present invention discloses a method (100) for detecting and quantifying adulteration in foodstuff utilizing Fourier Transform Infrared (FTIR) spectroscopy coupled with machine learning techniques. The method involves performing (101) an FTIR scan on a sample of the foodstuff to generate a FTIR spectrum, followed by acquiring (102) spectral data corresponding to molecular bonds present in the sample. The method (100) includes applying (105) of one or more machine learning models to predict the concentration of adulterants in the foodstuff sample by comparing obtained peaks in the spectral data with peaks from FTIR spectroscopy conducted with preset levels of adulterants.

No. of Pages : 24 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :02/07/2024

(21) Application No.202431050744 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : DEEP LEARNING APPLICATIONS IN ASSESSING INSTRUCTOR BURNOUT AND ENHANCING STUDENT ENGAGEMENT IN ONLINE HIGHER EDUCATION

(51) International classification	:G09B0007000000, G06N0020000000, G09B0019000000, G09B0005000000, G09B0007020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :

This invention introduces a real-time feedback and intervention system designed to enhance the assessment of instructor burnout and student engagement in online higher education environments. Leveraging advanced data processing and machine learning techniques, the system continuously monitors live data streams from virtual classrooms, including video, audio, and textual interactions. Real-time analysis enables the system to generate immediate insights into instructor behaviors indicative of burnout and student engagement levels. Automated alert systems notify educators and administrators of critical events, facilitating prompt interventions such as adjusting teaching strategies or providing additional support resources. The system's adaptive capabilities and personalized recommendations aim to optimize teaching effectiveness, improve learning outcomes, and foster a more responsive and proactive educational environment in digital learning settings.

No. of Pages : 19 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024

(21) Application No.202431050751 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR LABEL-FREE DETECTION OF A BREAST CANCER BIOMARKER IN A BIOLOGICAL SAMPLE

(51) International classification	:H01L0029780000, G01N0033574000, H01L0029660000, G01N0033543000, H01L0021823800
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a system and method for label-free detection of a breast cancer biomarker in a biological sample. This invention presents a label-free system for detecting breast cancer biomarkers, particularly C-erbB-2, in saliva or serum. The core component is a vertical tunnel field-effect transistor (VTFET) featuring a nanogap cavity region functionalized with thioglycolic acid to capture biomarkers. The VTFET incorporates a SiGe pocket for enhanced tunneling, a dual metal gate for work function engineering, and SiO2 layers for biomolecule immobilization. Detection occurs when the biomarker binds within the nanogap, altering the VTFET's electrical characteristics. The system measures drain current or flat band voltage changes to determine biomarker presence and concentration. Capable of detecting clinically significant C-erbB-2 levels in both saliva and serum, this method offers a sensitive, cost-effective approach to breast cancer screening. The invention could significantly improve early detection and monitoring of breast cancer, potentially leading to better patient outcomes.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202431050827 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SENSOR CONTROLLED NUTRIENT FEED WITH SOLAR POWER FARMING SYSTEM

(51) International classification :A01G0009240000, A01G0025160000, A01G0025020000, A01G0027000000, A01G0009020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a solar powered farming system that minimizes load on fertile land and grid power for irrigation, and helps in generating plant specific growth requirement flow chart for agricultural research purpose. The system comprises: at least one elongated hollow body (100) having an open end (102) and a closed end (104); at least one growth substrate filled bed (200) extended inside the hollow body (100) from its open end to its closed end, a vertical frame (300) having poles on which the hollow body (100) and the bed (200) are horizontally mounted; a fluid circulation pipeline (400); a microcontroller (800); and a solar cell (700) for supplying electricity to operate the system. A gap (G) of 3-5 inch is provided between outer surface of the bed (200) and inner surface of the hollow body (100). The pipeline (400) is adapted to supply water from a water tank (500) and fluid nutrients from a vermicompost bin (600) into the gap (G) through the open end (102) of the hollow body (100). The pipeline (400) is coupled with sprinklers (404) drip irrigation tubing provided along the bed (200). The microcontroller (800) is configured with sensors (802) to measure and generate reports regarding requirements of temperature, humidity, water, and nutrients at different stages of sapling growth cycle. Fig. 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202431051099 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : METHOD AND SYSTEM FOR IDENTIFYING NEUROLOGICAL PATTERN AND PROGNOSTIC MANAGEMENT

