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सत्यमेव जयते

G.A.R.6

[See Rule 22(1)]

RECEIPT



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Sr. No.	App. Number	Ref. No./Application No.	Amount Paid	C.B.R. No.	Form Name	Fee Payment	Remarks
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2	202531102257	TEMP/E-1/114432/2025-KOL	7040	13026	FORM 1	Full	AUTONOMOUS AI MEDICAL DIAGNOSIS AND TREATMENT POD
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(51) International classification	:G16H0040670000, G16H0050200000, G16H0010600000, G16H0020100000, G16H0040200000	(71) Name of Applicant : 1)SRJX RESEARCH AND INNOVATION LAB LLP Address of Applicant :Plot No - 3E/474, Sector-9, CDA, Post- Markat Nagar, Cuttack- 753014, Odisha, India Cuttack Orissa India
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(57) Abstract :

The present invention relates to an Autonomous AI Medical Diagnosis and Treatment Pod, a self-contained healthcare system capable of performing end-to-end medical functions autonomously. The pod integrates artificial intelligence, multi-modal sensors, imaging systems, robotic arms, and an internal pharmacy module within a single unit. It is configured to conduct history-taking, differential diagnosis, physical examination, therapeutic intervention, and medication dispensing without continuous human supervision. The AI engine processes physiological, biochemical, and imaging data, while robotic mechanisms execute clinical procedures such as palpation, sample collection, injection delivery, and wound care. The system further provides natural language patient interaction, telemedicine connectivity for remote supervision, blockchain-secured prescription management, and hybrid energy operation for deployment in hospitals, rural areas, disaster zones, and non-terrestrial environments. The invention offers a scalable, accessible, and fully autonomous healthcare solution, overcoming physician shortages and improving timely medical access in resource-limited settings.

No. of Pages : 23 No. of Claims : 27

FORM 2 THE PATENTS ACT, 1970 (39 OF 1970) AND THE PATENTS RULES, 2003 COMPLETE SPECIFICATION (See section 10; rule 13)
1. TITLE OF THE INVENTION AUTONOMOUS AI MEDICAL DIAGNOSIS AND TREATMENT POD
2. APPLICANT (a) NAME: SRJX RESEARCH AND INNOVATION LAB LLP (b) NATIONALITY: India (c) ADDRESS: Plot No - 3E/474, Sector-9, CDA, Post- Markat Nagar, Cuttack-753014, Odisha, India
3. PREAMBLE TO THE DESCRIPTION The following specification particularly describes the invention and the manner in which it is to be performed.

FIELD OF THE INVENTION

The present invention relates to the field of medical technology and artificial intelligence, and more particularly to an autonomous AI-integrated medical system configured to perform clinical examination, diagnosis, treatment and prescription dispensing within a single self-contained unit. The invention lies at the intersection of healthcare automation, robotics, and machine learning, and is directed towards enabling autonomous medical care delivery in both conventional and resource-limited environments.

BACKGROUND OF THE INVENTION

The global healthcare system is increasingly burdened by rising patient loads, shortages of skilled physicians, high consultation costs, and geographical barriers that limit access to timely medical expertise. There is a growing demand for automated, intelligent and accessible healthcare solutions capable of performing a wide range of medical tasks without constant reliance on human doctors. In many regions, particularly rural and underrepresented areas, inadequate healthcare infrastructure leads to delays in diagnosis and treatment, often resulting in worsening health conditions of patients. The traditional model of medical practice depends heavily on the diagnostic skills and experiential judgment of doctors, who use tools such as stethoscopes, imaging systems, and laboratory tests to arrive at conclusions. However, these processes are time-consuming, prone to human error and constrained by the availability of specialized professionals.

Advances in artificial intelligence, robotics and sensor technologies have created new opportunities to address these systemic challenges. Artificial intelligence has demonstrated high accuracy in specific diagnostic domains, such as the interpretation of radiological images and analysis of pathology slides, in some cases exceeding the performance of human experts. Simultaneously, robotic systems have evolved to perform precise and delicate operations, including surgical procedures, with exceptional stability and reliability. Despite these advances, existing technological solutions have largely focused on isolated medical functions diagnosis, imaging, or

teleconsultation without achieving full integration across the continuum of healthcare services.

The emergence of telemedicine during the COVID-19 pandemic further highlighted both the potential and limitations of remote healthcare delivery. While it significantly improved accessibility, it lacked the capability to perform physical examinations, diagnostic testing or immediate treatment interventions. As a result, there remains a critical gap between digital consultations and the comprehensive, hands-on approach of traditional medical practice. Bridging this gap through advanced, automated systems that integrate diagnostics, treatment, and decision-making could substantially enhance accessibility, accuracy and efficiency in healthcare delivery.

Healthcare economics also underscore the urgency of developing scalable and cost-effective alternatives to traditional doctor-dependent models. Rising healthcare costs, limited availability of specialists and increasing global demand for medical services necessitate innovations that can reduce operational burdens while maintaining quality and consistency of care. Furthermore, in critical environments such as disaster zones, remote expeditions, military operations, and space missions, the absence of qualified medical professionals amplifies the need for autonomous systems capable of providing essential healthcare services.

Overall, the evolution of intelligent automation and integrated medical technologies represents a transformative opportunity to decentralize healthcare and make high-quality medical services available at the point of need. This transition marks a pivotal step toward a more efficient, patient-centric, and globally accessible healthcare ecosystem.

OBJECTS OF THE INVENTION

The primary object of the present invention is to provide an Autonomous AI Medical Diagnosis and Treatment Pod capable of performing comprehensive clinical functions including examination, diagnosis, treatment, and prescription dispensing autonomously within a single integrated unit.

Another object of the invention is to provide a system that employs multi-modal sensor fusion, combining physiological, biochemical, and imaging data to achieve accurate and holistic diagnosis comparable to human clinical assessment.

A further object of the invention is to incorporate AI-driven decision-making algorithms configured to autonomously analyze patient data, perform differential diagnosis, recommend treatment, and issue prescriptions without human intervention.

An additional object of the invention is to provide robotic mechanisms equipped with tactile sensors capable of executing clinical procedures such as palpation, sample collection, injection administration, wound dressing, and minor therapeutic interventions.

Another object of the invention is to integrate an internal pharmacy module that securely stores and dispenses medications in pre-measured doses under AI supervision, thereby ensuring immediate and precise drug delivery.

A further object of the invention is to ensure secure and transparent prescription and treatment data management using blockchain or equivalent encryption protocols to prevent misuse and maintain integrity of medical records.

Yet another object of the invention is to incorporate telemedicine connectivity for optional remote supervision by medical professionals while maintaining autonomous operation as its default mode.

A still further object of the invention is to provide a sustainable and portable medical platform equipped with hybrid power systems, including solar energy compatibility, enabling reliable operation in rural, disaster-affected, military, and space environments.

