(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/02/2026

(21) Application No.202641020971 A

(43) Publication Date : 06/03/2026

(54) Title of the invention : Wall-Mountable Stainless Steel Lid for Cooking Utensils

(51) International classification	:A47J 36/06, A47J 36/10, A47J 36/38, A47J 27/08, A47J 27/09
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Asha P K

(57) Abstract :
The present invention relates to an improvised food-grade stainless-steel lid for cooking utensils. The lid comprises a circular stainless-steel body and an ergonomically shaped handle 5 mounted on a side portion adjacent to the rim of the lid. Unlike conventional lids having a centrally mounted knob, the side-mounted handle enables a user to lift, tilt, or partially open the lid while reducing direct exposure to hot steam.

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/02/2026

(21) Application No.202641020976 A

(43) Publication Date : 06/03/2026

(54) Title of the invention : Intelligent Walking Aid for Crowd Density Estimation and Safe Route Guidance

(51) International classification	:A61H 3/06, G06K 9/00, G01C 21/36, G01C 21/20, G01C 21/34
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Mrs. Parvathy.S
2)Mr. Poornachandra Tejaswi
3)Ms Rosemary Chacko
4)Mrs.Lovely Sasidharan

(57) Abstract :
The present invention encompasses an advanced, intelligent navigation assistance system integrated into a mobile assistive device, such as a smart walking stick, specifically engineered to augment the mobility and safety of visually impaired individuals. By leveraging real-time computer vision and sophisticated processing algorithms, the system provides a context-aware feedback mechanism that allows users to interact naturally with their surroundings. The process initiates with the continuous acquisition of high-resolution images of the forward environment via an onboard camera module.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/02/2026

(21) Application No.202641020982 A

(43) Publication Date : 06/03/2026

(54) Title of the invention : INTELLIGENT IV INFUSION MONITORING SYSTEM WITH AI-BASED LEAK AND BLOCKAGE PREDICTION

(51) International classification	:A61M 5/168, A61M 5/172, A61M 5/14, A61M 5/142, G16H 20/17	(71)**Name of Applicant :** **1)New Horizon College of Engineering** Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli, Bellandur(P),Bangalore-560103 Bangalore Karnataka India (72)**Name of Inventor :** **1)Dr. Santosh Kumar B** **2)Mrs.Chempavathy** **3)Mr.Kirthi Kumar S**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

The present invention relates to an intelligent intravenous infusion monitoring and control system for detecting infusion abnormalities in real time. The system integrates a smart cannula monitoring module and an inline flow and pressure sensing module to acquire multi-parameter data. An edge-based artificial intelligence processing module predicts leakage, blockage, infiltration, and cannula dislodgement and differentiates true failures from false alarms. An automatic infusion control module terminates infusion flow upon hazardous conditions, while an alert module notifies caregivers. A data storage module enables personalized monitoring, improving patient safety and reducing clinical risks during intravenous therapy use.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/02/2026

(21) Application No.202641020984 A

(43) Publication Date : 06/03/2026

(54) Title of the invention : AN IoT INTREGRATED VISION BASED SAFETY SYSTEM FOR TREADMILL

(51) International classification	:A63B 24/00, A63B 22/02, A63B 71/06, G08B 21/02, A61B 5/11	(71)**Name of Applicant :** **1)NEW HORIZON COLLEGE** Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathahalli, Bellandur(P), Bangalore-560103, Karnataka. Bangalore Karnataka India **2)NEW HORIZON COLLEGE OF ENGINEERING** (72)**Name of Inventor :** **1)Ms. Alka Sinha**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

A smart treadmill safety system utilizes a vision-based sensor to monitor the running deck. By calculating the physical size of the feet on the belt in real-time, the system can distinguish between adult users and children or foreign objects. If an unauthorized foot size is detected, the sensor triggers an immediate force stop of the treadmill belt, providing a proactive layer of protection against accidental injury.

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/02/2026

(21) Application No.202641020993 A

(43) Publication Date : 06/03/2026

(54) Title of the invention : A Solar-Powered Smart Bag with Rain Sensing and Automated Flap Control

(51) International classification	:H02J 7/35, H02S 30/20, H02J 7/00, H01L 31/042, G06F 1/26
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Dr. Mohan das
2)SUNIL S K
3)AASHISH THOMAS OOMMEN
4)ACHUTHA E. B
5)SUDEEP J
6)SUSHIL

(57) Abstract :
An advanced solar bag integrates flexible photovoltaic technology to convert 5 sunlight into electrical energy while maintaining a lightweight and portable design. Foldable solar panels efficiently power smartphones, laptops, and other devices, supported by a smart powermanagement system and a high-capacity lithium-ion battery. AI-driven charge controllers optimize energy harvesting under varying light conditions, and waterproof, durable materials ensure all- 10 weather protection. Wireless charging, multiple USB ports, and self-cleaning solar coatings further enhance performance.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/02/2026

(21) Application No.202641020995 A

(43) Publication Date : 06/03/2026

(54) Title of the invention : A Real-Time Adaptive Debris Discrimination and Dynamic Suction Control System for Vegetable Cleaning Machine

(51) International classification	:A23N 12/02, A47J 43/24, B65G 45/10, B65G 45/18, B65G 43/08
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Dr.R Suganya
2)Sreejith S

(57) Abstract :
The present invention relates to a system of a multi-sensor feedback-controlled vegetable cleaning and alignment system incorporating real-time adaptive debris discrimination and dynamic suction control. The system includes a conveyor belt mechanism, vegetable position detection sensors, an alignment mechanism, a cleaning module, a suction and debris removal unit, an optical verification sensor, and an intelligent control unit configured to operate in a closed-loop feedback architecture.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/02/2026

(21) Application No.202641021161 A

(43) Publication Date : 06/03/2026

(54) Title of the invention : AI-DRIVEN SELF-SUSTAINED PLANT POT

(51) International classification	:A01G 25/16, A01G 27/00, G06Q 50/02, G06N 3/08, G06N 3/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore- 560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)SUNIL S K
2)R .Mohan Das
3)SHREE PRASAD U
4)VEDPRAKASH B
5)G RAGHAVAN
6)SARAVANAN SETHURAMAN

(57) Abstract :
The present invention relates to a self-sustaining, AI-assisted plant care system designed to support individualized indoor or semi-outdoor gardening. The invention integrates environmental sensing with species-adaptive predictive analysis to determine optimal watering behaviour based on soil dynamics, ambient conditions, and the physiological characteristics of the plant. A lightweight embedded model processes moisture trends and environmental data locally, while a cloud-based generative interface translates plant-state information into natural- language feedback for intuitive user understanding.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/02/2026
(21) Application No.202641021176 A
(43) Publication Date : 06/03/2026

(54) Title of the invention : SMART WEARABLE PATCH DETECTS PCOD VIA HORMONAL, SWEAT BIOMARKER EARLY

(51) International classification	:A61B 5/145, A61B 5/00, A61B 5/1473, A61B 5/1486, A61B 10/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Nikita Singh

(57) Abstract :
The present invention discloses a wearable biosensor patch for early detection and continuous monitoring of Polycystic Ovarian Disorder (PCOD) through non-invasive sweat-based biomarker analysis. The patch comprises a flexible substrate, a sweat collection and microfluidic layer, and a multi-analyte sensor array configured to detect hormonal and metabolic biomarkers associated with PCOD.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130707 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : SMART ELBOW BAND FOR EPILEPSY PATIENTS

(51) International classification	:A61B 5/00, A61B 5/11, A61B 5/0205, A61B 5/1455, A61B 5/08
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Dr. Pragati Tripathi
2)Dr. Rajesh G
3)R. Lakshman
4)K R Ranjitha Bhat
5)Lekhana. M

(57) Abstract :
The invention pertains to a wearable epilepsy detection system that can be worn as an elbow band. It continuously tracks motion-related and physiological parameters to identify early seizure symptoms. The gadget incorporates a temperature sensor DS18B20, pulse oximeter MAX30102, EMG sensor, and ADXL335 accelerometer, all of which are linked to a System-on-Chip (SoC) for real-time data processing. Using a threshold-based decision algorithm, the system evaluates sensor data in real-time, classifying activities as normal, borderline or abnormal. The system immediately notifies the user or nearby caregivers by means of a buzzer and display when it detects abnormal patterns linked to seizures. By integrating multimodal detection methods, the system addresses common limitations in existing solutions, such as high false-positive rates and inadequate sensitivity, to offer a more robust and dependable alternative. For people with epilepsy, this small, non-invasive, and easy-to-use gadget offers continuous health monitoring, enhancing safety and reaction time. Alerts, delivered through visual or auditory signals, allow immediate awareness during critical moments, enhancing safety for users. The invention is intended to improve patients' quality of life by facilitating prompt intervention during seizure episodes and is made for daily use

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025

(21) Application No.202541130709 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : A GPS-ENABLED SAFETY ALARM FOR ALERTING TRAVELERS ON THE GO

(51) International classification	:G08B 21/02, G01S 1/00, G08B 25/01, G01S 19/14, G08G 1/0968
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Outer Ring Road, Near Marathahalli, Bellandur(P), Bangalore-560103. Bangalore Karnataka India
2)Dr. Sanjeev Prakashrao Kaulgud
(72)**Name of Inventor :**
1)Dr. Sanjeev Prakashrao Kaulgud
2)Dr. Sonia Maria Dsouza
3)Ms. Ramyshree PM

(57) Abstract :
A GPS-Enabled Safety Alarm for Alerting Travelers on the Go is that GPS-enabled safety alarm to travel, which clearly emerges as reliable safety on-the-go. Users can swiftly send the location and emergency alerts with just a touch of a button to given contacts, thus showing swift assistance in time-bound situations. A GPS-Enabled Safety Alarm for Alerting Travelers on the Go, with such versatility as real- time tracking and customizable alert settings, really empowers travelers to move with ease in unfamiliar environments-whether it's exploring new cities or venturing off the beaten path for peace of mind.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130711 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : DESIGN AND FABRICATION OF AUTOMATIC SOLAR POWERED RAILWAY TRACK CRACK DETECTION VEHICLE

(51) International classification	:B61L 1/18, B61L 1/16, E01B 35/00, B61L 23/04, B61L 23/16
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
2)Dr. Sudarshan T A
(72)**Name of Inventor :**
1)Dr. Sudarshan T A
2)Dr. Hemanth Raju T

(57) Abstract :
In recent years, India's burgeoning economy has led to an exponential increase in the demand for transportation, leading to a massive increase in traffic on the Indian railway network. Many accidents happen due to cracks in the track. We have used an Arduino microcontroller in this proposed system. It is a low power electrical device that uses a lead acid battery to power the vehicle. In this design, the IR sensor is used to detect cracks in the track. When a crack is identified, the buzzer sounds, the vehicle stops, and a solenoid is used to mark the location of the crack on the track. After a few seconds, the vehicle will continue to drive automatically. This device efficiently and accurately identifies cracks in the track, saving time and reducing any calamities caused by the cracks. The design of the device is simple and practical, which makes it easy to handle.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130717 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : THERMAL ENERGY HARNESSING FROM STATIONARY AUTOMOBILES AND PROCESS THEREOF

(51) International classification	:H01L 35/30, H01L 35/32, H01L 35/28, H02N 11/00, H02J 7/35
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli , Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Ajay Sudhir Bale
2)Inuganti Lakshmi Akshitha
3)D Haripriya
4)Kaivalya Nibandhe

(57) Abstract :
Thermoelectric System (100) comprising a Solar Heat Input Module (200), a TEG Interface Zone (201), a Thermoelectric Generator Module (202), a Power Conditioning & Conversion Module (203), an Energy Storage System (204), an Output Applications Module (205), and an Output Distribution Interface (206).

No. of Pages : 23 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025

(21) Application No.202541130721 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : FRESNEL LENS INTEGRATED SOLAR FLAT PLATE COLLECTOR

(51) International classification	:F24S 23/30, F24S 23/70, F24S 50/20, F24S 23/00, F24J 2/46
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli,Bellandur(P),Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Dr. Nagabhushana N

(57) Abstract :
The present invention relates to a solar water heating system that employs a Fresnel lens– based optical concentration mechanism to enhance thermal absorption and improve heating efficiency. The system comprises a flat-plate or tubular solar collector equipped with an absorber plate, over which one or more Fresnel lenses are mounted at a predetermined focal distance. The Fresnel lenses focus incident solar radiation onto the absorber surface, generating increased heat flux without requiring complex tracking systems or enlarging the collector area. The lens assembly is supported on an adjustable frame to maintain optimal focal alignment during seasonal variation. Water circulates through fluid channels in the absorber by thermosiphon or forced flow and is stored in an insulated tank. This configuration significantly improves performance under low sunlight conditions, enabling faster water heating, higher temperature output, and efficient operation with a compact, cost- effective structure.

No. of Pages : 9 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130740 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : QUANTUM COMPUTING SYSTEM FOR REAL-TIME TRAFFIC PREDICTION AND ROUTE PLANNING

(51) International classification	:G01C 21/34, G08G 1/01, G06N 20/00, G01C 21/20, G08G 1/0968
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Outer Ring Road, Near Marathahalli, Bellandur(P), Bangalore-560103. Bangalore Karnataka India
2)Dr. Jimsha K Mathew
(72)**Name of Inventor :**
1)Dr. Jimsha K Mathew
2)Vibha N R
3)Seema R
4)R B Pavithra,
5)Dr. Sreejith S

(57) Abstract :
The invention discloses a hybrid quantum AI traffic prediction and navigation optimization system designed to enhance real-time decision-making in intelligent transportation environments. It integrates live GPS telemetry, sensor data, congestion feeds, weather inputs, and historical mobility records, which are jointly processed through classical machine learning models and a Quantum Probabilistic Engine using variational circuits and qubit sampling. The system generates enriched traffic-state forecasts by combining quantum-assisted scenario exploration with classical predictive accuracy. A route optimization module evaluates multiple path options and computes the most efficient navigation route based on congestion likelihood, environmental factors, and user preferences. The optimized output is visualized on mobile devices, in-car displays, or fleet dashboards, while a continuous feedback loop refines the predictive engine using user telemetry. By unifying quantum computation with AI-based modeling, the invention addresses latency, instability, and unpredictability in existing navigation platforms and enables more adaptive and reliable routing in rapidly changing traffic conditions.