(51) International classification	:A61B0005000000, G06N0003080000, G06N0003040000, G16H0050200000, A61B0005369000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT METHOD AND SYSTEM FOR IDENTIFYING NEUROLOGICAL PATTERN AND PROGNOSTIC MANAGEMENT Disclosed is a method for real-time prediction of seizure and protective/ preventive care procedure of the patient of epilepsy. The method comprises receiving multi-channel signals from specified brain regions of the patient and performing a segmentation of the received multi-channel signals into a plurality of stationary-encoded segments. The method further comprises determining a neuromarked connectivity for each segmented part of the received multi-channel signals. The determining the neuromarked connectivity comprises performing one or more pre-processing operations on the multi-channel signals, performing a data augmentation on the pre-processed multi-channel signals, training a deep learning GCN model and a ML model simultaneously to analyze each segmented part and performing a post-processing operation on the segmented part of the received multi-channel signals. Furthermore, the method comprises identifying the neurological pattern associated with the patient based on an extracted neuromarked PLV features and a type of each segmented part of the received multi-channel signals. FIG. 4

No. of Pages : 29 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/07/2024

(21) Application No.202431051142 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : INNOVATIVE APPROACHES TO ENHANCE BREAST CANCER DETECTION USING MACHINE LEARNING AND IMAGE PROCESSING

(51) International classification	:G06K0009620000, G06N0003040000, G06N0003080000, G06T0005400000, A61B0006000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

INNOVATIVE APPROACHES TO ENHANCE BREAST CANCER DETECTION USING MACHINE LEARNING AND IMAGE PROCESSING The method for the development of a study uses Retina Net, an effective and quick CNN pre-trained object detector. Retina Net is a simple single-stage object detector. To increase performance, the chosen detector was subjected to two stages of transfer learning. The Retina Net model is originally trained on a general-purpose dataset known as the COCO dataset. The transfer learning is then utilized to apply the Retina Net model to another mammography dataset, the CBIS-DDSM dataset. Finally, the second transfer learning step is utilized to evaluate the Retina Net model on a tiny mammography dataset known as the IN breast dataset. Breast cancer data may be diagnosed using a variety of machine learning algorithms. This study introduces an automated breast cancer detection utilizing a machine learning model. As a classifier model, Convolutional Neural Networks (CNNs) were used to pick features, and noise was eliminated by Contrast Limited Adaptive Histogram Equalization. Additionally, the research examines five algorithms: Random Forest, SVM, KNN, Naïve Bayes classifier, and Logistic Regression. FIG.1

No. of Pages : 15 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051463 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : A NATURE BASED FIBER-BASED EPOXY COMPOSITES AND METHOD OF PREPARING THE SAME

(51) International classification :A61K0036185000, C08J0005040000, C08L0001020000, G06Q0040020000, C08K0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A NATURE BASED FIBER-BASED EPOXY COMPOSITES AND METHOD OF PREPARING THE SAME The confluence of environmental legislation and global industrial and consumer demands has propelled a concerted effort among manufacturers and scientists to develop novel, environmentally friendly, and sustainable materials. This endeavor aims to replace current synthetic fibers and mitigate reliance on petroleum-based products. Natural fiber-reinforced composites, owing to their affordability and biodegradability, have experienced a significant surge in utilization. In this context, to find the potential of Burr Mallow fibers, epoxy composites were meticulously crafted using the hand layup method. The utilization of Burr Mallow fibers in epoxy composites not only aligns with sustainability goals but also showcases the potential for these materials to outperform counterparts with different fiber loadings. The results prove that the composites fabricated with Burr Mallow fibers are suitable for various light weight applications.

No. of Pages : 26 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202431051740 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : An IoT-based Foot Ulceration Detection System and Predicting The Risk of Plantar Fasciitis

(51) International classification :A61B0005000000, G16H0010600000, G06Q0010100000, H04L0009080000, G16H0040670000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A low cost foot ulcer detection system for early prediction of Type-II diabetic patients has been designed and implemented. This is an improvised model of Semmes Weinstein Test (a test performed by medical practitioners manually in labs), also known as Monofilament Test. The work innovates the detection system with an Internet of Things (IoT) based technology where data is stored in a virtual server securely for monitoring and analysis purposes. The work ensures the data archives as well as data security with a possibility of data analysis for further diagnosis of patients in the healthcare industry. The device has been accomplished for the modern healthcare industry with reliable and scalable technologies, with minimal circuitry and can be operated very conveniently and safely.