Another object of the invention is to deliver a scalable, modular, and adaptive healthcare solution that can be configured for primary care, emergency response, or specialized medical applications.

The final object of the invention is to offer a fully autonomous healthcare ecosystem that overcomes the limitations of existing diagnostic kiosks, robotic

systems, and AI-assisted tools by unifying all medical functions into one comprehensive and self-sufficient pod.

SUMMARY OF THE INVENTION

The present invention provides an Autonomous AI Medical Diagnosis and Treatment Pod, a self-contained healthcare system designed to perform end-to-end medical functions autonomously. The invention integrates artificial intelligence algorithms, multi-modal sensors, precision robotics, imaging systems, and automated drug dispensing mechanisms within a single compact unit.

The pod is configured to replicate the workflow of a physician by autonomously conducting history-taking, diagnostic evaluation, physical examination, therapeutic intervention, and prescription dispensing without the need for continuous human supervision. The AI engine, trained on extensive medical datasets and clinical protocols, performs differential diagnosis by analyzing physiological, biochemical, and imaging data acquired through multi-modal sensors and robotic examination components.

The system further incorporates natural language processing (NLP) for interactive communication, robotic arms for examination and minor procedures, and an internal pharmacy module for immediate and controlled medication dispensing. The invention bridges the gap between telemedicine and physical healthcare by enabling real-time diagnosis and treatment in both connected and standalone environments.

Additionally, the pod is equipped with telemedicine connectivity, blockchain-based prescription security, and sustainable hybrid power management allowing deployment in rural, remote, or non-terrestrial locations. The invention thus provides a scalable, accessible, and autonomous healthcare solution capable of addressing global challenges such as physician shortages, emergency response, and medical inaccessibility.

BRIEF DESCRIPTION OF DRAWINGS

Fig 1: Detailed flow chart of the invention

1. **Patient Entry and Interaction:** The process is initiated when the patient enters the pod and engages with the system through a voice-activated or touch-based interface. The integrated AI module establishes communication, greets the patient, and conducts an interactive session to collect symptoms, medical history, and relevant contextual information using natural language processing (NLP).
2. **Data Collection via Multi-Modal Sensors:** Following initial interaction, the system activates a network of multi-modal sensors, including imaging devices, biosignal monitoring units, and lab-on-chip microfluidic cartridges. These components acquire real-time diagnostic parameters such as vital signs, physiological data, blood test results, and other relevant biomarkers required for comprehensive medical assessment.
3. **AI-Based Diagnosis and Robotic Examination:** The AI engine processes the acquired data, cross-references it with embedded medical knowledge bases and clinical guidelines, and performs differential diagnosis. Concurrently, robotic arms conduct automated physical examination procedures such as palpation and auscultation under AI supervision, ensuring synchronized diagnostic analysis and physical evaluation.
4. **Automated Treatment and Prescription Dispensing:** Upon confirmation of the diagnosis, the system autonomously initiates appropriate therapeutic actions. Depending on the identified condition, the pod either performs direct interventions—such as administering injections or executing wound-care procedures—or dispenses prescribed medications from its integrated pharmacy module in precise, controlled dosages.

Fig 2: The architecture and working principle of the invention

1. **AI Interface:** This module serves as the primary patient-facing component and comprises a voice-enabled display integrated with a

natural language processing (NLP) engine. It facilitates conversational interaction with the patient, collects symptoms and medical history, and communicates diagnostic findings and treatment instructions in an interactive and comprehensible manner.

- 2. Multi-Modal Sensors:** A network of integrated sensors designed to capture physiological, biochemical, and imaging data from the patient. These include digital stethoscopes, retinal scanners, ECG and SpO₂ monitors, and microfluidic cartridges for rapid blood and urine analyses.
- 3. Imaging Devices:** The system incorporates advanced imaging modalities such as X-ray, ultrasound, and infrared scanners to provide real-time internal body visualization. The imaging output is directly relayed to the AI engine to support diagnostic evaluation.
- 4. Bio-Signal Monitors:** Dedicated monitoring units continuously track vital physiological parameters including heart rate, respiratory rate, blood pressure, and oxygen saturation. Continuous data capture enables early detection of abnormalities during consultation or treatment.
- 5. Robotic Arms:** These precision-controlled robotic appendages are equipped with tactile and pressure sensors to perform physical examination tasks such as palpation, sample collection, injection delivery, and minor procedural interventions including wound dressing or laser-based therapies.
- 6. AI Engine:** The computational core of the system, responsible for analyzing multi-modal data inputs, performing differential diagnosis, and recommending appropriate treatment pathways. The AI engine employs explainable decision-making algorithms to ensure transparency and reliability in all diagnostic and therapeutic outputs.
- 7. Examination Bed:** A patient-support platform integrated with positional and pressure sensors to ensure stability, comfort, and optimal body alignment during diagnostic or robotic procedures. It enables dynamic adjustments under AI control for accurate and safe operation.
- 8. Internal Pharmacy Module:** A secure, temperature-regulated dispensing unit designed to store essential medications and release pre-

measured doses under AI authorization. This ensures sterility, precision, and immediate therapeutic response following diagnosis.

- 9. Power and Connectivity:** The system is powered through a hybrid energy configuration, capable of operating via grid supply, battery backup, or solar energy. Encrypted telemedicine connectivity enables remote specialist supervision or data review when necessary, while maintaining autonomous operational capability as its default mode.

Fig 3: Device Diagram

DETAILED DESCRIPTION OF INVENTION

The present invention pertains to a solution for the above challenges by providing an autonomous AI-integrated medical system that unifies examination, diagnosis, treatment, and prescription within a single platform. It leverages multi-modal sensors, advanced machine learning algorithms, and precision robotics to perform comprehensive medical assessments and deliver targeted interventions without the need for constant human supervision. The system bridges the existing gap between telemedicine and physical healthcare by enabling automated clinical procedures such as vital-sign monitoring, sample collection, imaging, and medication dispensing. Through continuous data analysis and adaptive learning, it ensures accurate, consistent, and real-time medical decision-making.

The present invention relates to an Autonomous AI Medical Diagnosis and Treatment Pod, which constitutes a self-contained healthcare unit capable of operating with minimal or no human intervention. The invention integrates advanced artificial intelligence algorithms, multi-modal sensors, robotic examination systems and automated prescription-dispensing mechanisms to deliver comprehensive end-to-end medical care. In contrast to conventional healthcare delivery models that depend on the physical availability of doctors for diagnosis and treatment, the present invention provides a scalable, accessible and cost-effective alternative that can be deployed across diverse environments including hospitals, rural and remote areas, emergency zones

and non-terrestrial locations such as space missions. The system is designed to emulate the complete workflow of a physician, encompassing medical history collection, diagnostic evaluation, physical examination, therapeutic intervention and follow-up, all within a single autonomous device.

