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St. JOSEPH'S COLLEGE OF ENGINEERING

(An Autonomous Institution)

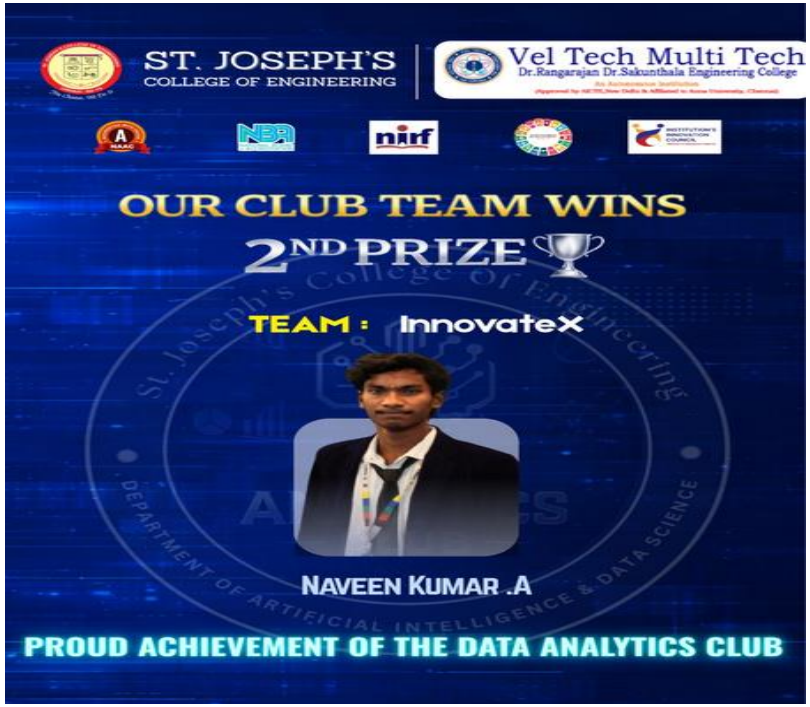
St. Joseph's Group of Institutions

OMR, CHENNAI - 119

DECEMBER 2025

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

S.No.	Title of the Events and Photographs	Details of the Event
1.	**ADS CLUB ACTIVITY** 	*The Data Analytics Club of St. Joseph's College of Engineering proudly announces the outstanding achievement of its club team, Logic Breakers, for securing the 1st Prize at the competition conducted by Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College. This remarkable success reflects the team's strong analytical skills, teamwork, and innovative problem-solving approach.*



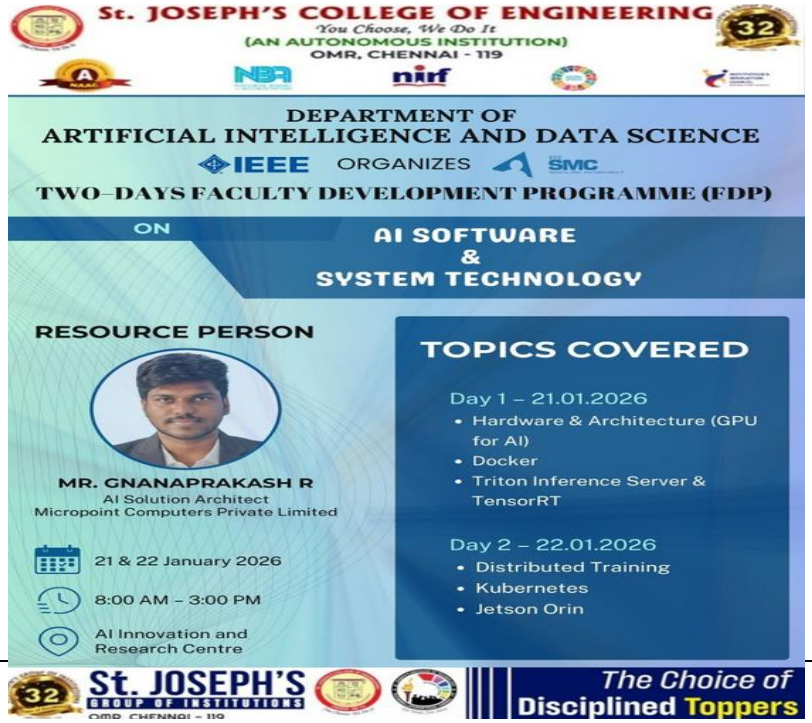
The Data Analytics Club of St. Joseph's College of Engineering proudly celebrates the remarkable achievement of its club team, InnovateX, for securing the 2nd Prize at the event hosted by Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College. This accomplishment reflects the dedication, innovation, and analytical excellence of the students. The team was represented by Naveen Kumar A, whose outstanding performance contributed significantly to this success.

The Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, OMR, Chennai, through its Forum for Design, Creativity and Innovation (FDCI) club, organized a technical session titled "From Ideas to Reality – A Practical Guide to 3D Visualization using Blender" on January 8, 2026. The session was conducted by Mr.