No. of Pages : 19 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202431051757 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTABLE POWER SUPPLYING DEVICE FOR ELECTRONIC GADGETS

(51) International classification	:H01R0031060000, H01R0025000000, H01R0013453000, B65G0023080000, E06B0009680000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An adaptable power supplying device for electronic gadgets, comprising an inverted T-shaped body 101 positioned on a fixed surface near electrical socket, a rotatable circular disc 201 having three cylindrical tubes 202 receive power from electrical socket, a sliding arrangement arranging tubes 202, a motorized slider 203 arranges a horizontal and vertical arranged link rod (204, 205) for facilitating user to receive electrical power from socket by inserting tubes 202 within holes of socket, multiple cuboidal slots 103 dedicated to store cuboidal box-shaped structure which configured with sockets, two motorized extendable sliders 105 for popping out structure for facilitating user to access socket and plug-in power plug with ease, a motorized roller 107 wrapped with wire, an electronically controlled nozzle 109 extinguishes fire, a temperature sensor monitor temperature of sockets, a L-shaped telescopic pole 111 presses a push button 112 to cut current supply.

No. of Pages : 25 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202431051758 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED FLOATING WASTE COLLECTION DEVICE FOR WATER BODIES

(51) International classification : E02B15/04, E02B15/10, G06T7/00, B25J19/02, B25J15/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An automated floating waste collection device for water bodies, comprises of a platform 1 to float over a surface of a water body from which floating waste is to be collected, a pump- jet unit 2 to provide propulsion to the platform 1 over the surface as per requirement, an imaging unit 3 to determine presence of the waste over surface of the water body, a pair of flaps 4 by means of a motorized pin joint 5 to provide rotation to the flaps 4, a SONAR module 8 to detect underwater obstacles in path of the platform 1, a first ball and socket joint 9 to regulate direction of propulsion of the platform 1, a level sensor 10 to monitor height of the platform 1 revealed over the water body, and an IIR sensor to monitor presence of any living being in the chamber 6.

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051759 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED PLANT IRRIGATION DEVICE

(51) International classification :A01G0027000000, A01G0025160000, A01G0025020000, A01N0043653000, G01N0033240000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
An automated plant irrigation device, comprising an inverted U-shaped frame 101 having a pair of motorized omnidirectional wheels 102 to translate the frame 101, an artificial intelligence-based imaging unit 103 installed within the frame 101 evaluates a 3-Dimensional mapping of an agricultural field, a GPS module determine co-ordinates of a user-selected area, a motorized sliding unit 201 installed over the frame 101 to provide translation to a water reservoir 202 configured with the sliding unit 201 , an electronic rotatable nozzle 104 installed over the reservoir 202 by means of an inverted L-shaped link 105, a hydraulic actuator 106 installed between the link and nozzle 104 to provide extension to the nozzle 104 dispense a regulated amount of water within the soil, and a weather sensing module including a humidity sensor and temperature sensor installed over the frame 101 to monitor humidity and temperature levels in the surroundings.

No. of Pages : 25 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051760 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED FOREST FIRE MONITORING AND EXTINGUISHING SYSTEM

(51) International classification	:G08B0017120000, G08B0017000000, A62C0003020000, C12Q0001040000, C12Q0001060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An automated forest fire monitoring and extinguishing system, comprising plurality of bodies 1 developed to be maneuvered within a forest area, a pair of motorized track wheels 2 arranged underneath the bodies 1 for maneuvering the bodies 1 within the forest area, an imaging unit 3 installed on each of the bodies 1 to generate 3D (three-dimension) mapping of surroundings, a sensing module 4 embedded within each of the bodies 1 to detect presence of smoke/flame, a thermal sensor 5 mapped on each of the bodies 1 to detect intensity of fire, a launching arrangement 6 integrated on the bodies 1 for launching fire extinguisher balls in fire prone area to extinguish the fire, a proximity sensor 7 laid on each of the bodies 1 to detect presence of living organisms and a wind detection sensor 8 arranged on the bodies 1 to monitor speed of wind blowing in surrounding.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051761 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED CROP PROTECTION AND SOIL MONITORING DEVICE

(51) International classification	:B62B0005000000, G06Q0050020000, A01M0007000000, G05D0001020000, G01N0033240000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An automated crop protection and soil monitoring device, comprising a body 101 developed to be positioned on a ground surface of an agricultural field, an artificial intelligence-based imaging unit 102 to determine height of the crops cultivated on the field, plurality of motorized wheels 103 via a V-shaped members 104 wheels 103 for effectively maneuvering the body 101 on entire agricultural field, an ultrasonic sensor to determine level of surface, a primary motorized pivot joints 105 with a pair of secondary motorized pivot joints 106 for tilting the members 104 in a manner to adjust position of the wheels 103, a motorized drilling unit 107 via a telescopic arm 108 to perform drilling operation on various spots on the agricultural field, an electronically controlled nozzle 109 to dispense the suitable fertilizer store in the chamber 110.