No. of Pages : 21 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130749 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : Integrated AI-IoT enabled smart device for plant disease detection

(51) International classification	:A01G 25/16, G06Q 50/02, G01N 33/24, A01G 27/00, H04L 29/08
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli , Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Mamta B Savadatti
2)Hamsalekha R
3)Om Praveen
4)Len Binoy
5)Nithin M
6)Sanjay P Achar

(57) Abstract :
This invention presents Integrated AI-IoT enabled smart device for plant disease detection that integrates multiple environmental and soil sensors with a Raspberry Pi for automated farm management. The system employs a camera for AI-based crop disease detection, along with LDR, soil moisture, temperature, humidity, TDS, and methane sensors for comprehensive real-time monitoring of crop and soil conditions. Collected data is processed using ML algorithms and transmitted to a cloud platform (ThingSpeak) for remote access and analytics, while an LCD display provides on-site feedback to farmers. The system automatically activates a water pump when soil moisture drops below threshold levels, ensuring efficient irrigation and precision agriculture. This integrated solution enhances crop yield, reduces water wastage, enables early disease detection, and minimizes human intervention through data-driven decision-making.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025

(21) Application No.202541130752 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : A Python-Based Adaptive Block Encryption System Using Per-Block Entropy Profiling

(51) International classification	:H04L 9/06, H04L 9/08, H04L 9/00, H04L 9/32, G06F 21/60
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Marathahalli, Outer ring road, Bengaluru-560103 Bangalore Karnataka India
2)Puvirajan T
(72)**Name of Inventor :**
1)Puvirajan T
2)Vikramaditya Singh Chauhan
3)Thiruvikram Karthikeyan
4)Reyhan Singh Yadav

(57) Abstract :
The invention focuses on transforming digital file security through an adaptive, intelligence-driven encryption framework. By analysing each file block individually using entropy profiling, the system determines the randomness of data and assigns an appropriate security mode. A unique cryptographic key is generated for every block using HKDF, ensuring strong protection and preventing key reuse. Authenticated encryption algorithms such as AES-GCM and ChaCha20- Poly1305 are used to provide both confidentiality and integrity. The system operates through a structured workflow that includes block splitting, entropy computation, mode selection, nonce generation, encryption, and metadata assembly. A corresponding decryption framework reconstructs keys and nonces to accurately restore the original file. Implemented entirely in Python, the invention enhances efficiency, strengthens data protection, and adapts encryption strength to the content being processed. By introducing per-block adaptive processing, the invention demonstrates a modern approach to securing sensitive digital information across diverse file types and use cases.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130757 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : NEUROMORPHIC VLSI-BASED HYBRID COMMUNICATION PROCESSOR FOR UNDERWATER AND EXTREME ENVIRONMENTS

(51) International classification	:H04B 13/02, H04B 10/80, H04B 10/50, H04B 10/2575, H04B 10/11
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Outer Ring Road, Near Marathahalli, Bellandur(P), Bangalore-560103. Bangalore Karnataka India
(72)**Name of Inventor :**
1)LIPSA DASH
2)JINITH KUMAR KS

(57) Abstract :
This invention introduces a Neuromorphic AI–driven Hybrid Li-Fi and RF Communication Framework for robust underwater data transmission through dynamic adaptation. By integrating acoustic positioning, optical Li-Fi metrics, and reinforcement learning, the system achieves real-time, energy-efficient mode switching. A central Decision AI module prioritizes Li-Fi for high-bandwidth transfer, while the multi-modal framework fuses acoustic beacons, optical signal quality, and RF feedback without hierarchy, ensuring seamless operation. At its core is a neuromorphic beam-steering engine, continuously aligning optical paths to sustain connectivity in dynamic underwater conditions. Unique to this invention is a reinforcement learning module implemented on a VLSI/FPGA platform, optimizing communication precision with increasing efficiency based on feedback and environmental factors over time. The system provides an intelligent, adaptive, and resilient link—perfectly tuned to deliver high-speed transfer, reliable fallback, and deeply future-ready underwater communication

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130761 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : AI-ASSISTED REAL-TIME ROUTING DEVICE FOR EV APPLICATION

(51) International classification	:H04L 1/00, H04L 1/18, H04L 1/16, H04W 84/12, H04L 29/06
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)D r . Sujitha S
2)Nishant Gupta
3)Raj Singh
4)Rani Gupta R
5)Renuka R Ramakrishnan

(57) Abstract :
The Present Invention Relates to the Design and Implementation of An Ai-Assisted Real-Time Router for Adaptive, Multi-Layer Vehicle Communication for intelligent electric vehicle (EV) communication networks and embedded real-time applications. The proposed system enables efficient and low-latency routing of data packets from a single transmitter node to three independent receiver nodes using an embedded microcontroller-based architecture. The router utilizes ESP32 microcontrollers with integrated Wi-Fi capability to support TCP/IP-based wireless communication, ensuring reliable data exchange between distributed electronic control units. The system incorporates real-time acknowledgment mechanisms, parity-based error detection, and controlled error generation to enhance fault tolerance and data integrity. OLED display modules integrated at both transmitter and receiver nodes provide real-time visualization of transmitted data, routing status, and system operation. User-controlled status indication inputs allow flexible testing of traffic conditions and routing behavior. The invention offers a cost- effective, scalable, and robust solution for real-time EV communication, embedded networking, and intelligent transportation systems, making it suitable for modern electric vehicles, IoT-enabled platforms, and academic research environments.

No. of Pages : 12 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130765 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : Smart Assistive Health Monitoring Framework for Neuro-Muscular Patients

(51) International classification	:A61B 5/00, A61B 5/0205, A61B 5/11, A61B 5/024, A61B 5/01
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Sangeetha C N
2)Bhuvan R
3)Supritha K
4)Gowthami K
5)Shubhashree MM

(57) Abstract :
The present invention relates to a smart assistive health-monitoring framework specifica lly designed for individuals suffering from neuro-muscular disorders, enabling continuous, non- intrusive, and real-time tracking of critical physiological and motor parameters. The inventio n integrates a multi-sensor wearable module comprising biometric sensors, motion-tracking units, and neurological response analysers that collectively capture vital health data such as muscle activity, tremor intensity, fatigue levels, heart rate, blood oxygen saturation, and temperature. The framework further incorporates an adaptive intelligence engine, powered by machine-learning algorithms, to analyse raw sensor data and predict abnormal patterns including muscle deterioration, fall risks, seizure-like episodes, or sudden physiological deviations. The system automatically generates alerts to caregivers, medical professionals, or emergency services through a secure communication network. This invention significantly enhances independent living, improves early detection of health complications, and provides a comprehensive digital ecosystem for continuous support and safety of neuro-muscular patients.

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130770 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : AI INTEGRATED HEALTHCARE DIAGNOSIS SYSTEM FOR DOCTOR VERIFICATION

(51) International classification	:G16H 10/60, G16H 50/20, G16H 40/20, G16H 80/00, G16H 40/67
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Park, Marathalli outer ring road, Bengaluru- 560103. Bangalore Karnataka India
(72)**Name of Inventor :**
1)M Nirmala
2)Chandrashekar R
3)Nalagala Suala Charan Kumar
4)Narsepalli Adarsh
5)Rajesh R

(57) Abstract :
The invention gives an AI-infused medical diagnosis platform that aims to merge automated disease detection with a mandatory doctor verification to guarantee an accurate and safe and reliable medical advice. Patients make their complaints via an AI-based interface that makes initial diagnostic recommendations and preventive proposals. All these AI generated outputs are sent to a special doctor verification portal where licensed medical practitioners can search and approve or amend the advice and send them to the patient. This system aims at making sure that no medical advice is reached to the patient without expert validation thus reducing the chances of misdiagnosing the patient and maximizing clinical reliability. Combining since intelligent diagnosis with human supervision within a unified workflow provides a safe, effective and reliable digital medical system that would be appropriate in the context of the present-day telemedicine.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130775 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : A Compact Speech-Driven Framework for Multilingual Voice Exchange Using Indian Languages

(51) International classification	:G10L 13/08, G10L 13/10, G10L 13/00, G10L 13/06, G10L 13/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Outer Ring Road, Near Marathahalli, Bellandur (P), Bangalore – 560103 Bangalore Karnataka India
2)Ms. Saranya S
(72)**Name of Inventor :**
1)Ms. Saranya S
2)Manjunatha Royal J
3)Yaswanth Reddy K.V
4)G Ramana Gowda Patil
5)K S Sharmila

(57) Abstract :
India's growing need for real-time multilingual communication demands lightweight and accurate speech systems. This work introduces INDRA-Lite, a three-stage model that enables fast and seamless spoken translation across Indian languages with minimal computation. It uses a phoneme-aware speech recognizer to capture unique regional tones, a compact bilingual GRU-based translation engine with language ID tokens and a simplified speech synthesizer enhanced with prosody embeddings to preserve natural intonation. Designed for mobile and low-resource environments, INDRA-Lite performs efficiently, achieving a 4.31 WER, 0.87 bilingual score, 0.81 phoneme clarity, 0.34-second latency and a 4.33 naturalness rating, with 93.19% successful speech exchanges, demonstrating high- quality, expressive bilingual speech output.

No. of Pages : 13 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130780 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : Real-Time Fault Monitoring in Smart Grids Using AI and Edge Intelligence

(51) International classification	:G06N 20/00, G05B 23/02, H02J 13/00, G05B 13/04, G06N 3/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Outer Ring Road, Near Marathahalli, Bellandur(P), Bangalore-560103. Bangalore Karnataka India
2)Dr.Ishani Mishra
(72)**Name of Inventor :**
1)Dr.Ishani Mishra
2)Dr.Monika Gupta
3)Hemaganga Y B
4)Inchara S K
5)Nattuva Monisha
6)Prerana H N

(57) Abstract :
The invention provides an intelligent smart grid monitoring and fault-management system that combines edge computing, machine learning, and a digital-twin–enabled federated learning framework to deliver fast, accurate, and privacy-preserving fault detection. The system incorporates voltage and current sensors, user-operated switches, and an Arduino-based controller that processes real-time electrical parameters and coordinates output devices such as relays, an LCD display, a buzzer, and a NodeMCU communication module. A machine learning model performs localized anomaly detection and predictive fault classification, while a Digital Twin & Federated Learning Module generates a virtual replica of the grid, enabling adaptive control, continuous model refinement, and secure aggregation of model updates from multiple edge devices without transmitting raw grid data. This integrated architecture enhances grid reliability, reduces downtime, supports autonomous decision-making, and enables scalable, privacy-preserving smart grid intelligence.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025

(21) Application No.202541130784 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : Smart V2V Control with Obstacle-Aware Wi-Fi Boosting

(51) International classification	:H04W 4/40, H04W 84/18, H04W 4/46, H04W 88/06, H04W 4/44
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Dr Sujitha S
2)G R Yashwanth
3)Lalith Narayan
4)Yashaswini B S
5)Chaudhary Manas Ray

(57) Abstract :
The present invention relates to the development of an AI-assisted V2V communication system capable of maintaining reliable wireless connectivity in the presence of physical obstacles that weaken or interrupt signal transmission. The proposed Smart V2V Control with Obstacle-Aware Wi-Fi Boosting system (100) integrates functional modules including a V2V communication module (101), signal quality analyzer (102), intelligent routing engine (103), Wi-Fi boosting module (105), cloud or edge connectivity (106), and attenuation detection logic (108). A transmitting vehicle (107) generates wireless signals (110) that may be partially blocked by an obstacle (109), resulting in reduced signal quality. The system detects this attenuation in real time and applies adaptive corrective actions such as dynamic boosting and intelligent routing to restore communication strength. The invention ensures fast, stable, and low-latency V2V communication by combining AI-driven decision-making with real-time signal monitoring. This solution offers a cost-effective and scalable approach for improving V2V reliability in intelligent transportation systems, supporting enhanced safety, efficient maneuver coordination, and robust wireless communication in obstacle-prone environments.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130786 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : A SYSTEM AND METHOD FOR PROVIDING POWER FROM A MULTI-CHEMISTRY BATTERY PACK

(51) International classification	:B60L50/60, B60L58/18, B60L58/20, B60R16/033, H01M50/267, B60W10/26, B60L58/12, H02J7/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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)Daimler Truck AG
Address of Applicant :Fasanenweg 10, Leinfelden-Echterdingen Germany 70771 Germany
(72)**Name of Inventor :**
1)Kedar Sunil Nannikar
2)Vasanth Nagarajan
3)Mohit Shukla

(57) Abstract :
A multi-chemistry battery pack system is disclosed. The system comprises at least two energy units co-housed within an enclosure of the multi-chemistry battery pack. The system further comprises at least two contactors, each contactor from the at least two contactors configured to selectively couple each energy unit of the at least two energy units to a power delivery bus of the vehicle. Further, the system comprises a controller operatively connected with each energy unit, and configured to provide power to the vehicle by: determining a driving profile of the vehicle, an aggregated State-of-Charge (SoC) of the multi-chemistry battery pack, and an aggregated State-of-Health (SoH) of the multi-chemistry battery pack. Based on the determination, the controller selectively switches power, using the at least two contactors, among the at least two energy units or combines the power, using the at least two contactors, from the at least two energy units. [Figure 2]

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130790 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : Vision-Assisted Robotic Arm Control System for Autonomous Object Detection and Pick and Place Operations

(51) International classification	:B25J 9/16, B25J 13/08, B25J 19/02, B25J 19/04, G05B 19/418
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Pooja Jose
2)Abhishek A Gowda
3)Abhishek Rajkumar Sakule
4)Aditya Prasad
5)Basavaprabhu K

(57) Abstract :
The invention discloses a vision-assisted robotic arm control system designed to autonomously detect, localize, and manipulate objects using integrated image processing and embedded actuation. A camera module captures real-time workspace images, which are processed by a vision algorithm employing colour segmentation, contour extraction, and pixel-to-coordinate mapping. The extracted object coordinates are transmitted to a motor controller that drives DC motors and a servo-based gripper integrated into a 3D-printed robotic arm. The system performs precise, autonomous pick-and-place operations without human intervention and adapts to variations in object position, orientation, and lighting conditions. The invention provides a low- cost, scalable, and efficient robotic manipulation framework suitable for industrial automation, educational systems, and smart manufacturing applications. Additionally, the system incorporates flexible programming and modular hardware design, enabling rapid customization for diverse operational environments. The embedded processor architecture ensures efficient on-device computation without reliance on external servers, thereby improving reliability and deployment feasibility. This invention enhances accessibility to advanced robotic automation by combining affordability, robustness, and practical real-world applicability.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130793 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : LESION-AWARE CHROMATIC ATTENTION–ENHANCED VGG SYSTEM FOR REAL-TIME MULTI-CROP DISEASE DIAGNOSIS AND SEVERITY INTELLIGENCE

(51) International classification	:G06N 3/04, G06N 3/08, G06T 7/00, G06K 9/62, G16H 50/20
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Marathahalli Outer Ring Road, Bangalore-560103 Bangalore Karnataka India
2)Sowmya H K
(72)**Name of Inventor :**
1)Sowmya H K
2)Nandhish K
3)Geetha P S
4)Priyanka B M
5)Janhavi Kanthi

(57) Abstract :
The invention discloses a deep learning–based system for automatic crop disease detection and severity assessment using leaf images. A novel Lesion-Aware Attention Block (LAAB) enhances disease-specific visual cues—such as chlorotic halos, necrotic spots, and discoloration—before feature extraction by a VGG-16 backbone. The system performs joint disease classification and severity estimation, categorizing infections as mild, moderate, or severe based on lesion spread, color intensity, and percentage of affected area. Optimized for real-time, offline deployment on mobile and edge devices, the invention provides fast, reliable, and accessible diagnostic support for farmers, improving crop protection and enabling timely intervention.

No. of Pages : 14 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2025
(21) Application No.202541130856 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : A REAL TIME ADAPTIVE LEARNING SYSTEM FOR ROADMAPS

(51) International classification	:G06Q 50/20, G06N 20/00, G09B 7/02, G09B 7/00, G09B 7/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(87) International Publication No	: NA
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(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)New Horizon College of Engineering
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)C. Lavanya
2)Mradula
3)Bhumika Murthy
4)Bincy Mary P
5)Utkarsh Bhardwaj
6)Vikrant Singh

(57) Abstract :
The present invention introduces an autonomous adaptive learning system that creates personalized study paths based on real time quiz performance. Quiz details such as accuracy, score, attempts and response patterns are processed through a dynamic K Means clustering method that groups learners according to changing proficiency levels. Each group receives a learning path that matches the difficulty needed for steady progress. The system uses a mastery based progression method where every module ends with a quiz. A learner advances only after showing mastery, and when mastery is not reached, simplified content is assigned again. The system performs continuous re clustering, automatic updates to learning paths and real time changes in content flow without manual control. A teacher dashboard presents real time insights into learner performance without affecting the adaptive flow. The present invention lies in its fully self regulating process that adjusts learner groups, study paths and content delivery through ongoing quiz driven data.
No. of Pages : 17 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/12/2025

(21) Application No.202541131057 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : TRANSFER LEARNING ENABLES HARDWARE TROJAN DETECTION SYSTEM THEREOF

(51) International classification	:G06F 21/56, G06N 3/04, G06N 3/08, G06F 21/55, G06N 20/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli , Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Omkar Krishna Kanetkar
2)Ajay Sudhir Bale
3)Mamta B Savadatti

(57) Abstract :
The Hardware Trojan Detection System (100) comprising a Netlist Generation Module (202), a DAG Structural Feature Extraction Module (203), a Semantic Feature Extraction Module (204), a Graph Attention Network (GAT) Classification Module (205), a Transfer Learning Module (206), and an Adaptive Trojan Detection System (207). The system receives a Verilog hardware description, converts it into a directed graph, extracts structural and semantic features, fuses these features for multi-modal analysis, and classifies potential Trojan-infected nodes using attention-based deep learning. The transfer learning mechanism enables the system to adapt to previously unseen circuits, providing scalable, automated, and golden-model-free detection of hardware Trojans in digital IP cores.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/12/2025

(21) Application No.202541131059 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : EGG TRAY FOR SPOILAGE DETECTION WITH INBUILT STRIPS

(51) International classification	:B65D 85/32, G01N 33/08, G01N 31/22, G01N 21/78, B65D 81/26
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Mrs. G. Vanthana
2)Vaibhav Kushwaha
3)Ullasa C