		*Gautham Harish K R, a third-year Artificial Intelligence and Data Science student (2023–2027). The programme provided hands-on insights into 3D visualization techniques using Blender, covering essential tools and workflows relevant to design and animation.* *The Department of Artificial Intelligence and Data Science at St. Joseph's College of Engineering, Chennai, through the FDCI Club, proudly presented an exciting design event titled "Design Verse – From Vision to Skill, From Now to Next". The event featured two engaging rounds aimed at enhancing students' UI/UX and design thinking skills.*

2.	**FDP/WORKSHOP/CONFERENCE/HACKATHON (ATTENDED /ORGANIZED)**  	*Students from Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering achieved a remarkable milestone by emerging as Proud Winners at the Smart India Hackathon 2025 (Software Edition), the world's largest open innovation platform initiated by the Ministry of Education, Government of India, AICTE, and MoE's Innovation Cell. The institution secured a Perfect 6 out of 6 squad victory, highlighting its strong culture of innovation and technical excellence. The winning team addressed the problem statement titled "Development of a mobile application for secure water levels data collection from rivers using image processing." The project focused on using image processing techniques to ensure accurate, secure, and reliable river water level monitoring. The team, Sentinels V2, represented the Department of ADS and demonstrated outstanding teamwork and problem-solving skills. The team members included Brayon Moses B (Team Lead), Ajai Srinivasan J, Abhinav R, Eric Jeevan A, Eric Jeevan A, Nityashri S K, and Prijitha P. Their*

	 	*innovative solution earned them a cash prize of Rs. 1,50,000/- at the grand finale. The team was mentored by Mr. Sathishkumar R (AP–ADS) and supported by Ms. Snekha Suresh (Industry Mentor). Their guidance played a crucial role in refining the solution and presentation. The achievement reflects the institution's strong academic foundation and industry collaboration.* *Students from St. Joseph's College of Engineering achieved an outstanding accomplishment by securing the First Prize in the National Level Hackathon titled "Cyber Guardians'26," organized by the Department of Computer Science and Engineering (Cyber Security) at Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College on 23rd January 2026. The winners, Mohammed Thameem Sulthan M, Marcben James Samuel S, and Manoharesh S, demonstrated exceptional technical expertise, innovation, and teamwork throughout the competition.*



Students from St. Joseph's College of Engineering achieved a commendable milestone by securing the Second Prize in the National Level Hackathon titled "Cyber Guardians'26," organized by the Department of Computer Science and Engineering (Cyber Security) at Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College on 23rd January 2026. The awardees, Naveen Kumar A, Pavithra C, and Mrithula J, showcased exceptional skills, innovation, and teamwork throughout the competition.

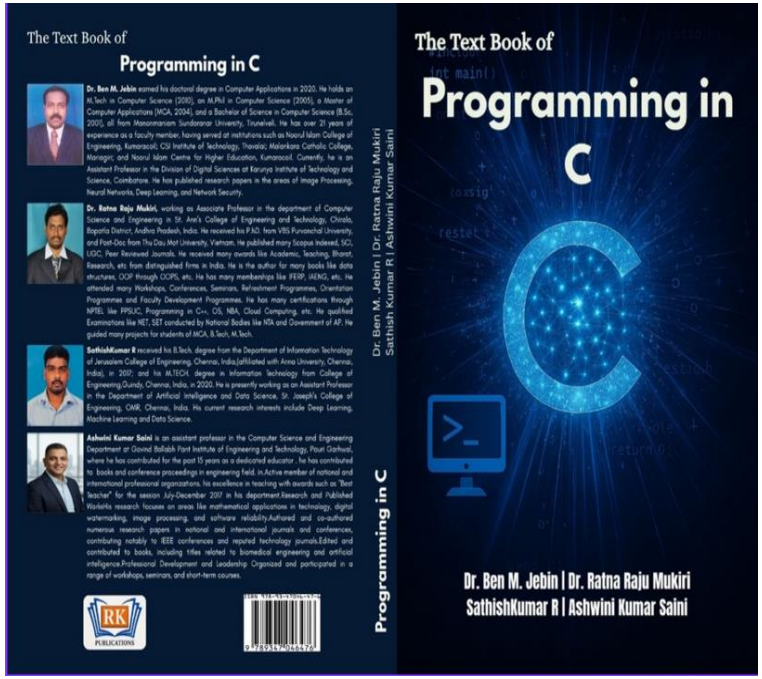
The Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, OMR, Chennai, in association with IEEE, organized a Two-Day Faculty Development Programme (FDP) on "AI Software and System Technology" on 21st and 22nd January 2026 at the AI Innovation and Research Centre. The programme was led by Mr. Gnanaprakash R, AI Solution Architect, Micropoint Computers Private

		Limited, who served as the resource person. The first day of the FDP focused on Hardware and Architecture for AI, Docker, and Triton Inference Server with TensorRT, providing participants with strong foundational and practical insights.
3.	**STUDENT ACHIEVEMENTS/COMPETITION ATTENDED BY STUDENTS**  	*Jeevitha M, an esteemed alumna of the Department of Artificial Intelligence and Data Science (ADS) at St. Joseph's College of Engineering, has brought immense pride to the institution by shining on the international stage. As a former AWS Cloud Captain and an active AWS Community Builder, she received global recognition at the prestigious APJC Community Awards, winning accolades in the "Best Cloud Captain" and "Customer Obsession" categories. This exceptional achievement marks India's pride with global recognition, making St. Joseph's College of Engineering the only college to receive this exclusive honour. Jeevitha proudly represented the institution at AWS re:Invent 2025, the flagship AWS global event held in Las*