No. of Pages : 21 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051762 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADJUSTABLE LIGHT ILLUMINATION CONTROL SYSTEM FOR TWO WHEELERS

(51) International classification	:B62K0005100000, B05B0014450000, H04N0013254000, B65G0023080000, B05B0015550000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
An adjustable light illumination control system for two wheelers, comprising a first 101 and second cuboidal body 102 positioned at front portion of a two-wheeler vehicle, a pair of motorized clamping units 103 grips at front fork of vehicle, an illuminating unit 104 produces high-intensity illumination, multiple metallic fins 105 manages temperature within bodies 101,102, a temperature sensor monitors temperature of second cuboidal body 102, a rectangular flap 107 collects air, an ultrasonic sensor detects sharp turns on path, a pair of motorized expandable slider rail 201 positions a cuboidal member 202 outside first cuboidal body 101, a LED 203 illuminates during tilting of vehicle, a set of RADAR detects presence of oncoming traffic, a pair of motorized roller 204 coiled with a reflective sheet 205 vary illumination, a cuboidal box 108 installed with electric dynamo 110 via a V-shaped link 111 generates electrical induction that stored in a battery.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051786 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTABLE PHOTOGRAPHY ASSISTIVE DEVICE

(51) International classification	:H04N0005225000, H04N0005232000, G06F0003042000, H04N0007180000, G06F0003030000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An adaptable photography assistive device, comprises of a frame 101 developed to be accessed by a user for performing a photography, a touch interactive display accessed by user to enter mode, a body 103 integrated with the handle 104 for user to grip, a base 105 provides stability to the body 103 on the surface, an imaging unit 107 captures images of the vicinity of the body 103, a sensing module determines distance and angle of the object, plurality of omnidirectional wheels 108 moves the body 103, a pair of cuboidal structures 109 arranged at correct orientation as per user's specification, a LED 201 (light emitting diode) emits light, plurality of flaps 202 orients to divert the light at correct angle, an image capturing module 111 captures images and videos of surroundings and a microphone 112 receives sound required in captured videos.

No. of Pages : 22 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051787 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTABLE CURRENCY EXCHANGE AND DENOMINATION SYSTEM

(51) International classification	:G06F0003048800, G06Q0040040000, H04N0001100000, G06Q0020380000, G07D0001040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
An adaptable currency exchange and denomination system, comprises of a body 101 associated with the system accessed for currency exchange or denomination, display panel 102 to provide input, a processing unit processes user's input, an extendable plate 103 extends forward to collect currency of user, an imaging unit 201 captures images of the currency, a pair first rollers 202 positions in contact with currency, a scanning module 104 scans the currency, a laser scanner 301 scans each note, a tray 203 accommodates translated currency, plurality of channels 206 stores notes of different currency, a plank 209 extend/retract by scissor arrangement 210 to push stacked notes, coin collection unit 211 collects coins, top-opened receptacle 404 dispenses exchanged/ denominated currency.

No. of Pages : 28 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202431051788 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : GOODS WAGON FOR CARRYING GOODS

(51) International classification	:B61D3/00, B61D39/00, G06T7/00, B25J19/02, B25J15/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A goods wagon for carrying goods, comprising a cuboidal body 101 developed to be installed with a locomotive, a primary computing unit is accessed by the user to enter destination of wagon, plurality of load cells detects load distribution of goods in body 101, a pair of motorized sliders 201 arranged with a pair of flaps to evenly spread goods within body 101, an artificial intelligence-based imaging unit 203 detects curve of railway tracks in path of wagon, a speed sensor detects speed of wagon, an RFID reader 204 for allowing user to enter wagon, plurality of temperature sensors monitors temperature of different regions of body 101, plurality of electronic sprayers 206 sprays water within the body 101, a weather module forecast weather in surroundings, and a pair of plate 104 via motorized pivot joints 103 covers top portion of body 101.