(57) Abstract :
The invention relates to an egg tray equipped with inbuilt lead acetate chemical strips for non-invasive detection of egg spoilage. The tray is designed with individual egg-holding slots, each integrated with a lead acetate strip that reacts to hydrogen sulfide (H_2S) gas released by deteriorating eggs. When exposed to H_2S, the strip undergoes a visible color change, enabling the user to easily identify spoiled eggs without cracking or physically inspecting them. The tray is constructed using biodegradable bioplastic, ensuring durability and environmental sustainability. The proposed solution offers a simple, cost-effective, and efficient method for freshness detection applicable at household, commercial, and industrial levels.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/12/2025
(21) Application No.202541131063 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : Dynamic Energy Management System for Solar–Wind EV Charging with Integrated Vehicle-to-Home Functionality Using AHEMA Intelligence

(51) International classification	:B60L 8/00, B60L 53/51, H02J 7/35, H02J 3/32, B60L 11/18
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Vinod Kumar S
2)Sujitha S
3)Meenakshi J C
4)Reshma Raj K R
5)Shreya N
6)Tirotaman K

(57) Abstract :
The invention provides a hybrid solar–wind electric vehicle (EV) charging system (100) integrated through a common 400 V DC bus (103) and controlled by an intelligent Adaptive Hierarchical Energy Management Algorithm, AHEMA (107). The system combines a photovoltaic subsystem (101) and a wind-energy subsystem (102), each operating under MPPT control, and coordinated through a collaborative MPPT module (108) that exchanges multi1source parameters including power ripple, DC-bus deviation, temperature, and renewable forecast strength to maintain bus stability. A bidirectional EV charger (104) enables both G2V charging and predictive Vehicle-to-Home (V2H) operation through a Home Energy Stress Index, HESI, computed by a V2H controller (109). The processing unit (106) performs real1time forecasting of renewable availability, household load variation, and EV battery state-of1charge, and converts these predictions into optimized power-flow commands for renewable extraction, EV charging/discharging, and grid interaction via a grid interface module (105). By integrating predictive optimization, hybrid renewable coordination, and intelligent V2H decision-making, the system minimizes grid dependency, maximizes renewable utilization, and ensures stable and reliable operation of the 400 V DC bus.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/12/2025
(21) Application No.202541131064 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : AI Powered Medical Consultation Platform with Offline Video Recommendations and Federated Multimodal Interaction

(51) International classification	:G16H 10/60, G06N 20/00, G16H 50/70, G06F 40/295, G16H 50/20
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(87) International Publication No	: NA
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(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)New Horizon College of Engineering,
Address of Applicant :New Horizon Knowledge Park, Marathalli, outer ring road, Bengaluru-560103. Bangalore Karnataka India
(72)**Name of Inventor :**
1)Sivasankari S S,
2)Vaibhav Sorcar
3)Anu Philomen T Dsilva
4)Ganesh Prasad Masule

(57) Abstract :
The Advanced AI Powered Medical Assistant System 100) represents a revolutionary advancement in artificial intelligence-driven healthcare technology, integrating sophisticated natural language processing, machine learning, and document analysis capabilities providing comprehensive medical support across diverse global populations. The system employs transformer-based language models optimized on extensive biomedical literature (101-102), sophisticated optical character recognition and named entity recognition systems for medical document processing (103-104) , intelligent clinical assessment and priority determination algorithms (105), personalized recommendation engines with clinical decision support (106), seamless healthcare record integration (107), and comprehensive auxiliary healthcare functions (108). The platform supports multilingual interactions across fifteen major languages while maintaining response latencies under three seconds and supporting over one thousand concurrent users (109). Comprehensive security and privacy measures ensure full compliance with healthcare regulations (110). This integrated solution transforms digital healthcare delivery by providing accessible, accurate, and personalized medical guidance bridging critical gaps between patients and healthcare providers.

No. of Pages : 17 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/12/2025
(21) Application No.202541131065 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : Nanorobot Assisted Autonomous Tumor Detection and Drug Delivery System

(51) International classification	:A61M 31/00, A61B 1/04, A61B 1/00, G06N 3/04, G06N 3/08
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore- 560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Rajesh G
2)Chandresh M
3)Akshayaasri S
4)Agnes Arul
5)Patan Izaz Khan
6)Kavitha K N

(57) Abstract :
The invention provides a nanorobot-assisted autonomous system for early detection and targeted treatment of gastric tumors using real-time imaging, deep learning, and robotic drug delivery. The system integrates an endoscopic camera for continuous image acquisition, a preprocessing engine for noise reduction and enhancement, and a TensorFlow Lite convolutional neural network for tumor classification. Upon identifying abnormal tissue, the system automatically activates a robotic platform that simulates nanorobot movement through an L293D-controlled motor assembly. A relay-operated micro pump subsequently dispenses a targeted spray representing therapeutic drug release at the detected tumor region. The invention further includes alert mechanisms and a user interface for logging, monitoring, and image display. This end-to-end autonomous framework provides an intelligent and minimally invasive diagnostic–therapeutic pathway, significantly improving early tumor identification and enabling selective treatment delivery.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/12/2025
(21) Application No.202541131067 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : Smart Wearable for Vital Tracking and Alerts

(51) International classification	:A61B 5/00, G16H 40/67, A61B 5/11, A61B 5/0205, A63B 24/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Bhaskar S V
2)Saranya S
3)Gagandeep Singh
4)Gurpreet Singh
5)Digantik Mukherjee
6)Sahil Kumar

(57) Abstract :
The Smart Wearable Band isn’t just another fitness tracker it connects health monitoring and real medical help in one seamless loop. Here’s how it works: everything starts with the Sensing Node, then moves to compact AI right on the device (using ESP32 and TFLite), sends data to the cloud, and finally reaches a caregiver through a mobile app. The heart of it all is a smart mix of AI a lightweight LSTM autoencoder quietly watches for unusual patterns, while a tough, rule-based system jumps in if someone falls. By handling most of the smarts right on the device, the band keeps your data private and responds fast. If there’s an emergency, the built-in NEO-6M GPS wakes up and uses Google Maps to guide help straight to the nearest hospital. Tests show it works: the fall detection scores high (F1-Score), it reacts in under five seconds, and the battery lasts more than three days without needing a charge.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/12/2025
(21) Application No.202541131327 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : SYSTEM FOR INTERPRETABLE COUNTERFACTUAL ANALYSIS IN HEART DISEASE ASSESSMENT

(51) International classification	:A61B 5/00, G16H 50/20, A61B 5/0205, G16H 50/30, A61B 5/021
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
2)Ms Lavanya C
(72)**Name of Inventor :**
1)Ms Lavanya C
2)Ms Mradula
3)Akash Verma
4)Aryan Ganesh
5)Aum Patel
6)Siddhant Madhav Paradkar

(57) Abstract :
The invention introduces a predictive health monitoring system that uses machine learning to estimate the likelihood of heart disease by analyzing structured clinical information enriched with simulated physiological signals. These synthetic measurements, including heart rate, systolic and diastolic blood pressure, and ECG like patterns, imitate data from wearable devices and allow the system to work even when physical sensors are not available. Classification models such as Logistic Regression and Random Forest generate probability scores and place individuals into low, moderate, or high risk categories while tuning improves accuracy. SHAP based explanations show how each feature contributes to the prediction and make the process clear for clinicians. The system also includes a causal counterfactual recommendation engine that uses these insights to create personalized and realistic suggestions that may help lower predicted risk. Overall, it offers accuracy, transparency, and accessible early detection for better heart health management in routine clinical use today.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030411 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : A Calibrated, Low-Latency EEG-Based NeuroSpeech System for Imagined Speech Token Decoding

(51) International classification	:G06N 3/04, G10L 25/30, A61B 5/372, G06N 3/08, A61B 5/0476
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Marathahalli outer ring road, Bengaluru-560103. Bangalore Karnataka India
(72)**Name of Inventor :**
1)Sowmya H K
2)Abu Talha Ansari

(57) Abstract :
A system and method are disclosed for decoding imagined speech from non-invasive scalp electroencephalogram (EEG) signals in near real time. The invention integrates EEG acquisition, causal preprocessing, real-time artifact suppression, and sliding-window segmentation to generate clean neural signals. Time–frequency and band-power features extracted from the EEG are processed by a neural decoding model comprising a convolutional neural network with a temporal module selected from a long short-term memory or gated recurrent unit network. Subject-specific calibration is performed to adapt the model to individual neural characteristics and improve decoding accuracy. The system generates predicted textual tokens with low end-to-end latency, thereby providing a practical, calibrated, and non-invasive framework for imagined speech token decoding and thought-to-text communication.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030415 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : A Conductive Smart-Paper Based Electrical Handwriting Detection System for Real-Time Audio Synchronization

(51) International classification	:G06F 3/0354, G06F 3/041, G06K 9/00, G06F 3/033, G06F 3/038	(71)**Name of Applicant :** **1)NEW HORIZON COLLEGE** Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli, Bellandur(P), Bangalore-560103 Bangalore Karnataka India **2)NEW HORIZON COLLEGE OF ENGINEERING** (72)**Name of Inventor :** **1)M Janaki**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

The present invention relates to a conductive smart-paper based system for real-time audio-synchronized handwritten note-taking. The system comprises a conductive smart-paper having conductive traces configured to generate electrical signals upon contact with a conductive pen tip. An intelligent pen comprising a sensing circuit, microcontroller, timestamping module, and microphone detects stroke signals and records audio simultaneously. Stroke events are electrically timestamped and synchronized with recorded audio without requiring optical camera-based detection. The invention eliminates lighting dependency, reduces power consumption, lowers manufacturing cost, and provides scalable deployment suitable for educational and professional environments.

No. of Pages : 19 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030418 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : SELF-CLEANING SOFT HAIR TIE

(51) International classification	:A45D 8/36, A45D 8/34, A41G 3/00, B32B 5/02, B32B 5/26
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Purva Paliwal

(57) Abstract :
The present invention relates to a self-cleaning soft hair tie (100) configured to enhance hygiene, durability, and sustainability in personal hair retention accessories. The hair tie comprises an elastic body structure (102) integrated with a self-cleaning module (104) through an integrated assembly (103). The elastic body structure includes a sustainable outer layer (106) formed from biodegradable or recyclable materials and an elastic core (108) providing stretchability and shape retention. The self-cleaning module incorporates an antimicrobial fiber layer (110), a micro-textured surface feature (112), and a moisture or air-activated element (114). The antimicrobial fiber layer inhibits bacterial and fungal growth, while the micro-textured surface reduces debris adhesion. The moisture or air-activated element facilitates odor neutralization and surface purification upon exposure to humidity or oxygen. The integrated configuration enables passive hygiene maintenance without frequent washing, thereby extending product lifespan and reducing environmental impact. The invention is suitable for large-scale textile manufacturing applications.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030422 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : A REAL-TIME DRIVER VIGILANCE ASSESSMENT USING ADAPTIVE EYE1BLINK DYNAMICS AND INTELLIGENT VOICE ALERT ESCALATION

(51) International classification	:A61B 5/18, B60W 40/08, B60W 50/14, G06K 9/00, A61B 5/00	(71)**Name of Applicant :** **1)New Horizon College of Engineering** Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli, Bellandur(P), Bangalore-560103 Bangalore Karnataka India (72)**Name of Inventor :** **1)Dr M Karthika,** **2)Ms Vaishnavi H B**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

The present invention discloses an adaptive blink analysis module (103) for a real-time driver vigilance monitoring system. The module processes eye-blink data (204), including blink duration and blink frequency, extracted from facial image frames of a driver. A driver profile memory (108) stores historical blink information and establishes an adaptive baseline blink profile unique to each driver during an initial calibration period. The baseline (205) is continuously updated during vehicle operation to accommodate individual behavioral variations. A comparison engine (206) evaluates real-time blink parameters against the adaptive baseline to determine driver fatigue levels. A temporal validation logic (107) filters irregular blink events caused by head movement or illumination changes to minimize false detections. The module enables accurate multi-level fatigue assessment with reduced false alarms and is suitable for low-complexity embedded vehicular applications to enhance road safety

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030426 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : AERIAL SURVEILLANCE-BASED AUTONOMOUS ROBOT

(51) International classification	:G05D 1/02, B25J 9/16, G05D 1/00, G06K 9/00, G01C 21/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Dr. Divya Sharma
2)Dr. Asha Joseph
3)Ms. Garima Joshi

(57) Abstract :
This invention novel tracking and navigation system for an autonomous robot with the help of a surveillance camera. The ground system includes an image acquisition using an overhead camera, or the top view, which is further processed and analyzed to find the robot location and destination location. Furthermore, this novel system involves computation of the obstacle-free path that the robot takes to go from robot's location to the destination. The robot and destination are identified in the image extracted from the real-time video. The control data is transferred using TCP/IP protocol over a wireless local area network to the processor on the robot. This directional control data is further transferred to a PID controller. The PID controller gathers the sensor data and the video stream and processes it to get the desired output operation.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030428 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : DESIGN AND FABRICATION OF AN ELECTROMECHANICAL STAIR NAVIGATION AID FOR WHEELCHAIR USERS

(51) International classification	:A61G 5/06, A61G 5/10, B62B 5/02, A61G 5/04, A61G 5/02
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Dr. Hemanth Raju T
2)Dr. Sudarshan T A

(57) Abstract :
The present invention relates to the design and fabrication of an electromechanical stair navigation aid for wheelchair users, intended to improve mobility and accessibility for physically challenged individuals. The system comprises a rigid wheelchair frame integrated with a seat assembly, multiple wheel assemblies, and an extended stair navigation support platform assisted by auxiliary wheels and inclined support arms. An electromechanical drive mechanism enables controlled ascent and descent of staircases while maintaining user stability and safety. The proposed design emphasizes structural strength, ease of operation, and cost effectiveness, making it suitable for both indoor and outdoor environments. Compared to conventional wheelchairs, the invention reduces user dependency and enhances independence by enabling safe stair navigation. The system is compact, portable, and adaptable, offering a practical solution for improving the quality of life of wheelchair users.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/03/2026
(21) Application No.202641030460 A
(43) Publication Date : 27/03/2026

(54) Title of the invention : Silver Coated Copper Shielding of Fe-Si-B Metallic Glass Ribbon for High-Efficiency Transformer core

(51) International classification	:C22C 45/02, H01F 41/02, H01F 1/153, G01R 33/12, H01F 27/255	(71)**Name of Applicant :** **1)New Horizon College of Engineering** Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India (72)**Name of Inventor :** **1)K Dhanalakshmi** **2)Ramachandra Naik** **3)Revathi V**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :
The present invention relates to Fe–Si–B based amorphous metallic glass ribbons for transformer core applications and a method for evaluating their magnetic performance. The transformer core comprises unannealed Fe–Si–B metallic glass ribbons prepared in two compositional variants: $Fe_{83}Si_{14}B_3$ (Sample A) and $Fe_{85}Si_{12}B_3$ (Sample B). A conductive copper shielding layer coated with silver paint is applied to the ribbons prior to magnetic characterization to reduce electromagnetic interference and enhance measurement accuracy. The magnetic properties are evaluated by determining the anisotropy field (H_a) followed by ferromagnetic resonance (FMR) analysis. Experimental results indicate that Sample A exhibits a lower anisotropy field of approximately 9.6 mT, whereas Sample B shows an anisotropy field of approximately 20.9 mT. The reduced anisotropy value of Sample A demonstrates superior soft magnetic behaviour, making it particularly suitable for high-efficiency transformer core applications requiring low magnetic losses, improved permeability, and enhanced energy performance under operational conditions.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030462 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : ECO-FRIENDLY BIODEGRADABLE PHONE CASE WITH EMBEDDED PLANT SEEDS

(51) International classification	:C08L 97/02, A01C 1/04, A01G 9/10, C08L 3/02, C08L 67/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli,Bellandur(P), Bangalore-560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)Ms. V. K. Durga Devi

(57) Abstract :
An eco-friendly biodegradable phone case formed from a renewable plant-based composite comprising Polylactic Acid derived from corn or sugarcane biomass, bamboo fiber, rice husk powder, and starch binder. The case measures approximately 145–155 mm in length and 8–12 mm in thickness. The back panel includes seed cavities containing viable plant seeds supported by an organic support layer. Upon soil disposal, the composite material degrades within approximately 180 days, enabling seed germination and plant growth, thereby converting electronic accessory waste into an environmentally regenerative product.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030465 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : AI-enabled Closed-Loop Solar-Adaptive Multi Level Crop Cultivation

(51) International classification	:G05D 3/12, H02J 7/35, H02S 20/32, A01G 9/24, A01G 9/16
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Marathahalli,Outer ring road, Bengaluru-560103. Bangalore Karnataka India
(72)**Name of Inventor :**
1)Sampa Das
2)Thiruvikram Karthikeyan
3)Mukul Manohar
4)Mukti Yadav

(57) Abstract :
The invention discloses an AI-enabled closed-loop solar adaptive system for multilevel crop cultivation configured to dynamically synchronise renewable energy harvesting with crop growth optimisation.The system includes a solar irradiance sensing module and a motorised photovoltaic positioning system intended to position photovoltaic panels towards the spatial direction of maximum solar irradiance as detected. A plurality of cultivation trays are mounted on motorised vertical and rotational platforms that can reposition crops between different levels according to the growth stage of plants and the availability of energy. An artificial intelligence closed-loop control engine processes real-time environmental, plant growth, and energy information to generate dynamic control signals for the orientation of photovoltaic panels, reconfiguration of cultivation trays, regulation of lighting, irrigation, and nutrient supply. The control engine adjusts internal optimisation parameters according to the difference between predicted and actual growth results.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030468 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : Hybrid Feature-Aligned Transformer-Convolution System with Adaptive Boundary Correction Learning for Multimodal MRI Tumour Segmentation

(51) International classification	:G06N 3/04, G06T 7/00, G06T 7/11, A61B 5/055, G06K 9/62
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Marathahalli,Outer ring road, Bengaluru-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Sampa Das
2)Jayanthi Muthuswamy
3)Thiruvikram Karthikeyan

(57) Abstract :
The invention discloses an feature-aligned hybrid solution that integrates the transformer and convolutional paradigms to segment brain tumours from multimodal MRI scans. The solution integrates broad context segmentation with fine-grained boundary refinement via structured convolutions, introduces real-time clinical feedback, employs boundary-conscious adaptive correction learning, and enables privacy-preserving federated model synchronisation. By analysing multimodal MRI inputs, the solution generates aligned embeddings that are fed into multi-scale refinement paths and selectively updated via clinician-supervised error localisation. This solution enhances boundary localisation, enables continuous optimisation, and provides a clinically stable solution for medical image segmentation..