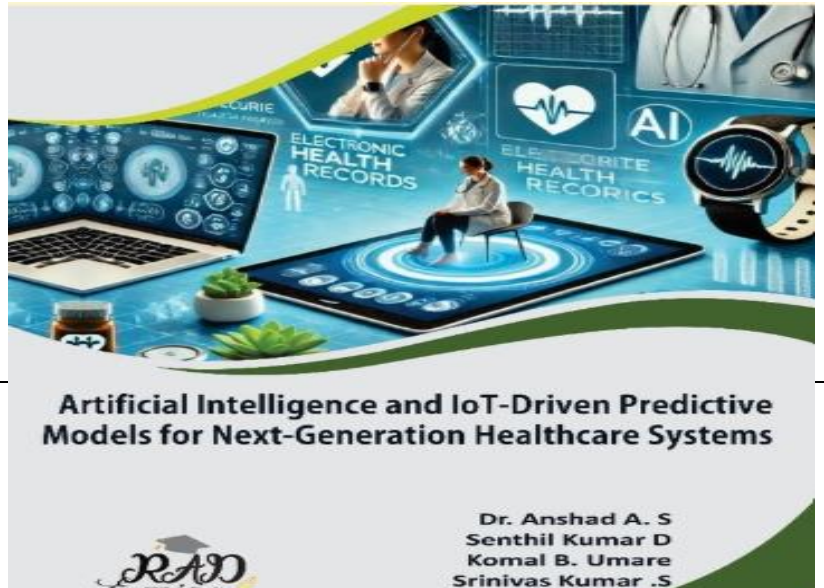
		Vegas, USA, which she attended with a full sponsorship worth ₹12 lakh.
		*Kiruthick Kumar J and Mohammed Naazil A A, students of the Department of Artificial Intelligence and Data Science at St. Joseph's College of Engineering, an autonomous institution under St. Joseph's Group of Institutions, Chennai, have achieved a notable academic milestone by winning the Best Paper Award. Representing the Batch 2022–2026, they received this honor at the IEEE International Conference on Advances in Engineering and Computing Technologies for Sustainable Development (AECTSD–2025), organized by Sri Ramakrishna Engineering College, Coimbatore.*

4.	**STAFF NPTEL CERTIFICATION/ STAFF ACHIEVEMENTS**   	*Dr. L. Sherly Pushpa Annabel, HOD of the Department of Artificial Intelligence and Data Science at St. Joseph's College of Engineering, has been awarded a Certificate of Appreciation for being recognized as an NPTEL Believer for the period July–December 2025.* *Dr. M. P. Rajakumar, from the Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, has been awarded the Certificate of Appreciation by NPTEL for*

		*being recognized as an NPTEL MEGASTAR for the July–December 2025 session.* *Dr. J. Vijayalakshmi, Associate Professor in the Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, Chennai, has been honored with the Best Professor Award. The recognition was presented as part of the Indira Gandhi Women Leadership and Empowerment Excellence Awards 2025. The award ceremony was organized by the National Institute for Research and Development, India (NIRDI) in association with LKP Academy.*



Mr Sathish Kumar R, Assistant Professor in the Department of Artificial Intelligence and Data Science at St. Joseph's College of Engineering, Chennai, has successfully published a scholarly paper/book contribution titled "Programming in C." The publication carries the ISBN 978-93-47046-47-6 and reflects his strong academic background and expertise in computer programming and software development



Mr Senthil Kumar D, faculty member of the Department of Artificial Intelligence and Data Science at St. Joseph's College of Engineering, Chennai, has successfully published a scholarly book titled "Artificial Intelligence and IoT-Driven Predictive Models for Next-Generation Healthcare Systems." The publication carries the ISBN-

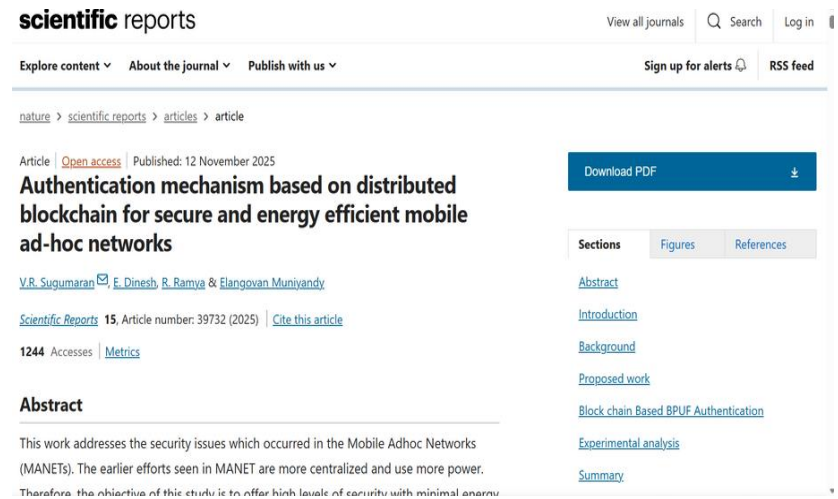
10 9349552418 and ISBN-13 9789349552418, signifying its academic authenticity.