No. of Pages : 22 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051789 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : AUTOMATED SHOPPING ASSISTIVE DEVICE

(51) International classification	:F24C0007080000, H04W0004020000, G06Q0030060000, H04N0021647000, B07C0003140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An automated shopping assistive device, comprises of body 101 opened from top side developed to be positioned on a ground surface, a pair of triangular shaped links 102 attaches tripod wheel 104 to move the body 101 over the surface as well as on stairs, an imaging unit 105 captures images of vicinity, display panel 106 enables user to select items to shop, a pair of motorized grippers 107 acquire grips on the items, a sensing module monitors parameters including firmness, color and odor of the items, a OCR module reads composition and expiration date, a motorized sorter conveyer belt 109 sorts the items based on the sections, a multi-sectioned container 111 stores plastic bag to wrap items, extendable L-shaped link to translate the weighing unit 110 in proximity to the vessel 112.

No. of Pages : 21 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051790 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : INTERACTIVE STUDYING ASSISTIVE SYSTEM

(51) International classification	:G06F0003048800, G06F0003048200, G09B0005060000, G03B0017540000, B42D0009000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An interactive studying assistive system, comprises of a first touch enabled screen 101 associated with the system, a microcontroller linked with the screen 101 processes the input commands, a speaker 102 notifies the user, a platform 103 accommodates a book, an artificial intelligence-based imaging unit 104 captures multiple images of pages of the book, a robotic arm 105 arranged with the platform 103 flips the book, a second touch enabled screen 106 displays determined sub-topics, a database linked with the microcontroller stores detailed explanation of the topics, a holographic projection unit 107 projects video for user to understand, an internet module fetches question of examination, a timer monitors real time, an OCR (Optical Character Recognition) module determines text written on the pages of the book, an LDR (Light Dependent Resistor) detects light in the surroundings.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051791 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTABLE CROP MONITORING DEVICE

(51) International classification	:H04N0005225000, H04N0005232000, A01G0009240000, F16M0011240000, F16M0011040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An adaptable crop monitoring device, comprising a body 101 integrated with a handle 102 accessed by a user to position in proximity to crops cultivated on a field, an artificial intelligence-based imaging unit 103 installed on the body 101 to determine positioning of crops, an extendable motorized slider 104 arranged in the body 101 to extend/retract for positioning a vertical frame 105 mounted on the slider 104 in proximity to infected portion of the crops, a motorized clamp 106 integrated in the frame 105 to grip infected portion of the crops, a magnifying glass 107 mounted on the frame 105 by means of a motorized guiding rack 108 to translate the glass 107 over the clamp 106 and an artificial intelligence-based image capturing module 109 installed on the frame 105 for capturing zoomed image of the infected portion of crops to monitor and analyze infected portion of the crops.

No. of Pages : 20 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051792 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTIVE SYSTEM FOR ESCALATORS

(51) International classification	:E04F0011180000, H04N0021422000, G16H0050200000, B66B0025000000, B66B0027000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
An adaptive system for escalators, comprising of an artificial intelligence-based imaging unit 102 captures images of vicinity of the escalator 101, a processing unit associated with the system processes and monitors the facial expression of the user, plurality of balustrades 103 mounted on edges of each of the steps allow boarded user with support, an ultrasonic sensor integrated on the balustrades 103 monitors average height of the user, a button mounted on ends of the escalator 101 accessed by authorized personnel for activating luggage carrying mode, a RFID (radio frequency identification) scans RFID card, a motorized hinge 104 integrated in each of the steps tilt portions of particular members of steps, a laser measurement sensor monitors length of the user's feet not aligned on the steps, an extendable flap 106 extends to restrict user feet to align with the step.

No. of Pages : 22 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051793 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTABLE WALKING AID ASSISTIVE DEVICE FOR VISUALLY IMPAIRED

(51) International classification :A61H0003000000, A61H0003040000, H04N0005232000, A61H0003060000, G09B0021000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An adaptable walking aid assistive device for visually impaired, comprising an elongated body 101 having a handle 102 gripped by user for handling device, an imaging unit 104 determines body 101 dimensions of user, a linear actuator 105 extends/retracts for maintaining an upright position, a microphone 106 receives command regarding a destination of user, a speaker 107 audibly guides user in travelling, an extendable L-shaped link 201 extends/retracts for positioning a canopy 202 over user, a proximity sensor synced with imaging unit 104 for detecting number of persons around user, a motorized curved slider 203 translates motorized rollers 204 towards outside of box 110 to rotate for unwrapping a coiled belt 205 fastened by user over user's waist, a pair of extendable rods 206 via a motorized slider 207 to translate rods 206 apart from each other for providing stability to user while walking with support of body 101.