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/03/2026
(21) Application No.202641030469 A
(43) Publication Date : 27/03/2026

(54) Title of the invention : Dual-Loop Adaptive Learning System for Continuous Vision Based on Bio-Signal Feedback Using Deep Adaptive Network

(51) International classification	:A61B 5/00, A61B 5/0476, G06N 3/08, A61B 5/16, A61B 5/374
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Mr. Shashikiran S
2)Mr. Srinivas Babu N
3)Mr. Kirana B V
4)Mr. Shravan Kumar Gogi
5)Mr. Pramod R
6)Mr. S V Darshan Patil

(57) Abstract :
The present invention is a dual-loop adaptive learning system that combines a deep adaptive network with bio-signal input to continuously improve eyesight. The system consists of a primary vision processing loop that is set up to produce perceptual outputs by analyzing image or video input using a deep learning architecture. A user's physiological signals, such as EEG, heart rate, EMG, or associated cognitive markers, are collected by a secondary bio-signal feedback loop. Adaptive control parameters that reflect attention, engagement, or cognitive state are obtained by analyzing the bio-signals. In order to modify learning rate, feature weighting, or structural characteristics in real time, these control parameters are dynamically given back to the deep adaptive network. By combining internal bio-feedback and exterior sensory information, the suggested design allows for continual self-optimization of vision performance. Personalized cognitive computing platforms, adaptive robotics, assistive vision systems, and human-machine interaction can all benefit from the invention.

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030471 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : Smart Auto-Deployable Egg-Shaped Protective Shelter for One-Wheeler Personal Mobility Vehicles

(51) International classification	:B62J 17/08, B62J 27/00, B62J 17/00, A61G 5/10, B62J 17/086
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli,Bellandur(P), Bangalore-560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)Ms. Meghana C N
2)Mr. Kuldeep Faldu

(57) Abstract :
The present invention relates to a protective shelter system for a one-wheeler personal mobility vehicle. The system comprises an egg-shaped protective shelter (1) configured to surround a rider operating the vehicle. The shelter has an approximate height ranging from 1600 mm to 1800 mm and a width ranging from 800 mm to 950 mm to accommodate a standing rider. A motorized expansion mechanism (3) is provided to deploy and retract the shelter, while a base support frame (4) supports the shelter around the rider platform. The shelter further includes a transparent viewing shield (2) to provide forward visibility. An environmental sensing module (5) comprising rain and ultraviolet sensors activates the deployment mechanism based on environmental conditions. The system may further include a solar panel and a GPS and anti-theft alarm module (8), thereby improving rider protection and operational safety.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030475 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : Smart Waste Segregation Bin Using Hybrid Sensor Fusion and Self-Learning Artificial Intelligence

(51) International classification	:G06N 20/00, B65F 1/14, B65F 1/00, B65F 1/16, G06N 3/08
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Subhash Kumar K

(57) Abstract :
The present invention relates to a smart waste segregation bin employing hybrid sensor fusion and self-learning artificial intelligence for automatic classification of mixed waste at the point of disposal. The system comprises a waste input unit, multiple sensing modules including a camera, weight sensor, moisture sensor, and metal detector, a processing unit configured to perform multi-sensor data fusion, and an actuator mechanism configured to direct waste into designated compartments. The processing unit incorporates a machine learning module capable of adapting classification rules based on usage patterns and feedback, thereby improving accuracy over time. The system further includes an IoT communication module for monitoring bin status and transmitting operational data to remote platforms. The proposed invention enhances segregation efficiency, reduces manual intervention, and supports sustainable waste management. The system is suitable for deployment in residential, institutional, and municipal environments.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030477 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : WEARABLE PEPPER SPRAY RING FOR PERSONAL SELF-DEFENCE

(51) International classification	:A01M 7/00, A62C 31/02, B05B 1/30, A62C 31/28, B05B 11/00	(71)**Name of Applicant :** **1)NEW HORIZON COLLEGE** Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli,Bellandur(P), Bangalore-560103, Karnataka Bangalore Karnataka India **2)NEW HORIZON COLLEGE OF ENGINEERING** (72)**Name of Inventor :** **1)Ms. Ronicca M S**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

The present invention relates to a wearable pepper spray ring for personal self-defence. The device comprises a ring body housing containing a replaceable pepper spray micro-cartridge, a rotatable spray nozzle, and a dual-stage safety actuation mechanism including a sliding safety lock and an actuator button. Upon activation, a spring-loaded valve releases a metered dose of pepper spray through a finger-aligned internal spray channel and outward through the nozzle. The invention further includes a nozzle safety shield and an anti-slip textured outer surface to enhance safety and handling.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030481 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : IoT and GSM-Based Smart Battery Management System with Gas Leakage Detection and Remote Alerts

(51) International classification	:H01M 10/48, H02J 7/00, H01M 10/42, G01R 31/36, G01R 31/382
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Dr Hamsalekha R
2)Dimpu Abhiram A S
3)Keerthan J S
4)Raghavendra H
5)Darshan P

(57) Abstract :
The present invention describes a IoT-Based Smart Battery Management System (100) for electric vehicles and energy storage batteries. It features an Arduino-based control unit connected to an ESP32 IoT communication module for real-time monitoring and remote supervision. A sensor module measures battery voltage, current, temperature, and gas leakage. The system continuously processes these signals to check battery health and safety status. A display module shows these parameters on-site. Meanwhile, operational data is uploaded to a cloud platform for logging and review. A GSM unit sends immediate alerts when abnormal conditions arise.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030506 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : A Dielectric-Responsive Hybrid Nanofluid Composition for Sensor and Smart Fluid Applications

(51) International classification	:G01N 27/22, G01N 33/28, C09K 8/03, G01N 27/02, H01B 3/12	(71)**Name of Applicant :** **1)New Horizon College of Engineering** Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India (72)**Name of Inventor :** **1)Rohini B**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

A smart fluid composition (107) comprising a hybrid nanofluid (104) including Copper Oxide (CuO) nanoparticles (105) dispersed in a binary organic fluid base (101) of butanol and diethylamine (DEA). The nanoparticles (105) are incorporated in concentrations ranging from 0.01 M to 0.06 M and homogenized using a magnetic stirrer (102). Dielectric properties are measured using a dielectric measurement instrument (106) over a temperature range of 293 K to 318 K. The hybrid nanofluid exhibits enhanced dielectric constant compared to the binary fluid (101), enabling smart sensing applications.

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2026

(21) Application No.202641030513 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : REPLACEABLE PIEZOELECTRIC ENERGY-HARVESTING MODULE EMPLOYING PRESSURE-AMPLIFYING SILICONE AND DAMPING LAYERS FOR FLOORING APPLICATIONS

(51) International classification	:H01L 41/113, H02N 2/18, F03G 7/08, F03G 7/06, H01L 41/083
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli,Bellandur(P), Bangalore-560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)Ms. Namrata Awasthi

(57) Abstract :
The present invention relates to a replaceable piezoelectric energy-harvesting module (EHM) designed for flooring applications that employs pressure-amplifying silicone and damping layers. The EHM incorporates a core structure consisting of a pressure-amplifying silicone layer, an intermediate damping layer, and upper and lower layers. By using these components, the replaceable EHM enhances the overall efficiency of energy conversion from mechanical pressure to electrical energy compared to conventional EHMs. This innovation addresses the need for improved solutions in the field of energy harvesting technologies by providing a scalable solution that adapts to varying pressures or loads effectively and increases output voltages and currents suitable for various power requirements. The replaceable nature of this module enables easy integration into various flooring systems while ensuring optimal energy conversion, making it a valuable solution for self-powered electronic devices within the realm of energy harvesting technologies.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/03/2026

(21) Application No.202641030767 A

(43) Publication Date : 27/03/2026

(54) Title of the invention : LION-Optimized LSTM-Based 5G and IoT-Enabled Intelligent Critical Health Monitoring System

(51) International classification	:G06N 20/00, G16H 40/20, G16H 40/67, G06N 3/08, G06N 3/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Mr. Srinivas Babu N
2)Mr. Shashikiran S
3)Mr. Nagendra R

(57) Abstract :
The invention establishes a closed-loop integration between artificial intelligence-based health prediction and adaptive communication resource orchestration, thereby reducing end-to-end latency, improving predictive accuracy, and enhancing reliability in mission-critical healthcare applications.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044697 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : A Handheld Dual-Mode 4K Imaging System with Simultaneous Wired and Wireless Transmission

(51) International classification	:H04N 5/225, H02J 7/00, G03B 17/02, H04N 7/18, H04N 5/232
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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)VETRIVEL AGALYA
Address of Applicant :Dr. Agalya V Professor and Associate Head R&D(IPR Cell) New Horizon College of Engineering New Horizon Knowledge Park Outer Ring Road,Near Marathalli Bellandur(P), Bangalore- 560103 Karnataka India
2)Kaarthikeyan S P
(72)**Name of Inventor :**
1)Kaarthikeyan S P

(57) Abstract :
The system as claimed in claim 1, wherein the camera module (101), the image processing unit (100), the wireless transmission module (104), the wired interface (105), and the power supply unit associated with the charging port (110) are integrated within a single portable enclosure, thereby providing a compact and miniaturized architecture

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044823 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : BLOCKCHAIN-ENABLED SECURE ELECTRONIC VOTING SYSTEM

(51) International classification	:H04L 9/32, G07C 13/00, H04L 9/06, G06F 21/32, H04L 9/08
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Park, Marathahalli outer ring road, Bengaluru-560103. Bangalore Karnataka India
(72)**Name of Inventor :**
1)Priya N
2)Kaushik J T
3)Harshith KM
4)Akash P Kalyankar
5)Anirudh Wagge

(57) Abstract :
The proposed digital voting system integrates Aadhaar-linked OTP verification (101–103), biometric facial comparison (106–107), and AI-enabled deepfake and liveness validation (110–111) to authenticate voters before granting access to the voting interface. This multi-factor authentication process ensures that only legitimate individuals can participate in the voting process and helps prevent impersonation or identity spoofing. Once authentication is successfully completed, the selected vote is securely processed and recorded using blockchain-backed storage (120), creating a tamper-resistant and permanent record of each ballot. Smart contracts (117) automatically enforce a one-vote-per-user rule by identifying and rejecting duplicate voting attempts before the vote is committed to the blockchain ledger. The system also supports a secure remote voting interface that allows authorized voters to cast ballots while maintaining privacy and system integrity. By integrating decentralized blockchain storage with AI-based biometric verification and fraud detection mechanisms, the system provides a transparent, secure, and scalable digital voting framework that enhances the reliability and trustworthiness of modern electronic election systems.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044828 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : A MULTIFUNCTIONAL WRITING PEN WITH INTEGRATED BLUETOOTH SPEAKER

(51) International classification	:B43K 29/00, G06F 3/0354, B43K 29/10, B43K 29/08, B43K 29/087
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli,Bellandur(P), Bangalore-560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)Jennifer I
2)Kuldeep Faldu

(57) Abstract :
A multifunctional writing pen with an integrated Bluetooth speaker is disclosed. The pen includes an outer pen body (110) housing both electronic and writing components. The upper portion of the pen includes a speaker output head (100) connected to a retractable speaker unit (102) that produces audio output. The pen further includes a control button (108) for power activation and wireless pairing. An internal acoustic channel (116) directs sound toward the speaker output head. A Bluetooth electronic circuit (118) receives wireless audio signals from external electronic devices and operates using a rechargeable battery (120) positioned within a battery housing (122). The lower portion of the pen includes a replaceable ink cartridge (130) terminating in a writing tip (138) for normal writing functions. A magnetic sound-amplifying cap (132) having an acoustic cavity (134) and outlet opening (136) improves sound resonance. The invention integrates writing and wireless audio playback within a compact pen structure suitable for portable use.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044842 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : Battery Safety Alary for Leak and Fire Detection

(51) International classification	:G08B 17/06, G08B 17/10, H01M 10/48, G08B 21/16, G08B 17/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :Outer Ring Road, East of NGEF layout Kasturi Nagar,Bangalore 560043 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Nirmala T
2)Sunitha R
3)Upanya P

(57) Abstract :
The present invention discloses a Battery Safety Alarm for Leak and Fire Detection (100) configured to provide early warning of hazardous battery conditions. The system comprises a gas leakage sensor (103), a fire or smoke sensor (104), a temperature sensor (105), an audible alarm (101), a visual alarm (102), and a protective action module (106). The sensors continuously monitor battery parameters and transmit signals to a control unit for real-time analysis. Upon detection of abnormal conditions such as gas leakage, overheating, or fire, the system activates audible and visual alerts and initiates protective actions including power disconnection and remote notification. The invention enhances operational safety and reliability of battery systems.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044846 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : Predictive Biometric Sleep-Adaptive Acoustic Regulation System

(51) International classification	:A61M 21/02, A61B 5/00, A61M 21/00, A61B 5/11, A61B 5/08	(71)**Name of Applicant :** **1)New Horizon College** Address of Applicant :Outer Ring Road, East of NGEF layout Kasturi Nagar,Bangalore 560043 Bangalore Karnataka India **2)New Horizon College of Engineering** (72)**Name of Inventor :** **1)Deepa George** **2)Tejas H**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

The present invention relates to an wearable predictive acoustic regulation system designed to reduce sleep disturbances caused by environmental noise. The device integrates biometric sensing components, including a surface electromyography (EMG) sensor (201), a micro-vibration accelerometer (202), and a breathing rhythm sensor (203), along with an external microphone array (205) and an internal reference microphone (206).An embedded processing unit (301) and digital signal processor (302) manage signal processing and adaptive noise control functions. An edge artificial intelligence unit (303) combines physiological and acoustic data to estimate sleep stage and evaluate the likelihood of short-term noise disturbances. Based on this assessment, the system adjusts noise control settings to reduce the impact of sudden impulse sounds while maintaining awareness of safety-critical signals.By integrating biometric estimation, environmental awareness, and predictive modeling within a unified wearable architecture, the system offers a proactive approach to acoustic regulation compared to conventional reactive noise cancellation devices.