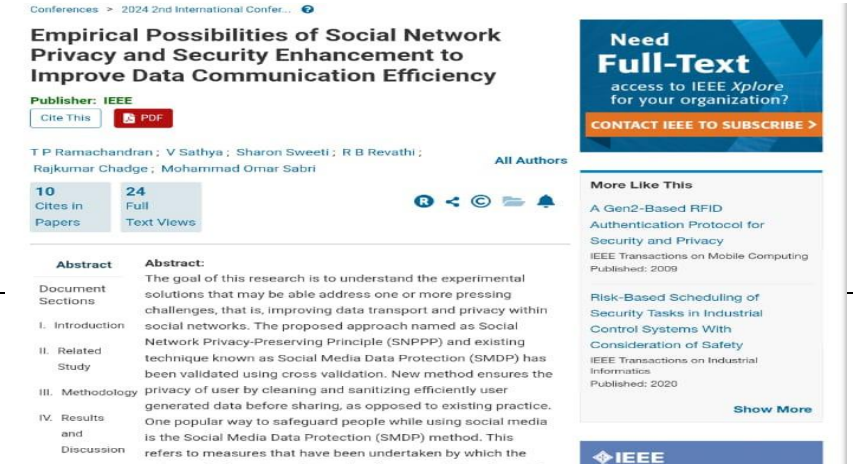
Pandit Publications
DEEP LEARNING FOR AI-POWERED VIDEO SURVEILLANCE SYSTEMS (Paperback, Dr. Lokesh N S, Dr. Abhisek Sethy, Dr.S Naveen Kumar Polisetty, D.Evangeline Nesa Priya, S. Sathish Kumar)

Ms. D. Evangeline Nesa Priya, Assistant Professor, Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, has successfully authored and published a book titled "Deep Learning for AI-Powered Video Surveillance Systems", released by Pandit Publications. The book carries the ISBN: 978-93-48908-31-5 and was officially published on 18 December 2025.

The Department of Artificial Intelligence and Data Science, St. Joseph's College of

		*Engineering (An Autonomous Institution), OMR, Chennai – 119, proudly congratulates its faculty members for being recognized as NPTEL Top Performing Mentors. This remarkable achievement reflects the department's commitment to academic excellence and quality education through NPTEL initiatives. The honoured mentors include Ms. P. Kumari Deepika, Mr. R. Sathish Kumar, Ms. Sathya V, Mr. D. Senthil Kumar, Dr. R. Baghia Laxmi, Ms. Kaviarasi J, Ms. T. Sivaprabha, Ms. Arunmozhikalanjchiam, and Ms. D. Evangeline Nesa Priya.* *The Department of Artificial Intelligence and Data Science at St. Joseph's College of Engineering, OMR, Chennai–119, proudly congratulates its faculty members for being recognized as NPTEL Mentors. The department is supported by a dedicated and accomplished team comprising Dr. L. Sherly Pushpha Annabel, Ms. S. Ananthi, Ms. D. Deepa, Ms. R. Jayasri, Dr. A. S. Nisha, Ms. M. Nithya, Ms. E. Aswini, Mr. A. Vijay, Dr.*

		J. Vijayalakshmi, Ms. Divya C, Ms. S. Dharanika, Mr. K. Vinodh Kumar, Ms. Abinaya C, Ms. Kavitha G, and Mr. Sugin S V.
5.	**INDUSTRIAL PROJECTS DONE BY STUDENTS**	-
6.	**JOURNAL PUBLICATIONS(ONLY PUBLISHED) DETAILS**  scientific reports View all journals Search Log in Explore content About the journal Publish with us Sign up for alerts RSS feed nature › scientific reports › articles › article Article Open access Published: 12 November 2025 Authentication mechanism based on distributed blockchain for secure and energy efficient mobile ad-hoc networks V.R. Sugumaran, E. Dinesh, R. Ramya & Elangovan Muniyandy Scientific Reports 15, Article number: 39732 (2025) Cite this article 1244 Accesses Metrics Abstract This work addresses the security issues which occurred in the Mobile Adhoc Networks (MANETs). The earlier efforts seen in MANET are more centralized and use more power. Download PDF Sections Figures References Abstract Introduction Background Proposed work Block chain Based BPUF Authentication Experimental analysis Summary	*Dr. R. Ramya has published a research article titled "Authentication Mechanism Based on Distributed Blockchain for Secure and Energy Efficient Mobile Ad-Hoc Networks" in the prestigious Scientific Reports (Nature) journal. The paper was published as Open Access on 12 November 2025 and appears in Volume 15, Article Number 39732 (2025). The research was carried out in collaboration with V. R. Sugumaran, E. Dinesh, and Elangovan Muniyandy.*