No. of Pages : 28 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/07/2024
(21) Application No.202431051825 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DYNAMIC WIRELESS CHARGING SYSTEM FOR ELECTRIC VEHICLES WITH HIGH-FREQUENCY INVERTER DRIVEN BY MODIFIED RESONANT GATE DRIVER CIRCUIT

(51) International classification :H02M1/08, H02J50/10, B60L53/12, H02M1/42, H03K17/00, H02M1/14, H02J50/70
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
DYNAMIC WIRELESS CHARGING SYSTEM FOR ELECTRIC VEHICLES WITH HIGH-FREQUENCY INVERTER DRIVEN BY MODIFIED RESONANT GATE DRIVER CIRCUIT A novel Gate Driver Circuit for High-Frequency Inverter used in Dynamic Wireless Charging of Electric Vehicles comprises a power supply (101), a Rectifier Circuit and Power Factor Correction Circuit (102), an DC link capacitor (103), a driver circuit (104), a high frequency inverter (105), a magnetic coupler (106), an output rectifier and filter (107), a control circuit (108), a feedback mechanism (109), a battery load (110), wherein the power supply is the initial point where the system receives electrical power, typically from an AC source. In another embodiment the Rectifier Circuit and Power Factor Correction Circuit convert the AC input into a DC voltage as well as maintain the power factor close to unity and this rectification process is crucial for systems that operate on DC power, ensuring a steady voltage supply for downstream components.

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/07/2024
(21) Application No.202431051951 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : DOUBLE-STAGE AIR DRIER FOR COMPRESSED AIR

(51) International classification :B01D53/26, B01D50/00, B60T17/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In the proposed invention, there is a double-stage filtration system. In the first stage, the heavy dirt particles will be separated because of the centrifugal force caused by the helical vane. In the second stage, separated condensed water will be collected at the perforated chamber, again because of the centrifugal force heavy water particles will be thrown outward and it will be collected at the perforated chamber. In the proposed invention the chances of air carrying separated water is very low. Because of the double stage and effective water collection mechanism in the proposed invention, the air will dry efficiently, as well as life of the desiccant particle will increase, which will lead to less frequent changes in desiccant causing less service cost.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202431051968 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : FRACTIONAL ORDER CONTROLLER USING NOVEL OPTIMIZATION FOR RENEWABLE ENERGY SOURCE BASED MICROGRID POWER SYSTEM

(51) International classification :H02J3/00, H02J3/24, H02J3/38, G05B13/04, G05B11/42, G06F113/04, G06N3/006
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The disclosure presents a controller for controlling power system (100) frequency, crucial for maintaining stability and reliability. Frequency thresholds, representing acceptable frequency ranges, trigger the generation of an error signal when deviations occur. a first controller (202) generates a fractional order proportional and derivative control signal and a second controller (204) generates a fractional part proportionate and integrates the error signal over time with a filter. The controllers combine outputs to form an overall control signal generated by an integrated 1+FOPD-FOPIF controller (206) which is tuned with a novel hybrid African Vulture Salp Swarm Algorithm (haVVSA) mechanism, regulating power generation and consumption to restore frequency within acceptable limits. Pre-determined low and high frequency thresholds define the permissible frequency range, guiding control actions. Continuous frequency monitoring ensures timely detection of deviations, facilitating proactive control.

No. of Pages : 38 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/07/2024

(21) Application No.202431052021 A

(43) Publication Date : 12/07/2024

(54) Title of the invention : DESIGN AND DEVELOPMENT OF DIGITAL FRUIT AND SPICES QUALITY IDENTIFICATION TECHNOLOGY

(51) International classification	:G01N0021359000, G06T0007000000, G06N0003040000, A61B0005145500, H04L0001160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

Technological advancements in automation have significantly impacted the fruit industry by enhancing economic growth and productivity. The manual method of fruit sorting and inspection is time-consuming and laborious, necessitating automated systems for efficient quality evaluation. This paper proposes a fruit identification and quality detection model using YOLOv5, which excels in real-time object detection. A dataset of 10,545 images of apples, bananas, oranges, and tomatoes is used. The model operates in two phases: phase 1 identifies the fruit with a mAP value of 92.80%, and phase 2 detects fruit quality, achieving mAP values of 99.60% for apples, 93.1% for bananas, 96.70% for oranges, and 95% for tomatoes. Mosaic augmentation enhances detection performance, making the system robust. The model's efficiency is validated in various scenarios and outperforms state-of-the-art methods. Additionally, the paper explores Near-Infrared Spectroscopy (NIRS) for authenticating spices, detecting adulteration, and identifying geographical origins.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202431052194 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : Tagore the Environmentalist-A Journey towards a Better Breathing Society