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044851 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : AI-Based System and Method for Reel Template Discovery, Customization, and Automated Video Generation

(51) International classification	:G06N 20/00, G06F 16/783, G06F 16/78, H04N 21/44, H04N 21/2347	(71)**Name of Applicant :** **1)New Horizon College** Address of Applicant :Outer Ring Road, East of NGEF layout Kasturi Nagar,Bangalore 560043 Bangalore Karnataka India **2)New Horizon College of Engineering** (72)**Name of Inventor :** **1)Byataraju** **2)Aman Pratap Singh**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

The present invention relates to an artificial intelligence-based system and method for reel template discovery, customization, and automated video generation. The system analyzes a user-uploaded reference video to extract non-copyrightable stylistic attributes including transition timing, animation patterns, and beat synchronization. These attributes are converted into abstract parameters and matched against an internal template library to suggest original templates. Users may customize selected templates and integrate personal media for automated reel generation. The system ensures intellectual property compliance by preventing duplication of copyrighted assets while enabling efficient and creative short-form video production.

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044852 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : Smart Biometric Secured Table with Tamper Detection and Controlled Visibility Drawer System

(51) International classification	:G07C 9/00, F21V 33/00, A47B 13/08, A47B 13/16, A47B 13/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor : NA**
Address of Inventor : NA

(57) Abstract :
The present invention discloses a Smart Biometric Secured Table (100) configured to provide secure storage and controlled access to personal belongings. The table comprises a tabletop assembly (101) including a biometric fingerprint sensor mounted on 6 mm black tempered glass with a one-way mirror coating, a tamper detection mechanism (102) configured to detect unauthorized access attempts and generate an alarm signal, a concealed storage drawer assembly (103) positioned beneath the tabletop for storing valuables, and a lighting and monitoring module (104) arranged within the lower structure of the table. The lighting module includes LED illumination configured to activate upon successful biometric authentication, thereby illuminating the drawer compartment and enabling the stored contents to be viewed through the one-way mirror tabletop surface. The invention integrates biometric authentication, tamper detection, concealed storage, and controlled illumination within a single furniture structure, thereby improving security, privacy, and usability for residential, office, and institutional environments.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044854 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : System and Process for Cloud-Coordinated Emergency Traffic Signal Control with Edge-Based Fail-Safe Execution

(51) International classification	:G08G 1/07, G08G 1/087, G08G 1/0965, G08G 1/01, G08G 1/0967
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Marathahalli, Outer ring road, Bangalore- 560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Gurulakshmi A.B.
2)Rajesh G
3)Abuzar Yaseen
4)Charanya S Reddy
5)Rachana D M
6)Pratheeksha B Shetty

(57) Abstract :
The present invention discloses a method and system for emergency traffic signal coordination using real-time GPS tracking and cloud-based control. An emergency vehicle unit continuously transmits location data to a cloud coordination platform, which identifies nearby traffic signals and issues commands to traffic signal controllers. The controllers temporarily override normal signal timing to provide a green signal for the emergency vehicle and restore normal operation after the vehicle passes. The system enables efficient and automated emergency traffic management within urban transportation networks.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044870 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : CUSTOMIZABLE DETANGLING COMB HAVING INTERCHANGEABLE TEETH AND AN INTEGRATED REFILLABLE SERUM DISPENSING SYSTEM WITH ANTI-CLOG CHANNELS

(51) International classification	:A45D 24/22, A45D 24/04, A45D 24/00, A45D 24/26, A45D 19/02
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Radhasree Choudhury

(57) Abstract :
The present invention relates to a customizable detangling comb having an integrated refillable serum delivery system for simultaneous hair detangling and cosmetic liquid application. The comb comprises a comb body (110) having an elongated handle and a comb head portion (120). The handle houses a refillable serum reservoir (150) having a capacity ranging between 5 ml and 20 ml. Internal liquid channels (140) extend from the reservoir toward teeth elements (132) provided on the comb head portion. Each teeth element includes micro-channels terminating in dispensing outlets (172) having a diameter ranging between 0.3 mm and 1.2 mm for controlled release of liquid. The spacing between adjacent teeth elements ranges between 2 mm and 8 mm. A flow control valve (160) regulates liquid dispensing, while an anti-clog channel system (170) maintains continuous liquid flow.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/04/2026
(21) Application No.202641044917 A
(43) Publication Date : 24/04/2026

(54) Title of the invention : AI-Integrated IoT-Based Automated Greenhouse System for Precision Monitoring and Control in Small-Scale Agriculture

(51) International classification	:A01G 9/24, A01G 9/14, A01G 9/26, A01G 9/22, G05B 13/04	(71)**Name of Applicant :** **1)New Horizon College of Engineering** Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathahalli, Bellandur(P), Bangalore-560103. Bangalore Karnataka India (72)**Name of Inventor :** **1)Mukti Yadav** **2)Sampa Das** **3)Mukul Manohar** **4)Manu Shankar G**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :
The invention provides an AI-integrated IoT-based automated greenhouse system comprising a sensing unit, a controller unit, a crop-profile dataset storing environmental target ranges for specific crops, a decision support module returns adaptive setpoints or schedules, a safety constraint verification module, and a pump drive subsystem capable of receiving a variable speed reference compatible with a variable frequency drive. The controller computes deviation between sensed parameters and crop-specific targets and generates adaptive actuation commands in a closed-loop manner. The system supports standalone operation, modular retrofit installation, and proportional irrigation control based on deviation magnitude.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044920 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : Wearable Multi-Sensor System for AI-Guided Lucid Dream and Mental-State Induction

(51) International classification	:A61B 5/00, A61B 5/11, A61M 21/00, A61B 5/16, A61B 5/0205	(71)**Name of Applicant :** **1)New Horizon College** Address of Applicant :Outer Ring Road, East of NGEF layout Kasturi Nagar, Bangalore 560043 Bangalore Karnataka India **2)New Horizon College of Engineering** (72)**Name of Inventor :** **1)Vasanth Kumar** **2)Akshath R Rajpurohit**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

The present invention relates to a wearable multi-sensor system for artificial intelligence-guided lucid dream induction and adaptive mental-state regulation. The system comprises a head-mounted wearable device (100) including a visual stimulation element (101), eye-movement sensors (102), neural activity sensors (103), and motion sensors (104); a wrist-mounted wearable device (200) including a cardiovascular sensor (201) and motion sensor (204); and wearable audio output devices (300) including audio transducers (301). The system performs real-time multi-sensor data fusion and closed-loop adaptive control to deliver calibrated visual and auditory stimuli based on detected physiological and neurological states, thereby facilitating lucid dream induction and mental-state stabilization while maintaining user comfort and safety.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641044967 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : SYSTEM AND METHOD FOR DETECTING UNDEREXPLORED RESEARCH AREAS USING MULTI-DOCUMENT ANALYSIS

(51) International classification	:G06F 17/27, G06F 17/30, G06F 40/30, G06F 16/35, G06F 16/33
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Madhumita Nayak

(57) Abstract :
The present invention discloses a computer-implemented system and method for detecting underexplored research areas through structured multi-document semantic analysis. The system comprises a Multi-Document Corpus Input Module (101) for ingesting heterogeneous research documents including academic articles, patents, and technical reports; a Preprocessing Module (102) for text normalization and metadata extraction; and a Structured Semantic Extraction Module (103) configured to extract research components such as problem statements, objectives, methodologies, variables, results, and limitations. A Thematic Classification Module (104) and Cross-Document Thematic Comparison Engine (105) analyze thematic distribution and co-occurrence patterns across the corpus. A Gap Detection Engine (106) identifies underrepresented themes and missing problem-method combinations, while a Temporal and Bibliometric Analysis Module (107) evaluates publication trends and citation-weighted impact. A Gap Ranking and Scoring Module (108) prioritizes identified research gaps, and an Output Generation Module (109) produces ranked research opportunities and analytical reports. The invention enables automated, scalable, and objective identification of research gaps across large-scale document collections.

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2026

(21) Application No.202641045057 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : AI PREDICTIVE DUAL TANK REVERSE OSMOSIS WATER PURIFICATION SYSTEM

(51) International classification	:C02F 1/44, C02F 9/02, B01D 61/12, B01D 61/10, C02F 103/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :Outer Ring Road, East of NGEF layout Kasturi Nagar,Bangalore 560043 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Shruthi N
2)Deepa George
3)Amruta Prema

(57) Abstract :
The invention discloses an AI-enabled Reverse Osmosis (RO) water purification system incorporating a dual-tank configuration purified water tank(301) and reject water tank(302). The system utilizes predictive analytics to forecast water consumption and optimize purification schedules. Sensors provide real-time water quality data to an AI controller that reduces wasted water and power consumption. Reject water is automatically reused for non-potable applications. The system further includes an IoT module for real-time monitoring. The invention enhances sustainability by reducing water wastage and improving purification efficiency.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2026

(21) Application No.202641045991 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : AI-Powered Smart Multi-Utility Trolley with Self-Navigation, Load Optimization and Eco-Charging System

(51) International classification	:B62B 5/00, G05D 1/02, H02J 7/35, B62B 3/00, B62D 63/02	(71)**Name of Applicant :** **1)New Horizon College** Address of Applicant :Outer Ring Road, East of NGEF layout Kasturi Nagar,Bangalore 560043 Bangalore Karnataka India **2)New Horizon College of Engineering**
(31) Priority Document No	:NA	(72)**Name of Inventor :** **1)Uma P**
(32) Priority Date	:NA	**2)Jeyarani R**
(33) Name of priority country	:NA	**3)Vybhavi B**
(86) International Application No Filing Date	: :01/01/1900	**4)Bhavya N** **5)Keerthan R**
(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	

(57) Abstract :

The invention titled “AI-Powered Smart Multi-Utility Trolley with Self-Navigation, Load Optimization, and Eco-Charging System” is designed to provide an intelligent, eco-friendly, and user-oriented mobility solution. This smart trolley operates autonomously using AI-based navigation and sensor technology to detect obstacles and follow the user with precision. It integrates solar and kinetic energy harvesting systems to ensure continuous power supply, promoting sustainability. The trolley includes voice, gesture, and mobile app-based control features, allowing users to operate it hands-free and monitor its performance in real time. Equipped with load- balancing sensors, temperature-controlled storage, and safety mechanisms, the invention enhances convenience, efficiency, and safety across various environments such as shopping malls, airports, hospitals, and educational institutions.

No. of Pages : 17 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2026

(21) Application No.202641046031 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : Electronic Knife with Biometric Authentication System

(51) International classification	:B26B 1/08, G07C 9/00, G06K 9/00, B26B 29/02, G06V 40/13	(71)**Name of Applicant :** **1)New Horizon College** Address of Applicant :Outer Ring Road, East of NGEF layout Kasturi Nagar, Bangalore 560043 Bangalore Karnataka India **2)New Horizon College of Engineering** (72)**Name of Inventor :** **1)Shruthi N** **2)Sania N**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

The present invention relates to an electronic knife with an integrated biometric fingerprint recognition system designed to enhance user safety and prevent unauthorized or accidental use. The knife may be implemented as a 5 folding or fixed blade design. The handle houses electronic components, including a fingerprint sensor, a microcontroller with secure memory for storing authorized user templates, and a power source. The blade remains locked until an authorized fingerprint is authenticated by the microcontroller, which actuates an electromechanical lock or solenoid to allow safe 10 deployment. Optional features include LED indicators for lock status and a wireless communication module for user management, usage logging, or firmware updates. This invention provides a secure and convenient cutting tool, reducing the risk of accidental injuries while ensuring usability for intended users.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2026

(21) Application No.202641046034 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : Advanced Dance Performance Reflection System

(51) International classification	:G09B 19/00, G06F 3/01, A63B 24/00, H04N 7/18, G06K 9/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :Outer Ring Road, East of NGEF layout Kasturi Nagar, Bangalore 560043 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Dr.Baswaraj
2)Thania Natarajan
3)Sunitha G

(57) Abstract :
The Advanced Dance performance Reflection Systems a system designed for the monitoring and rectifying the dance moves of the user. It integrates multiple components, including a motion capture (201) to detect and track 5 body movements, joint position, and angles, smart processor (301) allows the mirror to compare the dancer's movements with the reference choreography and it provides real time feedback, visual guidance such as highlighted joints, alignment lines, or color-coded corrections on the mirror surface. The Rythms also allows the users to identify their flaws. They also provide voice-based 10 guidance to the user and allows the user to interact with the mirror. It can be encrypted using voice recognition or passwords/ pin for the security of the user.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2026

(21) Application No.202641046035 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : Nature Powered Solar Tracker

(51) International classification	:F24S 50/20, H02S 20/32, F24J 2/54, F24S 30/425, F24J 2/52
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :Outer Ring Road, East of NGEF layout Kasturi Nagar, Bangalore 560043 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Dr. Shivanand M Hanchinal
2)Tarun Narayanan
3)Yashwanth K

(57) Abstract :
The present invention relates to a Nature Powered Solar Tracker (100, 200) designed to 5 automatically orient a solar panel (103) toward the Sun without using electrical or electronic components. The system comprises a base (101), a mounting frame (102), and a rotatable mechanism enabling angular movement. In one embodiment, thermally responsive fluid chambers create gravitational imbalance through differential heating, causing rotation of the mounting frame (102). In another embodiment, a balanced mechanical structure including an 10 anchor (200), vertical center pole (201), rotating mechanism (202), and support arm (203) enables passive tracking. The invention improves solar energy efficiency while reducing cost, maintenance, and power consumption

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/04/2026

(21) Application No.202641047379 A

(43) Publication Date : 24/04/2026

(54) Title of the invention : AI BASED SMART MULTIPURPOSE ROVER WITH VISION SYSTEM

(51) International classification	:G05D 1/02, G05D 1/00, G06K 9/00, G06V 10/764, G06T 7/73
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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)Dr.P.Meenakshi Sundaram
Address of Applicant :Sr.Assistant Professor, Department of Electrical and Electronics Engineering, New Horizon College of Engineering, Outer ring road, Marathahalli, Bengaluru - 560103. Email: meenakshisundaram.p_eee_nhce@newhorizonindia.edu Karnataka India
2)Dr.T.Arulkumar
3)M.Nagalingam
4)A.Thiyagarajan
5)Dr.K.Meenalochani
6)Dr.Hariharan N
7)Dr.A.Alaudeen
8)Prof.S.Sarathkumar
9)G Adline Priya

(72)**Name of Inventor :**
1)Dr.P.Meenakshi Sundaram
2)Dr.T.Arulkumar
3)M.Nagalingam
4)A.Thiyagarajan
5)Dr.K.Meenalochani
6)Dr.Hariharan N
7)Dr.A.Alaudeen
8)Prof.S.Sarathkumar
9)G Adline Priya

(57) Abstract :
This patent mainly focuses on design of AI-based Smart Multipurpose Rover with Vision System for dynamic and unstructured environments and surfaces. AI system, computer vision and embedded controllers to activate autonomous navigation and object detection. The system also makes the decision based on the AI algorithm. High resolution camera is used for image processing purpose to clarify the objects, obstacles for real time application. Path planning, obstacle detection, obstacle avoidance and specific task operation can be performed by the smart rover. The applications used by this are surveillance, agricultural crops monitoring, and disaster management and industry inspection system.