		Dr. Vijayalakshmi J has successfully published a JOURNAL research paper titled "BSLnO-2RNARFHNet: Recurrent Radial Nonlinear Autoregressive Exogenous Forward Harmonic Net for Rainfall Forecasting" in the International Journal of Intelligent Engineering & Systems (INASS). The paper presents an advanced rainfall prediction model that integrates Bird Sea Lion Optimization (BSLnO) with a Recurrent Radial Nonlinear Autoregressive Exogenous Forward Harmonic Network. The study utilizes time series data and applies Quantum Neural Networks (QNN) along with Mahalanobis distance–based feature fusion to improve forecasting accuracy and reduce redundancy.
7.	**FUNDED PROJECTS**	-
8.	**STAFF CONFERENCE PRESENTATION and PATENT PUBLISHED**  Conferences > 2024 2nd International Confer... **Empirical Possibilities of Social Network Privacy and Security Enhancement to Improve Data Communication Efficiency** Publisher: IEEE Cite This PDF T P Ramachandran ; V Sathya ; Sharon Sweeti ; R B Revathi ; Rajkumar Chadge ; Mohammad Omar Sabri All Authors 10 Cites in Papers 24 Full Text Views Abstract Document Sections I. Introduction II. Related Study III. Methodology IV. Results and Discussion **Abstract:** The goal of this research is to understand the experimental solutions that may be able address one or more pressing challenges, that is, improving data transport and privacy within social networks. The proposed approach named as Social Network Privacy-Preserving Principle (SNPPP) and existing technique known as Social Media Data Protection (SMDP) has been validated using cross validation. New method ensures the privacy of user by cleaning and sanitizing efficiently user generated data before sharing, as opposed to existing practice. One popular way to safeguard people while using social media is the Social Media Data Protection (SMDP) method. This refers to measures that have been undertaken by which the Need Full-Text access to IEEE Xplore for your organization? CONTACT IEEE TO SUBSCRIBE > More Like This A Gen2-Based RFID Authentication Protocol for Security and Privacy IEEE Transactions on Mobile Computing Published: 2009 Risk-Based Scheduling of Security Tasks in Industrial Control Systems With Consideration of Safety IEEE Transactions on Industrial Informatics Published: 2020 Show More IEEE	*Ms Sathya V has successfully published a research paper titled "Empirical Possibilities of Social Network Privacy and Security Enhancement to Improve Data Communication Efficiency" in an IEEE conference. The paper focuses on improving privacy protection and security mechanisms*

Conferences > 2025 International Conference...

Implementing Edge-Cloud Computing to Enable Real-Time, Responsive Urban Infrastructure Services: Establishing Resources Dynamically for Smart Cities

Publisher: IEEE | Cite This | PDF

M. Sukanya ; V.Samuthira Pandi ; P Kumari Deepika ; Khaled Tawfiq Al-Assaf ; Amit Dutt ; M. Dinesh **All Authors**

Abstract

Document Sections

1. Introduction

Abstract:
The tremendous advancement in urbanization, as well as the growth of polycentric urban systems, has led to the need to manage cities, even "smart cities", in an increasingly challenging and complex context; the efficient, scalable and real-time management of infrastructure services are then now an essential part of the mission of a city significantly impacting the quality of life of its

Predictive Maintenance AI for Irrigation Systems Integrating Sensor Networks and Historical Performance Data

Publisher: IEEE | Cite This | PDF

K. Vidhya ; Usikela Naresh ; D Deepa ; Kalluri Praveen ; T. Saranya ; G. Akshitha **All Authors**

Abstract

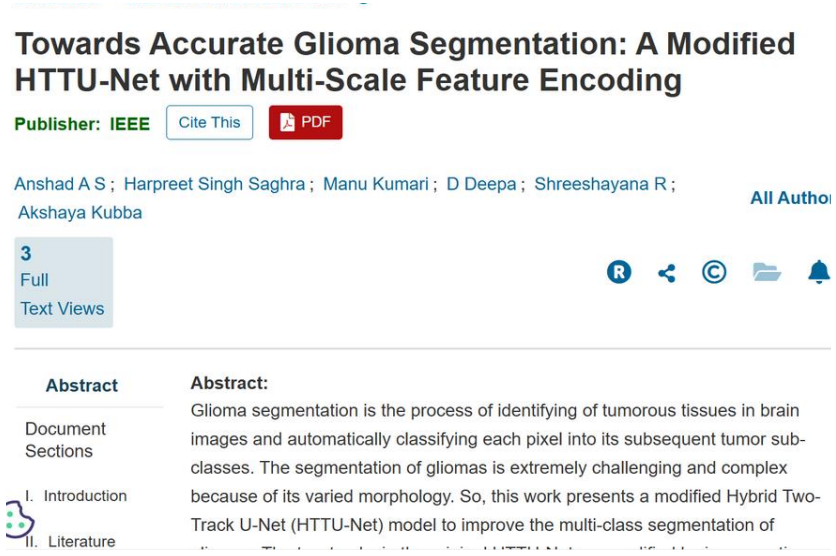
Document Sections

I. Introduction

Abstract:
This paper suggests a predictive maintenance system of irrigation systems with the help of artificial intelligence (AI) with sensor networks built in the framework of the IoT technology and historical data on performance. The main objective is to reduce operational disruptions, optimize operation of maintenance work and

in social networks to enhance efficient data communication.

Ms Kumari Deepika P has published a research paper titled "Implementing Edge-Cloud Computing to Enable Real-Time, Responsive Urban Infrastructure Services: Establishing Resources Dynamically for Smart Cities," published by IEEE. The paper proposes an advanced edge–cloud computing framework designed to support real-time and scalable urban infrastructure services in smart city environments.



Towards Accurate Glioma Segmentation: A Modified HTTU-Net with Multi-Scale Feature Encoding

Publisher: IEEE | Cite This | PDF

Anshad A S ; Harpreet Singh Saghra ; Manu Kumari ; D Deepa ; Shreeshayana R ; Akshaya Kubba | All Autho