(51) International classification	:G06Q0090000000, G09B0019000000, A61M0021000000, G06Q0050100000, G09B0007000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Tagore the Environmentalist-A Journey Towards A Better Breathing Society The invention presents an innovative method for enhancing environmental awareness, promoting ecological sensibility, and fostering sustainable living practices by leveraging the literary works and philosophies of Rabindranath Tagore. Tagore, a renowned Indian poet, philosopher, and Nobel laureate, extensively addressed themes of nature and human relationships with the natural world in his writings. His vivid descriptions of landscapes, seasons, and the interplay between human emotions and natural settings provide a rich resource for celebrating the beauty of nature and inspiring individuals to connect with the environment on a deeper level. The invention incorporates Tagore's ecological sensibility, emphasizing the interconnectedness of all life forms and the necessity of living in harmony with nature. By promoting sustainability and biodiversity conservation through educational modules based on Tagore's writings, the invention aims to cultivate an ecological consciousness that resonates with contemporary environmental ethics. Additionally, Tagore's critique of modern industrialization and urbanization is utilized to highlight the environmental degradation and spiritual alienation resulting from unchecked industrial progress. This perspective advocates for a balanced approach that integrates human development with ecological stewardship. A key component of the invention is the implementation of Tagore's educational philosophy, which intertwines learning with nature and rural life. This involves designing experiential learning programs for schools and communities that foster a deep respect for nature. The invention also seeks to establish emotional connections to nature by integrating Tagore's works into environmental psychology programs, recognizing that emotional attachment to nature can lead to pro-environmental behaviors. Furthermore, the invention leverages Tagore's emphasis on cultural heritage and traditional practices to develop community engagement programs that promote sustainable living. By integrating Tagore's methods with modern educational and technological approaches, the invention offers a holistic framework for environmental education, psychology, and sustainability, striving to create a better breathing society for present and future generations.

No. of Pages : 18 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202431052279 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : BISOLVENT FRACTIONATION AND PURIFICATION PROCESS OF WOGONIN

(51) International classification :A61K36/539, C07D311/30, C11D311/40, C07H17/07, B01D11/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract BISOLVENT FRACTIONATION AND PURIFICATION PROCESS OF WOGONIN A method for purifying wogonin is described here, which begins with extracting whole ground herbs of Scutellaria discolor Colebr. using hot water. The resulting polar aqueous extract undergoes liquid-liquid fractionation with a non-polar organic solvent, where wogonin and its derivatives migrate into the non-polar organic phase. This phase is then subjected to freeze crystallization, utilizing the saturated non-polar solution to further purify wogonin. Additionally, the novel aspects of the freeze crystallization and subsequent purification process are detailed here.

No. of Pages : 25 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024

(21) Application No.202431052320 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : Guru Nanak Institute of Technology

(51) International classification :B82Y0030000000, B01J0035100000, C02F0001280000, C02F0101300000, C02F0101100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Biomass Derived Carbon Nanotube Catalyst for Microbial Water Treatment ABSTRACT This invention relates to a novel catalyst derived from biomass for microbial water treatment applications. Specifically, it involves the synthesis of carbon nanotubes (CNTs) from biomass materials such as agricultural residues and forestry waste, using pyrolysis and chemical vapor deposition (CVD) techniques. These biomass-derived CNTs are characterized by their high surface area, structural integrity, and chemical stability, making them highly effective in enhancing microbial degradation of contaminants in water. The invention addresses the limitations of traditional water treatment methods, which often suffer from inefficiency, high costs, and environmental impacts. By utilizing renewable biomass resources, the production of CNTs becomes more sustainable and economically viable, reducing reliance on fossil-based materials. The synthesized CNTs act as catalysts in water treatment systems, facilitating microbial activity and redox reactions necessary for the breakdown of organic pollutants. The high surface reactivity of CNTs supports the formation of biofilms, improving the overall efficiency of microbial degradation processes. Experimental studies validate the superior performance of biomass-derived CNTs over conventional catalysts, demonstrating enhanced contaminant removal and microbial activity. This invention not only offers a cost-effective and efficient solution for water purification but also promotes sustainable waste management and resource utilization. The application of biomass-derived CNTs in microbial water treatment systems represents a significant advancement in environmental engineering, contributing to the global effort to ensure safe and clean water supplies while addressing economic and environmental challenges associated with traditional methods.