At the core of the invention lies an advanced AI engine trained on extensive medical datasets, clinical protocols and real-time patient data streams. This AI engine performs differential diagnosis by integrating patient-reported symptoms, medical history, sensor-derived physiological parameters, and imaging results. Unlike conventional symptom-checker systems that yield only preliminary or probabilistic assessments, the AI component of the present invention produces precise, evidence-based diagnostic determinations, thereby minimizing ambiguity and enhancing reliability in machine-driven healthcare decisions. The system employs natural language processing (NLP) to engage in interactive communication with patients, enabling it to collect case histories, clarify responses, and deliver comprehensible explanations of diagnoses and treatment plans. This functionality closely replicates the communicative and consultative interaction typically expected from a human physician.

The diagnostic capability of the invention is further reinforced through an array of integrated multi-modal sensors and robotic components. These include non-invasive imaging systems such as ultrasound probes, infrared scanners, and digital otoscopes, bio-signal monitoring units for ECG, blood pressure, and oxygen saturation and microfluidic cartridges capable of performing rapid blood and urine analyses. The robotic arm mechanisms are configured to conduct physical examination procedures including palpation, auscultation through embedded digital stethoscopes, and minor surgical or wound-care interventions. Each robotic operation is governed by adaptive AI control algorithms that adjust movement and pressure in real time based on patient anatomy and biometric feedback, ensuring both precision and safety. By integrating these advanced functionalities, the invention effectively bridges the existing gap between telemedicine consultations and direct, hands-on medical examination.

A further essential aspect of the invention lies in its treatment and prescription-dispensing functionality. Upon confirmation of a diagnosis, the pod is capable

of performing therapeutic interventions such as administering injections, applying dressings, or delivering laser-based therapies. Alternatively, the system can issue an automated prescription for required medications. The integrated pharmacy module securely stores essential drugs in sterilized, monitored compartments and dispenses them in accurate dosages under AI supervision. This mechanism eliminates the patient's dependence on external pharmacies and ensures immediate initiation of therapy, particularly critical in emergency conditions. The prescription process incorporates blockchain-based security to maintain data integrity and prevent misuse or unauthorized access to medication records.

The system also includes a telemedicine integration interface that allows remote specialists to monitor or override AI decisions when necessary. Nonetheless, the default operational mode of the invention remains fully autonomous, thereby ensuring functionality even in locations with limited or no healthcare workforce. The modular architecture of the invention permits scalability: advanced configurations may include surgical robotic extensions for minimally invasive procedures, whereas basic models may be optimized for primary care applications and chronic disease management. An intelligent energy management subsystem supports the operation of the pod through sustainable power sources, including solar energy, thereby enhancing usability in resource-limited settings.

The present invention distinguishes itself from prior art by offering a unified and fully autonomous healthcare solution. Existing AI medical systems are limited to providing decision-support functions for human doctors, while robotic platforms are confined to procedural assistance, and diagnostic kiosks offer only partial examination capabilities. None of these systems address the entire cycle of healthcare delivery within a single autonomous framework. By integrating AI-based diagnostics, robotic examination, therapeutic execution, and automated medication dispensing in one cohesive system, the invention establishes a disruptive model of healthcare delivery. It effectively substitutes several key functions traditionally performed by human doctors while enhancing consistency, minimizing human error, and ensuring universal access to quality medical care.

The Autonomous AI Medical Diagnosis and Treatment Pod therefore represents a significant technological advancement in the field of healthcare automation. It embodies the convergence of artificial intelligence, robotics, diagnostic instrumentation, and automated pharmacy systems into a holistic, self-sufficient medical platform capable of replicating and in certain contexts, surpassing the diagnostic and therapeutic capabilities of human physicians. The invention directly addresses global challenges such as physician shortages, limited healthcare accessibility in remote regions, rising healthcare costs, and the need for immediate medical response in emergencies, thereby positioning itself as a transformative milestone in the evolution of autonomous healthcare systems.

Novel features:

The novelty of the invention lies in its ability to transcend the fragmented, assistive nature of prior art and deliver a fully autonomous medical ecosystem within a single compact pod. Unlike existing systems that separately address diagnosis, robotics, or prescription support, the present invention integrates all these functionalities into a unified platform. Its combination of AI-driven diagnostics, robotic examination, and real-time prescription dispensing establishes a disruptive advancement in healthcare delivery, transforming the paradigm from doctor-assisted automation to fully autonomous replacement of core physician functions.

A key novel feature of the invention is its multi-modal sensor fusion system. Prior devices relied on limited diagnostic inputs, such as temperature, heart rate, or imaging scans in isolation. In contrast, this invention uniquely integrates imaging systems, biosignal monitors, biochemical cartridges, and tactile robotic sensors into a single diagnostic workflow. By simultaneously processing and correlating multiple physiological, biochemical, and visual data streams, the AI engine achieves diagnostic precision comparable to or surpassing that of human doctors. This holistic approach replicates the breadth of a complete physical examination while ensuring real-time, machine-level accuracy.

The pod is designed with four primary interconnected layers: the patient interaction interface, the diagnostic and examination module, the AI-based decision engine, and the treatment and dispensing system. The patient interaction interface forms the first point of contact, using advanced natural language processing (NLP) to communicate conversationally with patients. It collects information regarding symptoms, medical history, and lifestyle, and employs emotion-recognition algorithms to detect stress, discomfort, or anxiety. The interface is multi-lingual, voice-enabled, and coupled with a high-resolution display to guide patients through examination processes. This humanized interaction enhances patient confidence and compliance while simulating the communicative role of a physician—another novel dimension of the invention.

The diagnostic and examination module incorporates medical-grade sensors and robotic arms. Imaging devices such as digital stethoscopes, infrared scanners, ultrasound probes, retinal scanners, and biosignal monitors for ECG, blood pressure, oxygen saturation, respiratory rate, and heart rate variability are fully integrated. Laboratory-grade analysis is performed using microfluidic cartridges capable of rapid blood and urine testing for infections, glucose levels, cholesterol, and chronic disease biomarkers. The robotic arms, equipped with tactile sensors, can perform palpation, fluid collection, injections, wound dressing, and minor procedural interventions under AI supervision. The integration of multi-modal diagnostics with robotic functionality into a compact, autonomous unit represents a significant advance over prior systems that are limited to either diagnostic kiosks or robotic assistance under human control.

At the core of the invention lies the AI-based decision engine, a multi-layered deep learning framework trained on extensive datasets of patient records, clinical research, and real-time data. This AI engine performs differential diagnosis by correlating collected patient data with known medical patterns, calculating probabilities for likely conditions, assessing severity, predicting complications, and recommending treatment pathways. Reinforcement learning enables continuous improvement, while explainable AI (XAI) ensures transparent decision-making for patients and regulators. A further novel

aspect is the AI's independence: it performs history-taking, diagnostic evaluation, examination, treatment prescription, and patient engagement autonomously, a capability absent in prior assistive AI systems.