No. of Pages : 12 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026

(21) Application No.202641052150 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : Stress Level Detection Through Facial Expression and Voice Tone Analysis Using Deep Learning

(51) International classification	:G06K 9/00, G10L 25/63, G10L 25/51, A61B 5/16, A61B 5/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore- 560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)R Suganya
2)Ruchitha SK
3)Rakshitha G
4)Rithika Balaji
5)R. Deepyasree

(57) Abstract :
The present invention discloses a method and system for detecting and evaluating the 5 stress level of an individual using facial expression and voice tone analysis through a deep learning framework. The system comprises an input acquisition module, a facial expression analysis module, a voice tone analysis module, a feature extraction and normalization unit, a stress classification engine, and an output notification module. The input acquisition module captures real-time facial image frames and voice signals 10 from the user through camera and microphone interfaces. The facial expression analysis module detects facial regions and extracts facial landmarks and expression1related features, while the voice tone analysis module analyzes vocal characteristics such as pitch, tone variations, and spectral features associated with psychological stress. The extracted multimodal features are fused and processed by a trained deep 15 learning model to compute a stress probability score. Based on the evaluated stress level, the system generates alerts or displays status outputs indicating the detected stress condition, enabling real-time, non-intrusive stress monitoring

No. of Pages : 24 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052162 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : FULL-FACE BIKE HELMET WITH MODULAR DUAL-FILTRATION RESPIRATORY PROTECTION

(51) International classification	:A62B 18/08, A62B 18/02, A62B 7/10, A62B 18/04, A62B 23/02
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Vinod kumar M H
2)S Boobalan
3)Roshan P

(57) Abstract :
The invention discloses a helmet-integrated respiratory protection system designed to provide both impact safety and breathable air for two-wheeler riders operating in highly polluted urban environments. The system incorporates a full1face helmet with an integrated respirator mask body that forms a sealed breathing interface covering the nose and mouth of the user. Ambient air entering the helmet 10 is directed through a modular dual-stage filtration system capable of removing particulate matter such as PM10 and PM2.5 as well as harmful gaseous pollutants including nitrogen oxides, sulphur dioxide, carbon monoxide, and volatile organic compounds. An airflow valve mechanism regulates the discharge of exhaled air while preventing reverse airflow, thereby minimizing carbon dioxide 15 accumulation and breathing resistance. The system operates using passive airflow generated during vehicle motion without requiring external power sources. The invention provides an efficient, lightweight, and practical solution that integrates rider head protection with respiratory filtration, thereby improving breathing comfort, visibility, and overall rider safety in environments with high levels of air pollution.

No. of Pages : 21 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(21) Application No.202641052166 A
(19) INDIA
(22) Date of filing of Application :24/04/2026
(43) Publication Date : 08/05/2026

(54) Title of the invention : Automatic pen -Seriflow-stylus

(51) International classification	:B43K 29/00, B43K 8/02, B43K 7/12, B43K 8/03, B43K 29/08
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :Outer Ring Road, East of NGEF layout, Kasturi Nagar, Banglore-560043 Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)Sindu Akhilesh

(57) Abstract :
The present invention relates to a multifunctional writing instrument known as “Seriflow,” designed to integrate traditional writing and digital interaction within a single device. The instrument comprises an ergonomically designed housing with a retractable mechanism for controlled extension and retraction of the writing tip. It includes a refillable ink cartridge system that ensures smooth ink flow and promotes sustainability by reducing disposable waste. A font selector mechanism enables users to choose from multiple typographic styles, allowing personalization of writing for creative, professional, or branding purposes. The device further incorporates a digital display that provides real-time information such as font selection and ink levels. A stylus tip is integrated at one end of the instrument for interaction with touchscreen devices. The invention therefore combines pen, pencil, and stylus functionalities, improving convenience, usability, and adaptability for both analog and digital writing environments.

No. of Pages : 12 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052167 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : DUAL-USE COSMETIC- REFILLABLE INK SYSTEM -SAFE WRITING PEN WITH LIPSTICK

(51) International classification	:B43K 8/03, A45D 40/20, B43K 8/02, A45D 40/26, B43K 5/18
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore – 560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)SOUMYA.P

(57) Abstract :
The present invention relates to a novel writing instrument utilizing a lipstick-based, cosmetic-grade ink formulation integrated with a refillable cartridge system. The pen comprises a body, removable cap, and a thread-based refillable cartridge housing designed for easy and tool-free replacement. The ink reservoir contains a lipstick-based composition including wax, pigments, oils, emollients, and functional additives. The invention further incorporates a temperature-responsive flow mechanism that activates the ink upon exposure to body heat, enabling a transition from a semi-solid to a flowable state. This ensures smooth and controlled ink delivery through a capillary feed system to a precision nib assembly for consistent writing performance. The refill mechanism allows quick cartridge replacement within seconds, enhancing usability and convenience. Additionally, the cosmetic-grade formulation ensures user safety upon skin contact. The invention promotes environmental sustainability by significantly reducing plastic waste compared to conventional disposable writing instruments.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052168 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : Adaptive Facial Gesture Communication System

(51) International classification	:G06F 3/01, G06K 9/00, G10L 15/26, H04M 1/72436, H04M 1/72433
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Swati Sehgal
2)Zaara Afsheen

(57) Abstract :
This invention presents a facial gesture-based communication system designed for individuals who have lost the ability to speak or move due to conditions such as paralysis or ALS. Many such individuals retain limited control over facial movements, and this system builds on that retained capability to enable independent communication. Using the built-in camera of a standard laptop or mobile device, the system detects simple gestures like eye blinking and mouth opening in real time. Each gesture triggers a predefined message, which is displayed on screen and spoken aloud through a text-to-speech feature ensuring caregivers nearby can receive it clearly.

No. of Pages : 22 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052171 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : AI-Based Temperature Estimation at Distance with Uncertainty Quantification

(51) International classification	:G01K 13/00, G01K 7/42, G01J 5/00, G06N 20/00, G01J 5/10
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)P. BASKAR
2)S. Padmanabhan
3)V K Usha

(57) Abstract :
The Present invention provides an AI-based system and method for estimating the temperature of an object at a distance with quantified uncertainty. The system utilizes a combination of thermal sensor module, a distance measurement module, and an environmental sensor module whose outputs are processed by a data fusion and preprocessing unit. An AI model prediction engine estimates the object temperature, and an uncertainty quantification engine computes a confidence metric associated with the temperature estimation.

No. of Pages : 18 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052173 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : MULTI-PURPOSE FLEXIBLE BOX GUARD FOR FRAGILE OBJECT PROTECTION IN BACKPACKS

(51) International classification	:A45F 3/04, A45C 13/02, A45C 13/00, A45C 13/10, B65D 81/05
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Kiruthiga.R

(57) Abstract :
The present invention relates to a protective storage box (200) designed for safe transportation of fragile items within a backpack (100). The box comprises a rigid shell (202) made of polylactic acid (PLA) having a thickness of 3–4 mm, a transparent acrylic glass cover (201), and an internal foam or microfiber lining (203) for shock absorption. The box further includes removable padded inserts (204) and divider slots (205) for customizable organization of items such as spectacles, earbuds, and cosmetic products. A press-lock mechanism (206) ensures secure closure, while ventilation slots (207) prevent moisture accumulation. Additional features include a side mesh pocket (208), anti-slip grooves (209), and a detachable tray (210) for enhanced functionality. The box is compact, lightweight, and compatible with various bags. The invention provides protection against impact and compression, ensuring durability, reusability, and efficient organization of delicate items across multiple environments.

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052178 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : AI-DRIVEN ADAPTIVE SENSOR FUSION AND LOW-LATENCY COOPERATIVE INTELLIGENCE FOR AUTONOMOUS VEHICLE

(51) International classification	:G05D 1/02, G01S 13/931, B60W 30/095, G08G 1/16, G05D 1/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Park, Marathahalli Outer Ring Road, Bengaluru-560103. Bangalore Karnataka India
(72)**Name of Inventor :**
1)Aruna S
2)Pragati Tripathi
3)Meetaigar Khaja Naveed
4)Madineni Pravallika
5)Kusam Vardhini
6)R Haneshwar

(57) Abstract :
The present invention relates to an intelligent safety system for autonomous vehicles based on cooperative sensor fusion and vehicle-to-vehicle (V2V) communication. It integrates data from multiple onboard sensors, including LiDAR, radar, cameras, and ultrasonic sensors, to achieve accurate real-time environmental perception. The system enables efficient object detection, tracking, and enhanced situational awareness. Through V2V communication, nearby vehicles exchange critical information including speed, position, direction, and driving intent. A predictive analytics module processes both local sensor data and received V2V information to estimate potential collision scenarios. The system may utilize machine learning models to improve prediction accuracy and reliability. It generates early warnings to prevent accidents and improve road safety. An automated decision-making unit determines suitable avoidance actions such as braking, steering, and speed adjustment. Low-latency communication and redundancy mechanisms ensure reliable operation even in the event of failures. Overall, the invention provides a robust, scalable, and efficient solution for real-time collision prediction and avoidance.

No. of Pages : 21 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052190 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : STORAGE MECHANISM INTEGRATED ROTATABLE CHAPPATHI ROLLING BOARD

(51) International classification	:A47J 47/16, A47J 47/00, A47J 47/14, A47B 31/00, A47J 37/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore– 560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)SREYA HARISREE

(57) Abstract :
The present invention relates to a multifunctional chapatti rolling board comprising a rotatable platform integrated with a detachable ingredient storage system. The device includes a circular rolling surface mounted on a rotatable base, beneath which multiple storage compartments are positioned for convenient access to flour, spices, or other cooking essentials. The rolling surface incorporates spill-control grooves that prevent overflow of flour or dough, thereby maintaining cleanliness during food preparation. Each storage compartment is equipped with a locking mechanism to ensure secure placement and easy detachment for refilling or cleaning. The invention uniquely combines rotation and storage in a single compact structure, enabling efficient chapatti preparation while minimizing kitchen clutter. This functional integration represents a non-obvious advancement over traditional rolling boards, standalone turntables, and spice boxes. The invention is industrially applicable for mass production in wood, plastic, or composite materials, offering durability, hygiene, and enhanced usability for domestic and commercial kitchens.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052193 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : SELF-CLEANING SURFACE SANITIZATION DEVICE

(51) International classification	:A47L 13/58, A47L 13/20, A47L 13/256, A47L 13/22, A47L 13/24
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P),Bangalore-560103 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Thanvi Kuttaiah I
2)M K Divya
3)A Banu

(57) Abstract :
A self-cleaning mop for gym equipment comprising an elongated outer body casing (24), a rotating mop head (10), and a mop pad holder (12) adapted for cleaning gym equipment surfaces. The device includes a clean liquid tank (20) having a capacity of 150 ml to 300 ml and a dirty liquid tank (36) having a capacity of 100 ml to 250 ml, arranged separately to prevent mixing of fluids. A liquid dispensing outlet (22) connected through an internal fluid channel (40) provides controlled release of cleaning solution. A self-cleaning wringing system (16) extracts contaminants from the mop head (10) and directs them into a waste collection chamber (30) and the dirty liquid tank (36). The mop head (10) has a diameter ranging from 60 mm to 120 mm and is connected through a flexible joint (14). An air drying vent (32) enables drying within 1 to 3 minutes, allowing hygienic reuse.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026

(21) Application No.202641052195 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : VEHICLERESCUE – SMART FUEL AND EMERGENCY DELIVERY SYSTEM

(51) International classification	:G06Q 50/30, G06Q 10/06, G06Q 50/06, G06Q 10/00, H04W 4/02
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Outer Ring Road, Near Marathahalli, Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Sonali Mahure
2)Asha Joseph
3)Pallavi M G
4)Pradeeksha KS
5)Prarthana H M
6)Rachana G

(57) Abstract :
A software-driven roadside assistance and emergency service dispatch platform is disclosed. The invention provides a cloud-based system that enables motorists and vehicle owners to request roadside assistance services such as fuel delivery, mechanical repair, and vehicle towing through a digital interface. The platform includes user authentication modules, service request processing systems, automated service provider matching algorithms, real-time location tracking using map services, and integrated payment processing functionality and can be modified for requesting emergency services. Upon receiving a service request, the platform identifies nearby service providers and dispatches the most suitable provider while allowing users to track assistance in real time.

No. of Pages : 21 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026

(21) Application No.202641052197 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : IOT INTEGRATED FRESHNESS USAGE DETECTOR WITH REMOTE INDICATOR

(51) International classification	:F25D 29/00, F25D 27/00, G01N 21/64, A23L 3/28, F25D 23/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Marathalli,outer ring road, Bengaluru-560103. Bangalore Karnataka India
(72)**Name of Inventor :**
1)Rajasree R S
2)Pranav P
3)Puneeth Jain S
4)Ram Kishore J

(57) Abstract :
The present invention discloses an IoT enabled food freshness monitoring system configured for use within a refrigerator. The system comprises a food storage container having a removable lid housing a circular ultraviolet (UV) light-emitting diode array concentrically arranged around a centrally positioned fluorescence sensor. Upon illumination by the UV light, food items emit fluorescence signals indicative of biochemical changes associated with spoilage. A micro-environment sensor monitors ambient refrigerator conditions, including temperature and humidity. A processing unit fuses detected fluorescence emissions with learned refrigerator micro-environment data to compute a spoilage index representing the freshness state of the food item. The system further includes a wireless communication module configured to transmit freshness information and alerts to a user device, thereby enabling early spoilage detection and proactive food management. The invention operates autonomously without manual input and reduces food waste by providing accurate, real-time freshness assessment.

No. of Pages : 23 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026

(21) Application No.202641052199 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : Thermally Stabilized Solar Power Bank with Removable PCM Cartridge

(51) International classification	:H01M 10/659, H01M 10/613, H02J 7/35, H02J 7/00, H01M 10/615
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park, Outer Ring Road, Near Marathahalli ,Bellandur (P)Bangalore-560103. Bangalore Karnataka India
(72)**Name of Inventor :**
1)Jisha P K
2)Nagabhushana N
3)Lisha .M. Gowda
4)Lipika T
5)Mallikarjun .H.M
6)Madhusudan. L.S

(57) Abstract :
A portable solar power bank that passively regulates battery temperature using removable Phase Change material (PCM) Cartridge sleeves (108) and a graphite heat-spreading layer. Compact enclosure housing cylindrical lithium-ion cells. Graphite layer (107)wrapped around each battery cell for uniform heat conduction .PCM sleeve with melting temperature between 32°C and 38°C.Removable PCM cartridge containing multiple sleeves for easy replacement. Passive operation without fans or active cooling. The combination stabilizes battery temperature between 30°C and 45°C, enhances battery life, improves charging efficiency, and is applicable for outdoor, emergency, and off-grid applications.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052201 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : SENTINEL-LOCK PRO: NEAR-ZERO STANDBY CABINET SECURITY SYSTEM WITH MECHANICALLY ENGAGED ELECTROMAGNETIC SIGNAL BLACKOUT

(51) International classification	:G07C 9/00, E05B 47/00, E05B 49/00, G08B 13/14, G06F 1/32
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :Outer Ring Road, East of NGEF layout, Kasturi Nagar, Banglore-560043 Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)Divya Baliga B
2)Vidya Madyal
3)Lisha C

(57) Abstract :
The present invention relates to Sentinel-Lock Pro (100), an advanced cabinet security system featuring near-zero standby power architecture and integrated electromagnetic shielding. The system includes a lock housing (101) with electromagnetic barrier layers configured to block RFID, NFC, and other wireless signals when locked, protecting stored electronic devices from unauthorized wireless access. Access control is achieved through dual-factor authentication comprising a physical interrupt gesture sensor (103) acting as a hard-wired power activation switch and a fingerprint sensor (102) that remains electrically isolated until gesture activation, eliminating standby power consumption and enabling extended battery life of approximately 12–18 months. The locking mechanism (104) operates in failsafe mode and includes an emergency USB-C power port (105). A network-isolated NFC logging module (106) stores encrypted access events retrievable only via proximity tap. An inertial tamper detection sensor (107) with a 3-axis accelerometer monitors tilt, movement, and vibration to detect unauthorized tampering attempts.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052226 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : SENSOR-FUSION PRECISION IRRIGATION SYSTEM WITH RAINFALL-ADAPTIVE FLOW PREDICTION AND ANOMALY DETECTION CONTROL

(51) International classification	:G06Q 50/02, G06N 20/00, A01G 25/16, G01W 1/14, G06N 3/08
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Pragati Tripati
2)Aruna S
3)Jaydeep Mukherjee
4)Kiran Ghosh

(57) Abstract :
The present invention relates to an intelligent agricultural monitoring framework designed to enhance water resource management and crop monitoring through sensor-based data acquisition and machine learning techniques. The system integrates rain gauge sensors and water flow sensors to continuously monitor rainfall intensity and irrigation water usage in agricultural fields. The collected environmental and irrigation data are transmitted to a centralized processing unit for analysis and evaluation. The framework employs a hybrid machine learning approach combining Gradient Boosting and Random Forest algorithms to analyze patterns in rainfall and water flow data. The hybrid model enhances prediction accuracy for irrigation requirements and water availability. The system enables real-time monitoring of water distribution and rainfall conditions. It helps farmers make data-driven irrigation decisions to optimize water usage and crop productivity.