No. of Pages : 16 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2024
(21) Application No.202431052330 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : COMPOSITE SHEET FOR PRESERVING VEGETABLES IN VARYING ENVIRONMENTAL CONDITIONS

(51) International classification	:B32B0005180000, B32B0005240000, B32B0015140000, H01L0033500000, B32B0005020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A composite sheet (100) for preserving vegetables in varying environmental conditions is provided. The composite sheet (100) consists of three layers a top layer (102) of reflective film, an intermediate layer (104) of solid polymeric foam, and a bottom layer (106) of thick fabric. The design of the composite sheet (100) reduces the need for frequent water sprinkling, offering a cost-effective, durable, and efficient solution. The composite sheet (100) provides superior thermal insulation, enhanced durability, and improved moisture retention, significantly extending the shelf life of vegetables in high temperature and low humidity environments.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202431052345 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : SYNERGISTIC POLYHERBAL SOAP FORMULATION FOR SKIN BLEMISHES REDUCTION AND ANTI-AGING PROPERTIES AND PREPARATION THEREOF

(51) International classification	:C11D0009380000, A61Q0019100000, C11D0013100000, A61K0036610000, C11D0013160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides a synergistic polyherbal soap formulation for skin blemishes reduction and anti-aging properties, comprising, Soap base ranges from 50gm to 150gm; Guava extract 0.5gm to 1.5gm; Neem extract 0.5gm to 1.5gm; Beet root 1ml to 10ml; Guava Fragrance 2-6 drops. The synergistic polyherbal soap formulation, comprising, Lab prepared Soap base 100gm; Guava extract 1gm; Neem extract 1gm; Beet root 5ml; Guava Fragrance 4drops. The process for preparation of herbal soap using a lab made soap base, comprising, preparing lye solution by adding 113gm of pellets of caustic soda to 200ml of distilled water; reacting Lye solution as alkali phase and pure coconut oil to form soap base; using lemon extract as preservative and a little amount of turmeric powder to obtain Lab made soap base; adding ethanol extracts of Guava, Neem and Beet root each weighing 1gm to the melted base with continuous vigorous mixing; continuously mixing the bases mixture for about 5 minutes and moving out from the water bath; pouring the melted mixture at moulds and keeping it for setting to obtain polyherbal soap. The synergistic polyherbal soap bases are selected from Coconut milk, Goat milk, Shea butter and Lab prepared soap base. The synergistic polyherbal soap is cost-effective in preparation with properties of skin blemish reduction, anti-aging, and eco-friendliness.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024
(21) Application No.202431052519 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : ADAPTIVE PREDICTING DEVICE OF BITCOIN FUTURE-PRICE MOVEMENTS

(51) International classification :G06Q0020060000, G06N0020000000, H04L0041147000, G06N0005020000, G06N0005040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present disclosure relates to an adaptive predicting device (10) of bitcoin future-price movements. The adaptive predicting device includes a predicting board (2) configured to accommodate a forecast knowledge storing unit (3) that preserves and provides a gathered transferable knowledge of forecasting to carry out an estimation of precise predictions of bitcoin price movements continuously, a processing unit (5) along with a prediction accelerating unit (4) that estimates precise predictions of bitcoin price movements continuously for indicated foreseeable future, a set of memory units (6) that facilitate fast estimation in precise predictions of bitcoin price movements continuously, as well as allow temporary storage of prediction data during estimation and learning data during adaptivity, and a power-in slot (8) that allows device to connect to an external power supply source of specified rating.

No. of Pages : 30 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/07/2024

(21) Application No.202431052525 A
(43) Publication Date : 12/07/2024

(54) Title of the invention : PREDICTIVE MAINTENANCE REDEFINED: HARNESSING MACHINE LEARNING FOR INDUSTRIAL IOT SYSTEMS

(51) International classification	:G06N0020000000, H04L0067120000, G06Q0010080000, G06N0020100000, G06Q0010060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention relates to a system and method for industrial IoT environments, utilizing machine learning algorithms to predict equipment failures and optimize maintenance schedules. The system comprises a network of sensors to collect real-time operational data, a data processing unit for preprocessing this data, and machine learning models trained on historical data to forecast failures. A user-friendly interface displays real-time insights and alerts maintenance personnel to potential issues via an integrated notification system. This invention aims to reduce unplanned downtime, minimize maintenance costs, and improve overall operational efficiency by providing timely and accurate predictions of equipment failures.

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