The treatment and dispensing system constitutes another novel element of the invention. Upon diagnosis, the pod can autonomously initiate interventions such as injections, wound dressing, or laser-based therapies. An integrated pharmacy module stores essential medications in sterilized, temperature-controlled compartments and dispenses pre-measured doses under AI authorization. Blockchain-based verification ensures secure, traceable prescription records, addressing the critical gap between diagnosis and treatment present in conventional healthcare workflows. For treatments beyond its scope, the pod generates electronic referrals, transmitting patient data securely to higher-level medical centers.

The invention also incorporates telemedicine integration, enabling remote specialists to monitor, validate, or override AI decisions when necessary. However, the system is designed to operate independently, allowing deployment in regions lacking connectivity or healthcare personnel. Its modular design permits scalability, with variants optimized for primary care, emergency response, or advanced surgical assistance. Sustainability and portability further enhance the novelty: the pod features intelligent energy management, battery backup, and solar power compatibility, enabling operation in rural, disaster-stricken, military, or extraterrestrial environments. Its compact, mobile, and modular architecture allows easy maintenance, upgrades, and long-term deployment.

Security and compliance are integral to the invention. Patient data is encrypted and stored in accordance with HIPAA and GDPR standards, with biometric authentication controlling access. Anomaly detection algorithms safeguard against misuse or misdiagnosis, while emergency override protocols default to safe, standardized treatment in critical situations.

Collectively, the novel aspects of the present invention include its all-in-one integration, autonomous AI-driven workflow, multi-modal sensor fusion, robotic examination and intervention, automated treatment and dispensing, adaptive and continuously learning AI, sustainability and portability features,

telemedicine integration, and humanized patient interaction. By unifying these elements in a single compact device, the invention overcomes the limitations of prior art, providing a fully autonomous, closed-loop medical system that replicates and, in many contexts, surpasses the functions of a human doctor. This innovation marks a transformative step in healthcare delivery, expanding access to quality medical care in remote, resource-limited, high-risk, or otherwise inaccessible environments.

We claim:

1. An Autonomous AI Medical Diagnosis and Treatment Pod, comprising:
 - a. an AI interface module including a voice-enabled and touch-enabled display integrated with a natural language processing (NLP) engine, configured to interact with a patient, collect symptoms and medical history, and communicate diagnostic and treatment information;
 - b. a plurality of multi-modal sensors comprising digital stethoscopes, retinal scanners, ECG sensors, SpO₂ monitors, blood pressure sensors, and microfluidic cartridges configured to capture physiological, biochemical, and imaging data;
 - c. an AI engine operatively coupled to the AI interface and the sensors, configured to analyze the collected data, perform differential diagnosis, and determine treatment protocols;
 - d. two robotic arms equipped with tactile and pressure sensors, configured to perform physical examination tasks including palpation, auscultation, sample collection, injection delivery, and wound dressing;
 - e. an internal pharmacy module configured to dispense pre-measured doses of medication under AI authorization; and
 - f. a self-contained pod housing integrating all the above components to autonomously perform medical examination, diagnosis, treatment, and prescription without continuous human intervention.
2. The pod as claimed in claim 1, wherein the AI interface module includes a multilingual communication engine and emotion recognition system for improved patient engagement.
3. The pod as claimed in claim 1, wherein the imaging devices integrated with the pod comprise X-ray, ultrasound, and infrared scanners for internal visualization and diagnostic support.
4. The pod as claimed in claim 1, wherein the AI engine is a deep-learning computational unit trained on verified medical datasets to provide evidence-based diagnosis and treatment recommendations.

5. The pod as claimed in claim 1, wherein the robotic arms operate in synchronized coordination with the AI engine to execute diagnostic and therapeutic procedures with adaptive control.
6. The pod as claimed in claim 1, wherein the internal pharmacy module includes a temperature-controlled storage compartment for essential medications and an automated dispensing mechanism releasing doses only after AI validation.
7. The pod as claimed in claim 1, wherein the pod further comprises an examination bed integrated with positional, vibration, and pressure sensors to ensure patient comfort and optimal positioning during diagnostic or robotic operations.
8. The pod as claimed in claim 1, wherein the AI engine implements explainable AI algorithms to ensure transparency and auditability of diagnostic and therapeutic decisions.
9. The pod as claimed in claim 1, wherein the pod includes a telemedicine connectivity system enabling encrypted remote supervision or consultation by certified medical specialists.
10. The pod as claimed in claim 1, wherein the pod is powered through a hybrid energy system consisting of grid power supply, rechargeable battery backup, and solar panel integration.
11. The pod as claimed in claim 1, wherein all diagnostic and treatment records are stored in an encrypted blockchain-based database for maintaining data integrity and traceability.
12. The pod as claimed in claim 1, wherein the AI engine periodically updates its diagnostic algorithms through adaptive learning based on accumulated patient outcomes and validated clinical data.
13. The pod as claimed in claim 1, wherein the system architecture is modular, permitting configuration as a general diagnostic pod, emergency response pod, or surgical assistance pod.

14. The pod as claimed in claim 1, wherein the pod is designed for deployment in clinical facilities, rural healthcare centers, disaster relief zones, and military or space environments.
15. A process for autonomous medical diagnosis and treatment using an AI-based medical pod, the process comprising the steps of:
 - a. initiating patient interaction through the AI interface module having a voice-enabled and touch-enabled screen configured with NLP to collect symptoms and medical history;
 - b. capturing physiological, biochemical, and imaging data through multi-modal sensors comprising digital stethoscopes, ECG monitors, SpO₂ sensors, blood pressure sensors, retinal scanners, and microfluidic cartridges;
 - c. processing the collected data through the AI engine to perform differential diagnosis and identify the most probable medical condition;
 - d. performing physical examinations using two robotic arms equipped with tactile and pressure sensors to conduct palpation, auscultation, sample collection, or wound inspection;
 - e. generating a treatment protocol based on diagnostic results and clinical data comparison; and
 - f. executing treatment or dispensing prescribed medication automatically from the internal pharmacy module upon AI authorization.
16. The process as claimed in claim 15, wherein the patient interaction includes real-time conversational exchange in multiple languages and emotion-adaptive communication.
17. The process as claimed in claim 15, wherein the diagnostic data includes continuous monitoring of ECG, heart rate, oxygen saturation, blood pressure, and temperature for early detection of abnormalities.
18. The process as claimed in claim 15, wherein the AI engine compares patient-specific data with a medical knowledge base to compute a ranked list of probable diagnoses and select a final diagnostic conclusion.