No. of Pages : 21 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2026
(21) Application No.202641052273 A
(43) Publication Date : 08/05/2026

(54) Title of the invention : CHILD-SAFE BEVERAGE CONTAINER WITH TEMPERATURE-BASED CONTROL AND AUTOMATIC LOCKING MECHANISM

(51) International classification	:B65D 50/04, A47G 19/22, B65D 50/06, B65D 51/24, B65D 43/02
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)SATHYA J
2)A KALAIVANI

(57) Abstract :
The present invention relates to a child-safe beverage container designed to reduce the risk of burns from hot liquids. The container includes a lid equipped with an automatic locking mechanism and multiple sensors to monitor conditions such as temperature, liquid level, and motion. A temperature sensor continuously checks the liquid's heat level, and when it exceeds a predefined safe threshold, the system activates the locking mechanism to prevent the lid from being opened. As the liquid cools to a safe temperature, the lid automatically unlocks, allowing safe access. The container comprises a main body and a locking lid integrated with a mechanism that includes a spring, locking hook, and actuator. Additional components include a thermistor-based temperature sensor, a liquid level sensor within a waterproof housing, and a motion sensor that detects movement along multiple axes. All components are connected to a control unit, ensuring reliable, automatic operation and enhanced safety for children and controlled environments.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/05/2026

(21) Application No.202641060332 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : AN INTEGRATED NAIL POLISH CAP COMPRISING A REPLACEABLE REMOVER CARTRIDGE AND SPRAY DISPENSING

(51) International classification	:A45D 34/04, B05B 11/00, A45D 29/00, A45D 34/00, A45D 40/26
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Debopriya Kar

(57) Abstract :
The present invention relates to a nail polish container cap (20) attached to a bottle (40) and the cap (20) having a chamber (24) for accommodating a replaceable remover cartridge (30). The cartridge is fluidically connected to a spray nozzle (10) and includes a transparent level indicator (32). An applicator (50) is attached to the cap and extends into the bottle. The cartridge is positioned above the applicator and is fluidically isolated from the bottle, enabling independent storage and dispensing of nail polish and remover in a single integrated unit.

No. of Pages : 19 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/05/2026

(21) Application No.202641060336 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : CLOUD–EDGE FEDERATED CAUSAL LEARNING SYSTEM FOR PERSONALIZED ADAPTIVE EDUCATION

(51) International classification	:G06N 20/00, G06N 5/04, G06N 3/08, G06N 3/04, G06N 5/02	(71)**Name of Applicant :** **1)New Horizon College of Engineering** Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India (72)**Name of Inventor :** **1)K. Thamarai Selvi** **2)Jenita Subash** **3)Poornachandra Tejaswi**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

A cloud–edge based intelligent personalized learning system is disclosed, integrating Artificial Intelligence (AI) and Internet of Things (IoT) technologies to deliver real-time, privacy-preserving, and explainable learning experiences. The system utilizes wearable and ambient sensors to capture physiological and environmental data, which is processed at an edge aggregator node for low-latency feature extraction. A federated causal personalization engine enables secure, local data processing and generates context-aware learning recommendations using causal inference. A cloud orchestration layer maintains a global model and coordinates distributed learning, while a local explainability module provides interpretable insights. Additionally, an energy and network optimization module enhances system efficiency, enabling scalable, adaptive, and transparent personalized learning.

No. of Pages : 22 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/05/2026

(21) Application No.202641060340 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : Scent Enabled Multisensory Smart Savings Bank

(51) International classification	:G07F 19/00, G06Q 40/02, G06Q 40/00, A61L 9/12, G06Q 20/10	(71)**Name of Applicant :** **1)NEW HORIZON COLLEGE** Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli, Bellandur(P), Bangalore-560103, Karnataka Bangalore Karnataka India **2)NEW HORIZON COLLEGE OF ENGINEERING** (72)**Name of Inventor :** **1)M.K. Divya** **2)A. Banu** **3)Thanvi Kuttaiah.I**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

The present invention is about a scent enabled smart savings bank that helps people develop a habit of saving money in a fun and engaging way. As shown in Figure 1, the system has a money detection unit (101) that senses when money is inserted. This information is sent to a processing unit (103), which records the savings and stores it in a memory unit (104). Based on the saving activity, the device releases a pleasant scent to encourage the user. The system works using a power supply unit (107). As shown in Figure 2, the invention also includes a financial data analysis module (201) that checks the user's saving pattern and compares it with stored goals in a milestone database (202). A scent mapping module (203) selects different scents for different saving situations, and these are released through a scent unit (204). This creates a strong link between saving money and positive feelings. Overall, the invention makes saving money simple, enjoyable, and motivating.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/05/2026

(21) Application No.202641060349 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : INTEGRATED GARMENT HANGER WITH AUTOMATED SELF-REGULATED DISPENSING SYSTEM

(51) International classification	:A61L 9/12, A61L 9/14, B05B 11/00, D06F 58/20, A61L 9/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer ring road, near Marathahalli Bellandur(P), Bangalore-560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)Nishchitha B P

(57) Abstract :
The integrated garment hanger (100) with an automated self-regulated dispensing system designed to enable regulated and sporadic scent discharge onto clothing is the subject of the current invention. A timing mechanism (101(a)), a battery (101(b)), a pump (101(c)), and a fragrance storage chamber (101(d)) are all housed in a container unit (101). Automated dispensing without human involvement is made possible by the timer (101(a)) being modified to activate the pump (101(c)) at predetermined intervals. Fragrance liquid is transferred to a nozzle assembly (102) with the help of a pipe system (103), which includes segment (103(a)), fluidically coupled to the container (101). Through a 3 mm diameter exit, the multi-sectional cylindrical and tapered nozzle (102) controls flow and atomizes the liquid into a tiny spray. To ensure even coverage, the spray is directed downward onto clothing held up by hooks (104(a), (104(b)), and (104(c)). Compactly built within the hanger (100), the system offers a practical, easy-to-use, and space-saving way to preserve clothing freshness and minimize odor build-up in enclosed spaces.

No. of Pages : 21 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/05/2026

(21) Application No.202641060355 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : SMART TRANSPORT AUTOMATION SYSTEM INTEGRATING PASSENGER LOAD DETECTION AND DOOR CONTROL

(51) International classification	:E05F 15/73, B66B 13/14, B60J 5/04, B60J 5/00, B66B 5/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer ring road, near Marathahalli Bellandur(P), Bangalore-560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)Sowmya H L
2)Nishchitha B P
3)Thanvitha P Gowda

(57) Abstract :
In order to enhance passenger safety, avoid overloading, and facilitate intelligent door operation in transport vehicles, the current invention pertains to a smart transport automation system. The system combines an automatic door control system (300) with a passenger load sensing module (10). Infrared sensors (11) to detect passenger movement, weight sensors (120) to measure load conditions, and a camera-based detection unit (130) for passenger counting and validation make up the passenger load detection module (10).

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/05/2026

(21) Application No.202641060358 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : Two-Component Phone Support Assembly with Guided Slide Rail Interlocking Structure

(51) International classification	:H04M 1/04, H02J 7/00, B60R 11/02, H01R 31/06, H04M 1/11
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Bhavya P
2)Nagabhushana N
3)Nandini Sharma
4)Chirag Karthik P
5)Chiranth Mayur P
6)Nafees Ahmad

(57) Abstract :
The present invention discloses a modular adapter-mounted phone charging holder comprising a phone support member and an adapter engagement member configured for detachable interconnection through a guided linear slide rail mechanism. The slide rail mechanism includes complementary longitudinal rail structures permitting controlled linear insertion and removal. A terminal retention structure, formed as an integrally molded resilient bend at an end portion of the rail, is configured to elastically deflect during forward assembly and to prevent reverse disengagement under vertical gravitational load. The system further incorporates ventilation apertures positioned to promote airflow around a charging adapter and device. The two-component assembly is structured to mount directly onto a charging adapter body, enabling elevated wall-socket use while maintaining mechanical stability and thermal dissipation. The cooperative interaction between the linear rail engagement and the resilient terminal retention structure provides load-assisted locking and controlled detachability, thereby distinguishing the system from conventional hanging pockets, fixed brackets, and non-guided snap-fit charging holders.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061091 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : Precision Adaptive Concealer Cartridge

(51) International classification	:A61M 35/00, A45D 34/04, B05C 17/005, A45D 40/26, A45D 40/00	(71)**Name of Applicant :** **1)NEW HORIZON COLLEGE** Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli, Bellandur(P), Bangalore-560103, Bangalore Karnataka India **2)NEW HORIZON COLLEGE OF ENGINEERING** (72)**Name of Inventor :** **1)A. Banu** **2)M.K. Divya** **3)Thanvi Kuttaiah.I**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

The present invention relates to a precision adaptive concealer cartridge (100) configured to provide controlled and customized application of concealer material. The cartridge comprises a housing unit (101) for storing the concealer, an adaptive control mechanism (103) for regulating the flow and quantity, and a dispensing unit (102) for uniform application onto the skin. The system may further include an optional input unit (104) for user-based adjustment and a mixing unit (105) for blending multiple shades to achieve a desired tone. As illustrated in Figure 1, the invention provides a structural arrangement of the cartridge components including the housing unit (101), adaptive control mechanism (103), and dispensing unit (102). As illustrated in Figure 2, the operational flow of the system enables user input, control signal processing, shade adjustment, and controlled dispensing. The invention ensures precise application, reduced wastage, and improved user convenience, thereby overcoming limitations of conventional cosmetic dispensing devices.

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

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202641061098 A

(19) INDIA

(22) Date of filing of Application :14/05/2026

(43) Publication Date : 05/06/2026

(54) Title of the invention : HYBRID SMART SPOON WITH SELF COOLING FEATURE

(51) International classification	:A47G 21/04, A47J 43/28, A47G 19/30, A61J 9/00, A61J 9/06
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur(P), Bangalore-560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)Ms.Suchitra Deviprasad

(57) Abstract :
The smart, multipurpose feeding spoon that is the subject of this invention is intended to improve intake monitoring, temperature management, and safety during feeding. In order to facilitate effective heat transfer, the spoon's food-contact spoon bowl (101) is combined with a thermal conductive layer (103). To control and maintain the ideal meal temperature, a double-wall cooling chamber (102) with phase change material and gel is placed beneath the bowl. To guarantee longevity and cleanliness, the internal parts are contained in a sealed protective case (107). The handle has an LED temperature indicator(104) for real-time feedback and intake measurement indications (105). Food intake measurement unit (106), and its user interface is provided by a smart display (109). For easy charging and operating status indication, a USB charging port (110) The system is powered by a rechargeable battery compartment in Insulated Ergonomic handle (108) are also included. Controlled cooling, precise food intake monitoring, and enhanced user involvement are all made possible by the integrated system. This technology, which provides a safe, effective, and cutting-edge feeding solution, is especially appropriate for young children, the elderly, and patients in need of aided feeding.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061099 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : A SYSTEM FOR USING GIANT BUBBLE WRAP WASTE TO DESIGN THE RAIN COAT

(51) International classification	:A41D 3/04, A41D 3/06, B65D 81/03, A41D 27/00, B32B 5/18
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore – 560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)Ms.SUNITHA.S

(57) Abstract :
The present invention relates to a sustainable raincoat system developed using giant bubble wrap waste material. The raincoat comprises multiple panels formed from recycled bubble wrap sheets, integrated with sealing, fastening, and reinforcement mechanisms to ensure durability and waterproof performance. The inherent air filled structure of bubble wrap provides insulation, cushioning, and lightweight properties. The system enables cost-effective fabrication and promotes environmental sustainability by reducing plastic waste. The invention provides an innovative solution for converting packaging waste into functional protective apparel suitable for everyday use.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061100 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : A WEARABLE ELASTIC FACIAL MASSAGE DEVICE FOR TARGETED LYMPHATIC DRAINAGE AND ADAPTIVE COMPRESSION THERAPY

(51) International classification	:A61H 39/04, A61H 23/02, A42B 1/24, A61H 15/00, A61H 7/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Samraddi Naik

(57) Abstract :
The present invention relates to a wearable facial massage device configured as an anatomically mapped elastic cap for providing directional lymphatic stimulation and adaptive compression. The cap incorporates a multi-texture surface with raised massage elements to enhance mechanical stimulation. The device further comprises a multi-layered structure including a cushioning layer, an elastic base layer, a ventilated intermediate layer, and a skin-contact layer, thereby ensuring comfort, flexibility, and breathability. The invention operates without the need for electronic components and provides a non-invasive, cost-effective, and user-friendly solution for improving blood circulation, lymphatic drainage, and overall skin appearance.

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061102 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : A SALINE SYSTEM AND DUAL OUTLETS INTEGRATED CHAMBERS FOR WALL MOUNTED TAP

(51) International classification	:B67D 1/00, B67D 7/80, B67D 1/08, A47J 31/46, B67D 1/12	(71)**Name of Applicant :** **1)NEW HORIZON COLLEGE** Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathahalli, Bellandur(P),Bangalore-560103, Karnataka Bangalore Karnataka India **2)New Horizon College of Engineering**
(31) Priority Document No	:NA	(72)**Name of Inventor :**
(32) Priority Date	:NA	**1)Shivani Nigam**
(33) Name of priority country	:NA	**2)Sonika**
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

A sideways-mounted dual-chamber fluid dispensing system is disclosed, comprising a purified water chamber and a saline chamber integrated within a single housing. The system includes a solenoid-controlled inlet, filtration mechanism, NaCl reservoir, heating and stirring components for in-situ saline generation, and a dual dispensing nozzle for independent fluid output. The compact lateral mounting structure enables efficient installation while preventing cross-contamination between fluids. The system is suitable for medical, domestic, and hygiene applications requiring controlled saline preparation and purified water dispensing.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061104 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : SQUEEZE-BASED DUAL-ENDED NAIL APPLICATOR

(51) International classification	:A45D 34/04, A45D 29/04, A45D 29/00, A45D 29/18, A45D 29/05
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore – 560103, Karnataka Bangalore Karnataka India
2)NEW HORIZON COLLEGE OF ENGINEERING
(72)**Name of Inventor :**
1)ASHWINI CRASTA

(57) Abstract :
The present invention relates to a multifunctional dual-ended nail applicator for storing and dispensing nail polish and nail polish remover in a single integrated device. The applicator comprises an elongated housing having separate chambers for nail polish and nail polish remover, divided by an internal partition wall to prevent mixing. A first end includes a brush applicator for nail polish, while an opposite end includes a remover applicator tip. Each chamber is associated with a deformable pressure portion that enables controlled dispensing upon manual actuation. In one embodiment, one-way flow control elements and rotational lock rings are provided to prevent leakage and accidental dispensing. The device provides a compact, portable, and user-friendly solution for both application and removal of nail polish within a single unit.

No. of Pages : 16 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061118 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : Automated Telescopic Arm assisted specific Car Roof Cleaning System based on IoT

(51) International classification	:B60S 3/04, B60S 1/56, B60S 3/00, B60S 1/60, B60R 11/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Nagendra R
2)Srinivas Babu N
3)Shashikiran S

(57) Abstract :
The invention is an automated specific car roof cleaning system using Raspberry Pi, camera-based dirt detection using OpenCV, IoT and a telescopic arm with ACME lead screw mechanism to provide efficient and complete cleaning of car roof. The system integrates IoT for remote monitoring and control, providing efficient, automated, and intelligent cleaning with minimal human intervention. It is specifically designed for car roof-only cleaning, providing a compact and cost-effective alternative to full vehicle cleaning systems.