3 Full Text Views

Abstract

Document Sections

I. Introduction

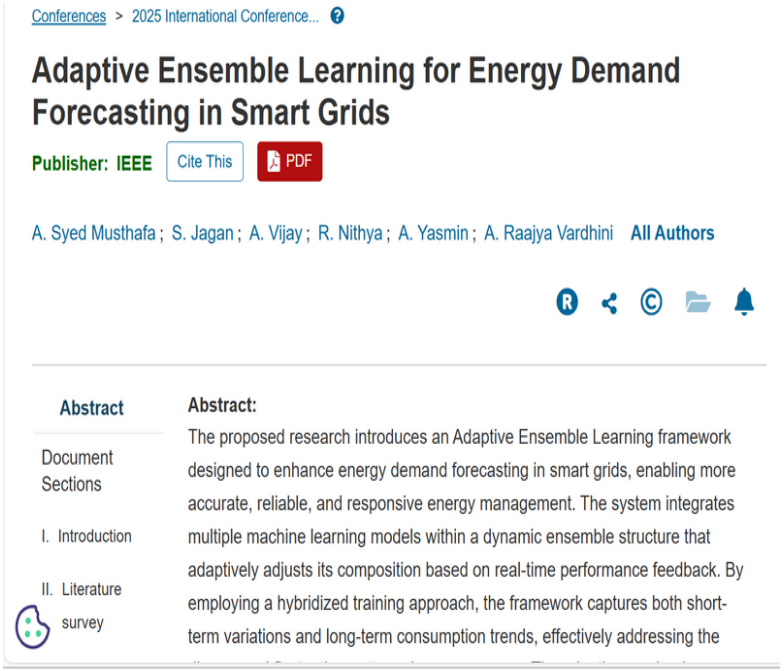
II. Literature

Abstract:

Glioma segmentation is the process of identifying of tumorous tissues in brain images and automatically classifying each pixel into its subsequent tumor sub-classes. The segmentation of gliomas is extremely challenging and complex because of its varied morphology. So, this work presents a modified Hybrid Two-Track U-Net (HTTU-Net) model to improve the multi-class segmentation of

Ms Deepa D from St. Joseph's College of Engineering has published a research paper titled "Predictive Maintenance AI for Irrigation Systems Integrating Sensor Networks and Historical Performance Data," published by IEEE. The paper proposes an intelligent predictive maintenance framework that combines artificial intelligence with IoT-based sensor networks to monitor irrigation systems in real time.

Ms Deepa D from the Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, has published a research paper titled "Towards Accurate Glioma Segmentation: A Modified HTTU-Net with Multi-Scale Feature



Conferences > 2025 International Conference...

Adaptive Ensemble Learning for Energy Demand Forecasting in Smart Grids

Publisher: IEEE | Cite This | PDF

A. Syed Musthafa ; S. Jagan ; A. Vijay ; R. Nithya ; A. Yasmin ; A. Raajya Vardhini All Authors

Abstract

Document Sections

I. Introduction

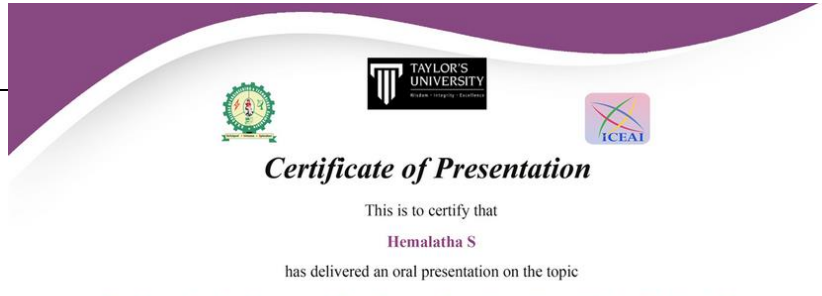
II. Literature survey

Abstract:

The proposed research introduces an Adaptive Ensemble Learning framework designed to enhance energy demand forecasting in smart grids, enabling more accurate, reliable, and responsive energy management. The system integrates multiple machine learning models within a dynamic ensemble structure that adaptively adjusts its composition based on real-time performance feedback. By employing a hybridized training approach, the framework captures both short-term variations and long-term consumption trends, effectively addressing the

Encoding," published by IEEE. The paper proposes an advanced deep learning–based approach for accurate segmentation of glioma tumors from brain MRI images.

Mr. Vijay, faculty member of the Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, has successfully published a research paper titled "Adaptive Ensemble Learning for Energy Demand Forecasting in Smart Grids" in an IEEE-published international conference (2025). The paper presents an innovative adaptive ensemble learning framework aimed at improving energy demand forecasting accuracy in smart grid systems.



TAYLOR'S UNIVERSITY

ICEAI

Certificate of Presentation

This is to certify that

Hemalatha S

has delivered an oral presentation on the topic

Dr. Hemalatha S from department of Artificial Intelligence and Data Science from St. Joseph's College of Engineering

		*successfully delivered an oral presentation at the 3rd International Conference on Evolutionary Artificial Intelligence (ICEAI 2025), organized by RVS College of Engineering and Technology, Coimbatore, in association with Taylor's University, Malaysia, held on 19 and 20 December 2025. She presented her research paper titled "Deep Learning–Based Automated Bone Fracture Detection and Severity Quantification in X-ray Imaging using YOLOv8,"* *D. Evangeline Nesa Priya of St. Joseph's College of Engineering, OMR, Chennai, was honored at the 1st International Conference on Frontiers in Engineering, Science and Technology (ICONFEST 2025) for her contribution as a research paper author. She presented a paper titled "Explainable AI in Smart Health Attacks" at the conference held on*

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/10/2025
(21) Application No.202541101544 A
(43) Publication Date : 28/11/2025

(54) Title of the invention : ML-DRIVEN INTELLIGENT FRAMEWORK FOR ENGLISH COMMUNICATION SKILL DEVELOPMENT AND AUTOMATED PLACEMENT IN HIGHER EDUCATION