19. The process as claimed in claim 15, wherein the robotic arms perform sample collection, wound care, and injection delivery using AI-guided movement and feedback from tactile sensors.
20. The process as claimed in claim 15, wherein the AI engine commands the internal pharmacy module to release a pre-measured medication dose after confirming diagnosis and treatment plan consistency.
21. The process as claimed in claim 15, further comprising recording all diagnosis, treatment, and prescription data in an encrypted blockchain-based database.
22. The process as claimed in claim 15, wherein the AI engine provides explainable decision outputs for every diagnostic or therapeutic recommendation.
23. The process as claimed in claim 15, wherein telemedicine connectivity is activated for remote expert supervision or consultation through encrypted communication channels.
24. The process as claimed in claim 15, wherein the AI continuously refines its models through adaptive learning based on patient outcomes and updated medical literature.
25. The process as claimed in claim 15, wherein the pod operates autonomously in default mode and is powered by a hybrid energy system comprising grid power, rechargeable battery, and solar modules.
26. The process as claimed in claim 15, further comprising transmitting patient data and diagnostic summaries to higher-level healthcare centers for referral or advanced intervention when required.

27. The process as claimed in claim 15, wherein all modules operate in a closed-loop configuration enabling the pod to conduct patient interaction, diagnosis, treatment, and prescription without human assistance.

Dated this 23rd day of October 2025



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ABSTRACT

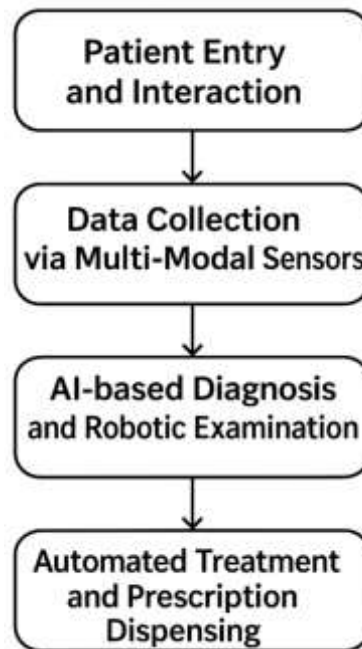
AUTONOMOUS AI MEDICAL DIAGNOSIS AND TREATMENT POD

The present invention relates to an Autonomous AI Medical Diagnosis and Treatment Pod, a self-contained healthcare system capable of performing end-to-end medical functions autonomously. The pod integrates artificial intelligence, multi-modal sensors, imaging systems, robotic arms, and an internal pharmacy module within a single unit. It is configured to conduct history-taking, differential diagnosis, physical examination, therapeutic intervention, and medication dispensing without continuous human supervision. The AI engine processes physiological, biochemical, and imaging data, while robotic mechanisms execute clinical procedures such as palpation, sample collection, injection delivery, and wound care. The system further provides natural language patient interaction, telemedicine connectivity for remote supervision, blockchain-secured prescription management, and hybrid energy operation for deployment in hospitals, rural areas, disaster zones, and non-terrestrial environments. The invention offers a scalable, accessible, and fully autonomous healthcare solution, overcoming physician shortages and improving timely medical access in resource-limited settings.

Fig 2

Appl No. -

Sheet 1 of 3



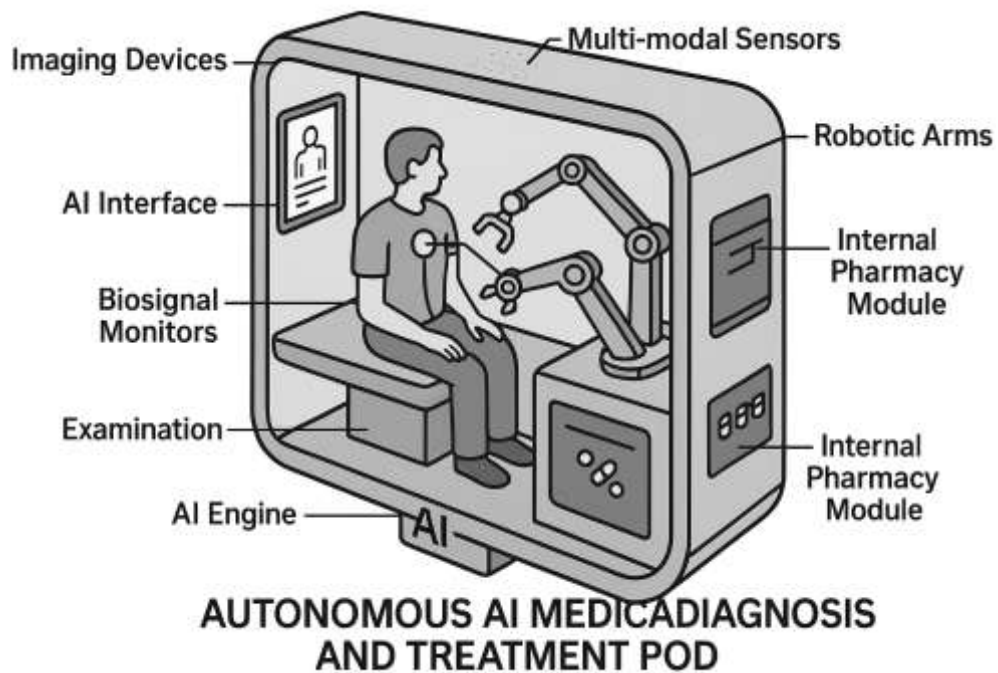
Detailed Flowchart

Figure 1

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Appl No. -

Figure 2 of 3



Detailed Architecture

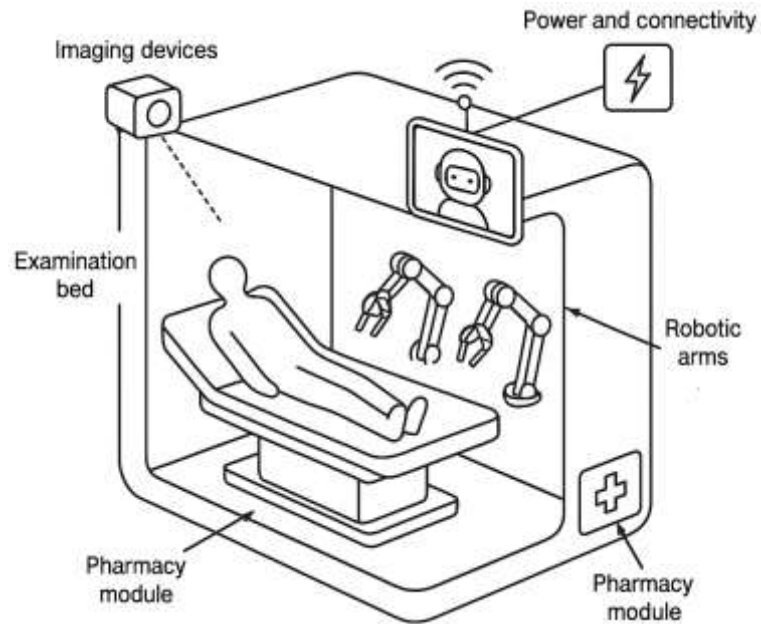
Figure 2

Sudarshana

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Appl No. -

Figure 3 of 3



Device Diagram

Figure 3

Sudarshana

Sudarshana Bandyopadhyay
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FORM 5
THE PATENTS ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003