No. of Pages : 18 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061126 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : SELF CLEANING SYSTEM FOR LIP COSMETIC DEVICE

(51) International classification	:A45D 40/26, A45D 40/00, A46B 15/00, A45D 40/20, A46B 17/06	(71)**Name of Applicant :** **1)NEW HORIZON COLLEGE** Address of Applicant :New Horizon Knowledge Park,Outer Ring Road, Near Marathalli,Bellandur(P), Bangalore- 560103, Karnataka Bangalore Karnataka India **2)NEW HORIZON COLLEGE OF ENGINEERING** (72)**Name of Inventor :** **1)Jyoti Harsha Shetty**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

A self-cleaning cosmetic applicator system (100) is designed to dispense and automatically clean solid cosmetic products such as lipstick, lip balm, concealer, or foundation sticks. The system includes an outer housing with a removable cap (101), a base unit (105), and a movable cosmetic carrier that supports a cosmetic stick (102) for extension and retraction. An internal cleaning assembly features a micro-cleaning ring (103) that engages the cosmetic surface during operation. The ring may include flexible bristles, silicone fins, absorbent or antimicrobial elements to remove residue, oils, and contaminants. A rotational actuation mechanism (106) activates the cleaning process in response to cap closure, base rotation, or product retraction. During cleaning, residue is directed into an internal waste chamber (104). A hygiene indicator (107) signals when the product is clean and ready for reuse. The system enhances hygiene, convenience, and product longevity while maintaining a compact, user-friendly design.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061129 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : COLLAPSABLE DISPENCER METRICS FOR BOTTLE CAP

(51) International classification	:G01F 19/00, B65D 41/04, G01F 11/26, B65D 47/06, B65D 47/20
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur (P), Bangalore- 560103 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Pallavi N
2)Skanda S

(57) Abstract :
A device for measuring and dispensing liquids is disclosed. The device comprises a bottle cap mount (1) configured to be secured onto a bottle neck, a sealing gasket (3) arranged within the bottle cap mount (1) to provide a leak-proof seal, and a mounting or locking ring (4) provided with at least one locking clip or latch (5). A collapsible measuring chamber (6) is disposed above the bottle cap mount (1), the measuring chamber (6) being configurable between a collapsed state and an expanded state and having a measurement scale (7) for indicating volume. The device further includes a pouring spout (8) formed at an upper end of the measuring chamber (6) and an anti-drip valve or tip (9) associated with the pouring spout (8) for controlled dispensing of liquid. The device is configured to enable measurement and dispensing of liquid while remaining mounted on the bottle.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061131 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : LOCKEASE- SMART DOOR LOCKING SYSTEM

(51) International classification	:G07C 9/00, E05B 49/00, E05B 47/00, H04L 12/28, G08B 13/196
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Pallavi Nayak
2)Vipul Raj
3)Samarth Hegde
4)Gunnikaa Gupta
5)Manishka
6)Sushma Shree

(57) Abstract :
The present invention discloses a portable smart lock system capable of providing secure, intelligent, and multi-factor access control for doors, lockers, safes, and other secured enclosures. The system integrates multiple authentication methods, including fingerprint recognition, keypad-based PIN entry, and mobile-based control. It further incorporates a camera module for surveillance, an OLED display for user interaction, and a WS2812 LED notification ring for visual status indication. The lock supports wireless connectivity and seamless integration with smart-home platforms using the ESPHome API, enabling remote monitoring, control, and automation through Home Assistant. The portable design, combined with enhanced security features and real-time notifications, makes the invention a versatile and advanced smart locking solution.

No. of Pages : 27 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061135 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : MECHANOCHEMICALLY FABRICATED NANOCOMPOSITE FOR CR (VI) REMOVAL

(51) International classification	:C02F 1/28, B01J 20/24, B01J 20/30, C02F 1/62, B01J 20/26
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur (P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Poornima G S
2)V S Anusuya Devi

(57) Abstract :
A new β-cyclodextrin capped polyaniline coated Fe_3O_4 nanocomposite was successfully synthesized via a mechanochemical approach for efficiently removing hexavalent chromium [Cr(VI)] from aqueous systems. The solvent-free grinding procedure allows for in situ polymerisation of aniline over magnetic Fe_3O_4 using β cyclodextrin as a stabilizing agent. The resulting composite has improved adsorption 10 performance due to synergistic interactions between its components. UV-visible absorption measurements demonstrated the efficient removal of Cr(VI) (99%). The nanocomposite also exhibits facile magnetic separation and great reusability, making it ideal for long-term wastewater treatment.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/05/2026
(21) Application No.202641061136 A
(43) Publication Date : 05/06/2026

(54) Title of the invention : A SYSTEM FOR DYNAMIC ROUTE ACTIVATION

(51) International classification	:G01C 21/34, G06Q 50/30, G06Q 10/04, G08G 1/123, H04W 4/029
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur (P) Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Naresh KV
2)Dr. Nandini G
3)Rajat B Hubballi

(57) Abstract :
The invention describes a computer-implemented adaptive time-window demand clustering algorithm for dynamic bus route activation within an intelligent transportation management system. It aggregates passenger travel requests received through a mobile application, where each request includes origin, destination, travel date, and preferred departure time window. A centralized server processes this data using spatial clustering and temporal alignment modules to group requests based on geographic proximity and time similarity. A route activation scoring module calculates a Route Activation Score (RAS) using factors such as passenger count, time alignment, route efficiency, and estimated operational cost. When the RAS exceeds a predefined threshold, the system automatically notifies transportation service providers to allocate buses. This approach reduces passenger waiting time, minimizes vehicle underutilization, optimizes fuel consumption, and enhances overall operational efficiency through predictive demand aggregation and dynamic route activation.

No. of Pages : 26 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061140 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : INTEGRATED MULTI-STUMP COMPUTER VISION SYSTEM FOR REAL-TIME CREASE OCCUPANCY AND GROUNDING VERIFICATION

(51) International classification	:G06T 7/00, A63B 71/06, A63B 69/00, G06K 9/00, A63B 69/36	(71)**Name of Applicant :** **1)New Horizon College of Engineering,** Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli,Bellandur (P), Bangalore-560103 Bangalore Karnataka India (72)**Name of Inventor :** **1)Chandan Raj B R** **2)Harshith C M** **3)Bilwanth C Aradhya** **4)Mahaan C Aradhya** **5)Rohith C M**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

An automatic adjudication system (100) using computer vision to determine run-out and stumping decisions in cricket is disclosed. The system operates without requiring sensors embedded in the playing surface and comprises multiple high-speed cameras (101) mounted on the wicket assembly and a local processing unit (102) executing real-time algorithms. Using image segmentation and spatial mapping, the system detects the popping crease and identifies the position of the batsman's foot or bat relative to the pitch surface (105). Ground contact is determined by analyzing pixel proximity and shadow patterns to distinguish between contact and non-contact states. The processing unit (102) employs binary signaling integrated with smart bails (103), where the default state indicates "not grounded" and changes instantly to "grounded" upon confirmation of contact behind the crease line (107). The system provides objective, real-time decision-making, eliminates parallax error, and preserves the natural condition of the playing surface.

No. of Pages : 29 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061368 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : AI-Driven Multi-Modal Public Grievance Redressal System with Predictive Issue Detection and Smart Department Routing

(51) International classification	:G10L 15/26, G06N 20/00, G06Q 50/26, G06F 16/35, G10L 15/18
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)Dr. R Suganya
2)Sneha
3)Tanya Shukla
4)Lekhya Tallam
5)Janiya Maria Tomy

(57) Abstract :
The present invention relates to an Artificial Intelligence (AI)-based public grievance redressal system designed to improve the efficiency and accuracy of handling citizen complaints. The system allows users to submit grievances through multiple input modes such as text, voice, and images. An input processing module converts these inputs using text processing, speech-to-text, and image analysis techniques. The processed data is structured and analyzed by an AI-based classification engine that uses keyword and contextual analysis to identify the appropriate department. The system also includes a duplicate detection feature to identify and group similar complaints or generate new entries. Additionally, smart routing automatically forwards complaints to concerned authorities, while predictive analytics analyze historical data to identify potential civic issues. The system generates alerts for early intervention and ensures transparent tracking and efficient resolution, thereby enhancing public grievance management and supporting smart governance initiatives.

No. of Pages : 25 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061372 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : SMART DIGITAL DISPLAY FOR INDIAN MUSIC INSTRUMENTS

(51) International classification	:G10G 1/00, G10H 1/00, G09B 15/00, G10G 1/02, G10G 3/04
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :New Horizon Knowledge Park, Outer Ring Road, Near Marathalli, Bellandur(P),Bangalore-560103. Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)Poornima H K

(57) Abstract :
The present invention relates to a compact, instrument-mounted digital notation display system designed for Indian classical music instruments. The system comprises a micro-display unit detachably mountable onto a musical instrument, an audio input module used to capture sound signals generated during performance and a processing unit adapted to perform real-time pitch detection and conversion of detected frequencies into corresponding swara notation. It is visually presented on the display unit in a format optimized for hands-free readability during performance. The device includes wireless connectivity, enabling synchronization with external devices such as smart phones. The proposed system eliminates the need for external music stands or handheld devices, thereby reducing performer distraction and improving learning efficiency also provides an integrated solution combining pitch detection, notation visualization and performance assistance in a single portable unit.

No. of Pages : 17 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061380 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : A Wearable Multi-Reservoir Automated Ophthalmic Drug Delivery System with Pressure-Assisted Positioning, Retractable Eye Shield and Synchronized Alert Mechanism

(51) International classification	:A61B 5/00, A61B 5/16, A61B 5/0476, A61B 5/0205, A61B 5/374	(71)**Name of Applicant :** **1)New Horizon College** Address of Applicant :Outer Ring Road, East of NGEF layout Kasturi Nagar, Bangalore 560043 Bangalore Karnataka India **2)New Horizon College of Engineering** (72)**Name of Inventor :** **1)S Mamatha** **2)Prasanna Prakash** **3)VasanthaKumar Selvaraj** **4)Joshua C** **5)Mugundhan**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :

This invention relates to a smart wearable behavior monitoring system designed for real-time assessment of activity, attention levels, and neurological responses in neurodivergent children. The system comprises a smart wristband equipped with motion, gyroscope, and pulse sensors, and a smart headband incorporating EEG sensors for monitoring brainwave activity associated with focus, stress, and cognitive states. Sensor data is transmitted to a processing unit where it is filtered, synchronized, and analyzed. The processed data is communicated via a wireless module to a monitoring dashboard that provides real-time activity summaries, behavioral trends, and alerts. An AI-based analysis module compares incoming data with predefined behavioral patterns to detect anomalies such as hyperactivity, inactivity, reduced attention, or stress responses. The system generates timely notifications for caregivers, enabling early intervention and supporting personalized care in a non-invasive and user-friendly manner.

No. of Pages : 18 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061382 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : AI-BASED INTELLIGENT INTERVIEW AND GROUP DISCUSSION TRAINING SYSTEM WITH REAL-TIME BEHAVIOURAL ANALYSIS

(51) International classification	:G10L 25/63, G09B 19/06, G10L 15/18, G09B 19/04, G10L 15/22
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	: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

(71)**Name of Applicant :**
1)NEW HORIZON COLLEGE OF ENGINEERING
Address of Applicant :New Horizon Knowledge Park Outer Ring Road, Near Marathahalli Bellandur(P), Bangalore-560103, Karnataka Bangalore Karnataka India
(72)**Name of Inventor :**
1)C R Rathish
2)Amrita Kashyap
3)V S Chandana Shri
4)Caleb Miracle

(57) Abstract :
This invention presents an AI-Driven Intelligent Interview and Group Discussion Training System featuring Real-Time Behavioural Analysis, aimed at equipping candidates for job recruitment and communication-heavy situations via immersive and adaptive simulations. The system incorporates a multimodal framework that includes an Automatic Speech Recognition (ASR) engine for immediate transcription and acoustic feature analysis, a Natural Language Processing (NLP) engine for assessing semantic relevance, fluency, vocabulary, and argument structure, along with an Emotion and Behavioural Analysis module that identifies emotional states and confidence levels by utilizing acoustic parameters like MFCCs, pitch, and speech rate. It likewise features an AI-powered Group Discussion Simulation module with various adjustable personas able to engage in dynamic interactions and produce counterarguments through Retrieval-Augmented Generation (RAG). A Real-Time Feedback Synthesizer delivers in-depth performance insights, whereas an Adaptive Question Generation Engine driven by an advanced Large Language Model facilitates individualized assessment, allowing thorough, real-time evaluation and focused skill development.

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

(12) PATENT APPLICATION PUBLICATION
(21) Application No.202641061383 A
(19) INDIA
(22) Date of filing of Application :14/05/2026
(43) Publication Date : 05/06/2026

(54) Title of the invention : RETRACTABLE COMB INTEGRATED MULTIFUNCTIONAL HAIR CLIP

(51) International classification	:A45D 8/36, A45D 42/10, A45D 24/10, A45D 42/14, A45D 6/00	(71)**Name of Applicant :** **1)NEW HORIZON COLLEGE** Address of Applicant :New Horizon Knowledge Park Outer Ring Road Near Marathahalli Bellandur (P), Bangalore– 560103, Karnataka Bangalore Karnataka India **2)NEW HORIZON COLLEGE OF ENGINEERING** (72)**Name of Inventor :** **1)CHAITHRA N**
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No Filing Date	: :01/01/1900	
(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	

(57) Abstract :
A multifunctional hair clip with a built-in grooming system and mirror is disclosed. The clip body (200) consists of an upper and lower arm connected by a spring-biased hinge (201). It includes a retractable pop-out comb assembly (202), operated through a click activation system (204) and supported by a dual extension mechanism (203) for smooth and stable movement. The comb can be extended in steps—retracted, partially extended, and fully extended—using a ratchet mechanism (208) that provides controlled positioning and tactile feedback. A safety locking mechanism (205) holds the comb securely in place, while a stop block (209) prevents over-extension and protects internal parts. The clip also features an integrated reflective element (207) on the upper arm for easy grooming and inspection. When not in use, the comb remains enclosed inside the clip, ensuring cleanliness. The device is compact, portable, and allows convenient one-hand operation for everyday use and travel.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061391 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : ADAPTIVE AI VISION – HELMET COMPLIANCE & VEHICLE CONTROL – TWO-WHEELER SAFETY SYSTEM

(51) International classification	:A42B 3/04, G08B 21/02, A42B 3/30, G06V 40/16, G06V 20/59
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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
Address of Applicant :Outer Ring Road, East of NGEF Layout, Kasturinagar, Banglore-560043 Bangalore Karnataka India
2)New Horizon College of Engineering
(72)**Name of Inventor :**
1)M B Dhanapriya

(57) Abstract :
An Intelligent Face and Helmet Detection System (FHDS) integrate Artificial Intelligence with vehicle control to enhance rider and pillion safety on two-wheelers. A significant percentage of fatal two-wheeler accidents occur due to riders not wearing helmets, making this a critical safety concern. The FHDS proactively enforces helmet compliance by using AI-powered cameras to verify helmet usage before vehicle startup, thereby making safety a non-negotiable condition rather than a personal choice. Designed for real-world riding conditions, the system adapts intelligently to ensure normal vehicle operation while maintaining safety. During a ride, if a helmet is removed, the system issues a warning and subsequently limits the vehicle's speed to a safe level, compelling corrective action. By embedding safety as the default behaviour, this system has strong potential to reduce fatalities, prevent severe injuries, and promote a culture of responsible riding, ultimately protecting lives and families from preventable tragedies.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/05/2026

(21) Application No.202641061396 A

(43) Publication Date : 05/06/2026

(54) Title of the invention : DOMESTIC BIOLOGICAL OXYGEN GENERATION AND AIR PURIFICATION SYSTEM UTILIZING GENETICALLY MODIFIED AUXOTROPHIC MICROALGAE

(51) International classification	:C12M 1/00, C12N 1/12, C12M 1/04, C12M 1/12, C12M 1/36
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(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 :New Horizon Knowledge Park Outer Ring Road, Near Marathalli Bellandur(P), Bangalore-560103 Bangalore Karnataka India
(72)**Name of Inventor :**
1)C R Rathish
2)Shakir Ahmad Bhat
3)Shaik Ameer Sohail
4)Manjunatha

(57) Abstract :
The present invention relates to a compact domestic photobioreactor system designed to improve indoor air quality and oxygen generation using genetically engineered microalgae. The system includes a sealed photobioreactor vessel containing a liquid culture of modified Chlorella vulgaris, along with an LED illumination module optimized for low indoor lighting conditions. A gas exchange system enables carbon dioxide intake and oxygen release through a semi permeable membrane. The system also features a nutrient supply unit providing a controlled nitrogen source and a self-adaptive control system that monitors parameters such as CO_2, O_2, temperature, and pH. A multi-layer biosafety mechanism ensures safe containment and operation. In an alternative design, a helical tubular photobioreactor with a circulation system enhances light exposure and overall efficiency. The system operates as a closed, automated unit requiring minimal maintenance, making it suitable for residential and office environments, and offering a sustainable solution for air purification.

No. of Pages : 21 No. of Claims : 8