Declaration as to Inventorship
[See section 10(6) and rule 13(6)]

1. NAME OF APPLICANT: SRJX RESEARCH AND INNOVATION LAB LLP,

hereby declare that the true and first inventor(s) of the invention disclosed in the complete specification filed in pursuance of our application numbered _____ dated 23 October 2025 are:

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Dated this 23rd day of October 2025



Name of the signatory:

Signature Not Verified

Digitally Signed.
Name: Sudarshana
Bandyopadhyay
Date: 23-Oct-2025 21:43:49
Reason: Patent Filing

Dated this 22nd day of October 2025

Sudarshana Bandyopadhyay
Regn No.: IN/PA 2802
Agent for the Applicants
Email: bandyopadhyay.sudarshana@gmail.com
Phn No: 9748818235

To,
The Controller of Patents,
The Patent Office
At Kolkata

UDYAM REGISTRATION CERTIFICATE

UDYAM REGISTRATION NUMBER

UDYAM-OD-07-0095836

NAME OF ENTERPRISE

SRJX RESEARCH AND INNOVATION LAB LLP

TYPE OF ENTERPRISE *

SNo.	Classification Year	Enterprise Type	Classification Date
1	2025-26	Micro	16/08/2025

MAJOR ACTIVITY

SERVICES

SOCIAL CATEGORY OF
ENTREPRENEUR

GENERAL

NAME OF UNIT(S)

S.No.	Name of Unit(s)
1	SRJX RESEARCH AND INNOVATION LAB LLP

OFFICAL ADDRESS OF ENTERPRISE

Flat/Door/Block No.	PLOT NO-3E/474	Name of Premises/ Building	SECTOR-9
Village/Town	CDA CUTTACK	Block	NA
Road/Street/Lane	Avinab Bidanasi	City	Cuttack Sadar
State	ODISHA	District	CUTTACK , Pin 753014
Mobile	9090255155	Email:	soumyajena1989@gmail.com

DATE OF INCORPORATION /
REGISTRATION OF ENTERPRISE

05/05/2025

DATE OF COMMENCEMENT OF
PRODUCTION/BUSINESS

05/05/2025

NATIONAL INDUSTRY
CLASSIFICATION CODE(S)

SNo.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity
1	72 - Scientific research and development	7210 - Research and experimental development on natural sciences and engineering	72100 - Research and experimental development on natural sciences and engineering	Services

DATE OF UDYAM REGISTRATION

16/08/2025

* In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the M/o MSME.

Disclaimer: This is computer generated statement, no signature required. Printed from <https://udyamregistration.gov.in> & Date of Printing: 23-Oct-2025 21:13:37

Signature Not Verified
Digitally Signed.
Name: Sudarshana
Bandyopadhyay
Date: 23-Oct-2025 21:13:37
Reason: Patent Filing

For any assistance, you may contact:

1. District Industries Centre: CUTTACK (ODISHA)

2. MSME-DFO: CUTTACK (ODISHA)

Visit : www.msme.gov.in ; www.dcmsme.gov.in ; www.minmsme.gov.in

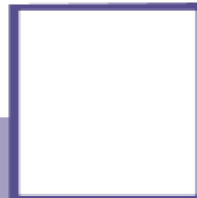


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n



Udyam Registration Number : UDYAM-OD-07-0095836

Type of Enterprise	MICRO	Major Activity	Services
Type of Organisation	Limited Liability Partnership	Name of Enterprise	SRJX RESEARCH AND INNOVATION LAB LLP
Owner Name	SRJX RESEARCH AND INNOVATION LAB LLP	PAN	AFPF54480L
Do you have GSTIN	No	Mobile No.	9090255155
Email Id	soumyajena1989@gmail.com	Social Category	General
Gender	Male	Specially Abled(DIVYANG)	No
Date of Incorporation	05/05/2025	Date of Commencement of Production/Business	05/05/2025

Bank Details

Bank Name	IFS Code	Bank Account Number
Punjab national bank	PUNB0787800	7878002100002490

Employment Details

Male	Female	Other	Total
3	2	0	5

Investment in Plant and Machinery OR Equipment (in Rs.)

S.No.	Financial Year	Enterprise Type	Written Down Value (WDV)	Exclusion of cost of Pollution Control, Research & Development and Industrial Safety Devices	Net Investment in Plant and Machinery OR Equipment[(A)-(B)]	Total Turnover (A)	Export Turnover (B)	Net Turnover [(A)-(B)]	Is ITR Filled?	ITR Type
1	2023-24	Micro	0.00	0.00	0.00	0.00	0.00	0.00	No	NA

Unit(s) Details

SN	Unit Name	Flat	Building	Village/Town	Block	Road	City	Pin	State	District
1	SRJX RESEARCH AND INNOVATION LAB LLP	PLOT NO-3E/474	SECTOR-9	CDA CUTTACK	NA	Avinab Bidanasi	Cuttack Sadar	753014	ODISHA	CUTTACK

Official address of Enterprise

Flat/Door/Block No.	PLOT NO-3E/474	Name of Premises/ Building	SECTOR-9
Village/Town	CDA CUTTACK	Block	NA
Road/Street/Lane	Avinab Bidanasi	City	Cuttack Sadar
State	ODISHA	District	CUTTACK , Pin : 753014
Mobile	9090255155	Email:	soumyajena1989@gmail.com
Latitude	20.5021859203546	Longitude:	85.88860428847029

National Industry Classification Code(S)

SNo.	Nic 2 Digit	Nic 4 Digit	Nic 5 Digit	Activity
1	72 - Scientific research and development	7210 - Research and experimental development on natural sciences and engineering	72100 - Research and experimental development on natural sciences and engineering	Services

Are you interested to get registered on Government e-Market (GeM) Portal	No
Are you interested to get registered on TReDS Portals(one or more)	No
Are you interested to get registered on National Career Service(NCS) Portal	No
Are you interested to get registered on NSIC B2B Portal	No
Are you interested in availing Free .IN Domain and a business email ID	N/A
Are you interested in getting registered on Skill India Digital Portal	No
District Industries Centre	CUTTACK (ODISHA)
MSME-DFO	CUTTACK (ODISHA)
Date of Udyam Registration	16/08/2025
Date of Printing	16/08/2025

IEC Details	
IEC Number	
IEC Status	Inactive
IEC Registration Date	
IEC Modification Date	

"FORM 1 THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of rule 20)				(FOR OFFICE USE ONLY)	
				Application No.	
				Filing date:	
				Amount of Fee paid:	
				CBR No:	
				Signature:	
1. APPLICANT'S REFERENCE / IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)					
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
3A. APPLICANT(S)					
Name in Full		Nationality	Country of Residence	Address of the Applicant	
SRJX RESEARCH AND INNOVATION LAB LLP		Indian	India	SRJX RESEARCH AND INNOVATION LAB LLP, Plot No - 3E/474, Sector-9, CDA, Post- Markat Nagar, Cuttack- 753014, Odisha, India	
3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]					
Natural Person ()		Other than Natural Person			
		Small Entity (✓)	Startup ()	Others ()	
4. INVENTOR(S) [Please tick (✓) at the appropriate category]					
Are all the inventor(s) same as the applicant(s) named above?		Yes ()		No (✓)	

If “No”, furnish the details of the inventor(s)					
Name in Full		Nationality	Country of Residence	Address of the Inventor	
DR SOUMYA RANJAN JENA		Indian	India	Plot No - 3E/474, Sector-9, CDA, Post-Markat Nagar, Cuttack-753014, Odisha, India	
MR SANJOY SAHA		Indian	India	63/1, Thakur Para Road, P.O.- Naihati, North 24 Parganas, West Bengal-743165, India	
DR SOHIT AGARWAL		Indian	India	D 388, Sarvanand Marg, Malviya Nagar, Jaipur-302017, Rajasthan, India	
5. TITLE OF THE INVENTION					
AUTONOMOUS AI MEDICAL DIAGNOSIS AND TREATMENT POD					
6. AUTHORISED REGISTERED PATENT AGENT(S)			IN/PA No.	2802	
			Name	Sudarshana Bandyopadhyay	
			Mobile No.	9748818235	
7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA			Name	SUDARSHANA BANDYOPADHYAY	
			Postal Address	Ground Floor, S-456, LGF, Greater Kailash – II, New Delhi – 110048, India	
			Telephone No.	NA	
			Mobile No.	97488 18235	
			Fax No.	NA	
			E-mail ID	bandyopadhyay.sudarshana@gmail.com	
8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION					
Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)

N.A.					
9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)					
International application number			International filing date		
N.A.					
10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION					
Original (first) application No.			Date of filing of original (first) application		
N.A.					
11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN					
Main application/patent No.			Date of filing of main application		
N.A.			N.A.		
12. DECLARATIONS					
(i) Declaration by the inventor(s) (In case the applicant is an assignee: the inventor(s) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period). We, the above-named inventor(s) is/are the true & first inventor(s) for this Invention and declare that the applicant(s) herein is/are my/our assignee or legal representative. (a) Date: (b) Signature: (c) Name: Dr Soumya Ranjan Jena (a) Date (b) Signature(s): (c) Name: Mr Sanjoy Saha (a) Date: (b) Signature: (c) Name: Dr Sohit Agarwal					

(ii) Declaration by the applicant(s) in the convention country

(In case the applicant in India is different than the applicant in the convention country: the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)

I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative. – **N.A.**

- (a) Date
- (b) Signature(s)
- (c) Name(s) of the signatory

(iii) Declaration by the applicant

We the applicant hereby declare that: -

- ☒ We are in possession of the above-mentioned invention.
- ☒ The complete specification relating to the invention is filed with this application.
- ☐ The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.
- ☒ There is no lawful ground of objection(s) to the grant of the Patent to us.
- ☐ We are the true & first inventor(s).
- ☒ We are the assignee or legal representative of true & first inventor(s).
- ☐ The application or each of the applications, particulars of which are given in Paragraph-8, was the first application in convention country in respect of my invention(s).
- ☐ We claim the priority from the above mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by us or by any person from which I derive the title.
- ☐ Our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph-9.
- ☐ The application is divided out of my /our application particulars of which is given in Paragraph-10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act.
- ☐ The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph-11.

13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

<i>Item</i>	<i>Details</i>	<i>Fee</i>	<i>Remarks</i>
Complete/ provisional specification	No. of pages: 14	1600	Including Form 2, description,
No. of Claim(s)	No. of Claims = 27 No. of Pages = 5	-	Claim pages
Abstract	1		Abstract page
No. of Drawing(s)	No. of drawings = 3 and No. of pages =3		Drawing sheets

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

- b. Form 3: Statement and Undertaking
- c. Form 5: Declaration as to inventorship
- d. Power of Attorney
- e. Form 28
- f. Form 9

Total fee ₹ 9540/- is being paid online through electronic portal

We hereby declare that to the best of our knowledge, information and belief the fact and matters stated herein are correct and we request that a patent may be granted to us for the said invention.

Dated this 23rd day of October 2025.

Signature:



Name: Sudarshana Bandyopadhyay

(Regn No: IN/PA 2802)

Agent for the Applicant

Phn no.: 97488 18235

email: bandyopadhyay.sudarshana@gmail.com

To,
The Controller of Patents
The Patent Office,
at Kolkata

FORM 28
THE PATENTS ACT,
1970 (39 of 1970)

AND

THE PATENTS
RULES, 2003

TO BE SUBMITTED BY A SMALL ENTITY / STARTUP/ EDUCATIONAL
INSTITUTION

[See rules 2 (fa), 2(fb), 2(ca) and 7]

1	Name, address and nationality.	We, SRJX RESEARCH AND INNOVATION LAB LLP, of the address Plot No - 3E/474, Sector-9, CDA, Post- Markat Nagar, Cuttack-753014, Odisha, India, applicant in respect of the patent application no. _____ dated 23 October 2025 hereby declare that we are a micro entity in accordance with rule 2(fa) and submit the following document as a proof :
2	Documents to be submitted	
	i. For claiming the status of a micro entity:	
	A. For an Indian applicant: Evidence of registration under the Micro, Small and Medium Enterprises Act, 2006 (27 of 2006).	
3	To be signed by the applicant(s) / patentee (s) / authorised registered patent agent.	The information provided herein is correct to the best of my/our knowledge and belief. Dated this 23rd day of October 2025
4	Name of the natural person who has signed.	 Signature:

Signature Not Verified

Digitally Signed.
Name: Sudarshana
Bandyopadhyay
Date: 23-Oct-2025 21:13:37
Reason: Patent Filing

	Designation and official seal, if any, of the person who has signed.	Sudarshana Bandyopadhyay Regn. No.: IN/PA 2802 Agent for the applicant Phn No. 9748818235 Email: bandyopadhyay.sudarshana@gmail.com To The Controller of Patents, The Patent Office, At Kolkata
--	--	--

FORM 9
THE PATENTS ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003
REQUEST FOR PUBLICATION
[See Section 11A(2); Rule 24A]

We, SRJX RESEARCH AND INNOVATION LAB LLP, of the address Plot No - 3E/474, Sector-9, CDA, Post- Markat Nagar, Cuttack-753014, Odisha, India, hereby request for an early publication of our Patent Application No. _____ filed on 23 October 2025 under Section 11A(2) of the Act.

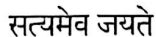
Dated this 23rd day of October 2025



Sudarshana Bandyopadhyay
Regn No.: IN/PA 2802
Agent for the Applicants
Email: bandyopadhyay.sudarshana@gmail.com
Phn No: 9748818235

Signature Not Verified

Digitally Signed.
Name: Sudarshana
Bandyopadhyay
Date: 23-Oct-2025 21:11:23
Reason: Patent Filing

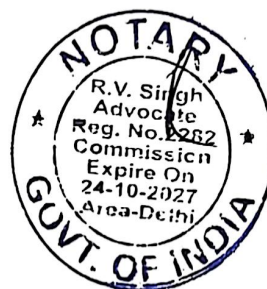


Government of National Capital Territory of Delhi

₹100

e-Stamp

Certificate No.	: IN-DL35961746213944X
Certificate Issued Date	: 16-Aug-2025 11:10 AM
Account Reference	: IMPACC (IV)/ dl962703/ DELHI/ DL-ESD
Unique Doc. Reference	: SUBIN-DL DL96270305293890128756X
Purchased by	: SRJX RESEARCH AND INNOVATION LAB LLP
Description of Document	: Article 48(c) Power of attorney - GPA
Property Description	: Not Applicable
Consideration Price (Rs.)	: 0 (Zero)
First Party	: SRJX RESEARCH AND INNOVATION LAB LLP
Second Party	: ZAINAB SYED AND ASSOCIATES
Stamp Duty Paid By	: SRJX RESEARCH AND INNOVATION LAB LLP
Stamp Duty Amount(Rs.)	: 100 (One Hundred only)



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IN-DL36961746213944X



Signature Not Verified

Digitally Signed:
Name: Sudarshana
Bandyopadhyay
Date: 23-Oct-2023 21:43:49
Reason: Patent Filing

Statutory Alert:

1. The authenticity of this Stamp Certificate should be verified at 'www.shcllestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate
3. In case of any discrepancy please inform the Competent Authority.

FORM-26
The Patents Act, 1970
(39 of 1970)
FORM FOR AUTHORIZATION OF A PATENT AGENT/OR ANY PERSON IN A
MATTER OR PROCEEDING UNDER THE ACT
[See Sections 127 and 132; Rule 135]

I, **SRJX RESEARCH AND INNOVATION LAB LLP**, Indian, of the address **SRJX RESEARCH AND INNOVATION LAB LLP, Plot No - 3E/474, Sector-9, CDA, Post- Markat Nagar, Cuttack-753014, Odisha, India**, hereby authorize **Zainab Syed & Associates** having address **3E, Nawab Bhagwanpora, Lal Bazar, Srinagar, Jammu & Kashmir, 190023, India** (**Mobile No.: +91 9748818235, Email: bandyopadhyay.sudarshana@gmail.com**) through **Ms. Sudarshana Bandyopadhyay (IN/PA 2802)** and **Ms. Meenu Sharma (IN/PA-2856)**, registered Indian Patent Agents, to act on our behalf and to further appoint attorney(s)/agent(s) in connection with the filing and prosecution of our patent applications for grant of Letters Patent, filing of request for examination, filing request for amendment, recordal of change of name and address, ownership, change of address of service in India, renewal of patent, recordal of assignments, filing and defending oppositions and infringement actions, restoration of patents, registration of documents and such other actions and all proceedings under the Patents Act, 1970 and the Patent Rules, 2003 and all such proceedings before the Patent Office or the Government of India or any Court in India and all acts and things as the said attorney may deem necessary or expedient in connection therewith or incidental thereto.

We further request that all notices, requisitions and communication relating thereto may be sent to such person/s at the corresponding address mentioned below:

Ground Floor, S-456, LGF, Greater Kailash – II, New Delhi – 110048, India,

(Contact No.: +91 9748818235; Email: bandyopadhyay.sudarshana@gmail.com)

We, hereby, revoke all previous authorizations, if any, in respect of the proceedings.



We, hereby, assent to the action already taken by the said person/s in the above matter.

Dated this 14th day of August, 2025

SRJX RESEARCH AND INNOVATION LAB LLP

Through:

Signature: *Soumya Ranjan Jena*

Name: Dr. Soumya Ranjan Jena

Company
Seal:

SRJX Research and Innovation Lab LLP
LLPIN: ACO-1435

To,
The Controller of Patents,
The Patent Office,
Kolkata



ATTESTED

Notary Public Delhi

16 AUG 2025

FORM 9
THE PATENTS ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003
REQUEST FOR PUBLICATION
[See Section 11A(2); Rule 24A]

We, SRJX RESEARCH AND INNOVATION LAB LLP, of the address Plot No - 3E/474, Sector-9, CDA, Post- Markat Nagar, Cuttack-753014, Odisha, India, hereby request for an early publication of our Patent Application No. _____ filed on 23 October 2025 under Section 11A(2) of the Act.

Dated this 23rd day of October 2025



Sudarshana Bandyopadhyay
Regn No.: IN/PA 2802
Agent for the Applicants
Email: bandyopadhyay.sudarshana@gmail.com
Phn No: 9748818235

Signature Not Verified

Digitally Signed.
Name: Sudarshana
Bandyopadhyay
Date: 23-Oct-2025 21:17:03
Reason: Patent Filing

FORM 3 THE PATENTS ACT, 1970 (39 of 1970) and THE PATENTS RULES, 2003 STATEMENT AND UNDERTAKING UNDER SECTION 8 (See section 8; Rule 12)					
1. Name of the applicant(s).			We, SRJX RESEARCH AND INNOVATION LAB LLP, Plot No - 3E/474, Sector-9, CDA, Post-Markat Nagar, Cuttack-753014, Odisha, India hereby declare:		
2. Name, address and nationality of the joint applicant.			(i) that we have not made any application for the same/substantially the same invention outside India Or (ii) that we who have made this application No dated 23 rd October 2025 alone/ jointly with, made for the same/ substantially same invention, application(s) for patent in the other countries, the particulars of which are given below:		
Name of the country	Date of application	Application No.	Status of the application	Date of publication	Date of grant
N.A.					
3. Name and address of the assignee			(iii) that the rights in the application(s) have been assigned to SRJX RESEARCH AND INNOVATION LAB LLP, Plot No - 3E/474, Sector-9, CDA, Post-Markat Nagar, Cuttack-753014, Odisha, India		

Signature Not Verified

Digitally Signed.
 Name: Sudarshana Bandyopadhyay
 Date: 23-Oct-2025 21:17:03
 Reason: Patent Filing

	that we undertake that upto the date of grant of the patent by the Controller, we would keep him informed in writing the details regarding corresponding applications for patents filed outside India within six months from the date of filing of such application. Dated this 23rd day of October 2025
4. To be signed by the applicant or his authorized registered patent agent.	 Signature.
5. Name of the natural person who has signed.	Sudarshana Bandyopadhyay Regn. No.: IN/PA 2802 Agent for the applicant Phn No. 9748818235 Email: bandyopadhyay.sudarshana@gmail.com
	To The Controller of Patents, The Patent Office, at Kolkata
Note.- Strike out whichever is not applicable;	