(51) International classification :G06Q0050200000, G06Q0010063100, G09B0007020000, G09B0019060000, G06N0020000000
(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 :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ML-DRIVEN INTELLIGENT FRAMEWORK FOR ENGLISH COMMUNICATION SKILL DEVELOPMENT AND AUTOMATED PLACEMENT IN HIGHER EDUCATION The current idea reveals a Machine Learning–Driven Intelligent Framework aimed at improving English communication abilities and automating student placement procedures in higher education institutions. The system incorporates sophisticated technologies such as Artificial Intelligence (AI), Machine Learning (ML), Natural Language Processing (NLP), and Speech Recognition to assess, guide, and match students with appropriate academic or career possibilities. The framework consists of several interrelated modules: an Input Layer for gathering student data; a Preprocessing Module for sanitizing and organizing input; a Skill Evaluation Engine for evaluating proficiency in speaking, listening, reading, and writing; a Student Profiling and Analytics Module for producing tailored progress insights; a Customized Educational Framework for providing adaptive learning suggestions; and a Placement Prediction Engine for predicting placement readiness. A Recommendation and Matching System associate's pupils with pertinent job or academic chances, whereas a Feedback and Enhancement Cycle perpetually retrains the ML models to enhance precision and adaptability. The idea offers a sophisticated, data-informed, and scalable solution that improves communication skill development, optimizes placement processes, mitigates human bias, and boosts institutional efficiency in higher education settings. FIG. 1
No. of Pages : 14 No. of Claims : 10

The Patent Office Journal No. 48/2025 Dated 28/11/2025 115219

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/10/2025
(21) Application No.202541101841 A
(43) Publication Date : 28/11/2025

(54) Title of the invention : AI-ENABLED FACIAL EMOTION RECOGNITION PLATFORM FOR MONITORING STUDENT BEHAVIOR AND PERFORMANCE IN HIGHER EDUCATION

(51) International classification :G06V0040160000, G06Q0050200000, G10L0025630000, A61B0005160000, G06N0003080000
(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 :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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12)Dr. Vidya Sagar S. D.

(57) Abstract :
AI-Enabled Facial Emotion Recognition Platform for Monitoring Student Behavior and Performance in Higher Education is the proposed invention. An AI-enabled facial emotion recognition platform is an advanced educational technology solution designed to analyze students' emotional states and behavioral patterns in real time. Using computer vision and deep learning algorithms, the system detects facial expressions captured through classroom cameras or webcams during online sessions The proposed invention focuses on understanding the functions of Facial Emotion Recognition. The invention focuses on analyzing the parameters of Facial Emotion Recognition Platform for Monitoring Student Behavior and Performance in Higher Education using algorithms of AI Approach.
No. of Pages : 16 No. of Claims : 4

12th and 13th December 2025 at JIS College of Engineering, Kalyani, India.

Dr. J Vijayalakshmi, from the Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, has successfully published a patent titled "ML-Driven Intelligent Framework for English Communication Skill Development and Automated Placement in Higher Education." This patent introduces a sophisticated Machine Learning–Driven Intelligent Framework designed to enhance English communication skills and automate student placement processes in higher education.

An Indian patent application titled "AI-Enabled Facial Emotion Recognition Platform for Monitoring Student Behavior and Performance in Higher Education" has

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/11/2025

(21) Application No.202521116864 A
(43) Publication Date : 26/12/2025

(54) Title of the invention : PREDICTIVE MAINTENANCE SYSTEM USING MACHINE LEARNING TECHNIQUES

(51) International classification :G06F 17/40, G16B 50/30, G16B 50/20, G16C 20/70, G16C 20/90

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

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5)Dr. V. Vijayaganth
6)M. Roja
7)Dr. C. R. Rene Robin
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4)Mr. Abhilash Nagilla
5)Dr. V. Vijayaganth
6)M. Roja
7)Dr. C. R. Rene Robin

(57) Abstract :
[032] The present invention relates to a Predictive Maintenance System Using Machine Learning Techniques designed to monitor equipment health, detect anomalies, and predict potential failures in real time. The system integrates multi-sensor data acquisition, edge computing, and a cloud-based machine learning engine to continuously analyze operational parameters such as vibration, temperature, acoustics, electrical load, and environmental conditions. Advanced machine learning models—including supervised, unsupervised, and deep learning algorithms—identify abnormal patterns, estimate Remaining Useful Life (RUL), and provide early warning of component degradation. An adaptive learning mechanism enables the system to automatically recalibrate models based on newly acquired data, ensuring long-term accuracy and robustness. A decision-support module correlates predicted failures with probable root causes and generates actionable maintenance recommendations. The invention offers a scalable, intelligent, and automated solution that enhances machine reliability, minimizes unplanned downtime, reduces maintenance costs, and supports data-driven industrial asset management across diverse applications. Accompanied Drawing [FIGS. 1-2]
No. of Pages : 21 No. of Claims : 10

been successfully published by Mr. Sugin S. V in the Patent Office Journal of India. The patent application (Application No. 20254101841 A) was filed on 22 October 2025 and officially published on 28 November 2025.

Mrs. Sivaprabha T, from the Department of Artificial Intelligence and Data Science, has successfully published a patent titled "Predictive Maintenance System Using Machine Learning Techniques" with the Indian Patent Office. The patent application was filed in India on 25/11/2025 and published on 26/12/2025 under Application No. 202521116864 A in The Patent Office Journal No. 52/2025.

Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

INTELLECTUAL PROPERTY INDIA

Application Details	
APPLICATION NUMBER	202541114785
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	21/11/2025
APPLICANT NAME	1 . KIRUTHIK KUMAR J 2 . MAHESH KUMAR P 3 . Dr.HEMALATH A.S
TITLE OF INVENTION	DEEP LEARNING-BASED AUTOMATED BONE FRACTURE DETECTION AND SEVERITY QUANTIFICATION IN X-RAY IMAGING USING YOLOV8
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	jkdec2004@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	16/01/2026

Students Kiruthik Kumar J and Mahesh Kumar P, along with faculty member Dr. S. Hemalatha from St. Joseph's College of Engineering, have successfully published a patent titled "Deep Learning-Based Automated Bone Fracture Detection and Severity Quantification in X-Ray Imaging Using YOLOv8" in the field of Computer Science. The patent was filed as an ordinary application with the Office of the Controller General of Patents, Designs and Trade Marks, Government of India, on 21st November 2025.

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2025

(21) Application No.202521106064 A
(43) Publication Date : 16/01/2026

(54) Title of the invention : IOT-ENABLED PERSONALIZED AIR POLLUTION MONITORING, CONTROL, AND HEALTH PROTECTION SYSTEM USING AI-BASED PREVENTIVE ALERT MECHANISM

(51) International classification :G01N33/00, G08B21/12, G06N20/00, H04L67/12, G01N15/06
(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 :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
IOT-ENABLED PERSONALIZED AIR POLLUTION MONITORING, CONTROL, AND HEALTH PROTECTION SYSTEM USING AI-BASED PREVENTIVE ALERT MECHANISM The present invention relates to the development of an IoT-enabled personalized air pollution monitoring, control, and health protection system using ai based preventive alert mechanism represents a novel approach to provide real-time environmental and health management. The system employs Internet of Things (IoT) sensors to provide continuous monitoring of air quality parameters in the user's surrounding environment. The data is sent to a cloud-based AI analytics engine that localizes pollution levels, predicts future exposure risks, and highlights potential health threats, using adaptive machine-learning algorithms. User-specific alerts and preventive recommendations will be delivered through mobile and wearable interfaces to assist users in taking appropriate protective action in a timely manner. The system will also facilitate automatic control of indoor air purifiers and ventilation devices based on AI-driven analysis. This intelligent system will provide

Dr. Sherly Pushpa Annabel has successfully published a patent titled "IoT-Enabled Personalized Air Pollution Monitoring, Control, and Health Protection

		*System Using AI-Based Preventive Alert Mechanism", which was published in the Patent Office Journal of India on 16 January 2026.* *Dr. S. Hemalatha has successfully published a patent titled "Quantum-Resilient Hybrid Cryptographic Accelerator for Post-Quantum Secure Data Transactions" in the field of Computer Science. The patent was filed as an ordinary application with the Office of the Controller General of Patents, Designs and Trade Marks, Government of India, on 23rd November 2025, and was officially published on 12th December 2025.*

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/11/2025

(21) Application No.202521115148 A
(43) Publication Date : 26/12/2025

(54) Title of the invention : IOT-ENABLED MACHINE LEARNING FRAMEWORK FOR AUTOMATED KIDNEY STONE DETECTION USING MEDICAL IMAGE PROCESSING

(51) International classification :G16H 30/40, G16H 30/00, A61M 60/33, A61P 13/12, G16H 30/20

(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

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4)DHANYA KRISHNAN
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6)KIRUTHIKA S
7)VIVEK V
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8)DR. SASIKALA. P
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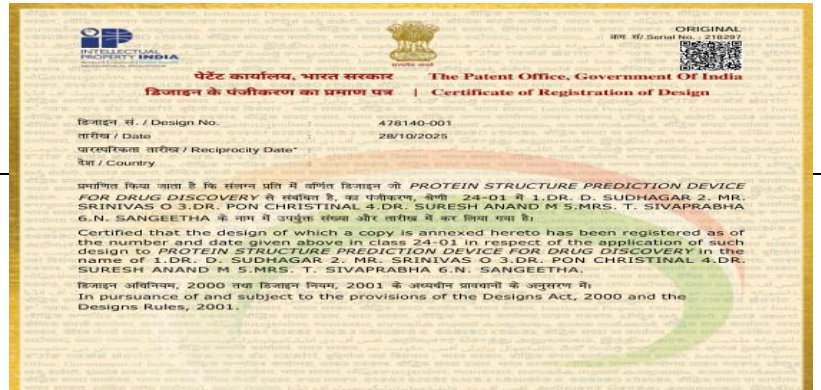
12)ABHENDRA PRATAP SINGH

(57) Abstract :
IOT-ENABLED MACHINE LEARNING FRAMEWORK FOR AUTOMATED KIDNEY STONE DETECTION USING MEDICAL IMAGE PROCESSING The invention discloses a novel IoT-based Machine Learning framework for automated 5 10 15 detection and classification of kidney stones. We combine advanced medical image processing methodologies, including noise reduction, contrast enhancement, and segmentation, with deep learning algorithms based on Convolutional Neural Networks (CNNs) to identify the presence of stones and their location accurately. The framework utilizes an Internet of Things (IoT) architecture that enables data diagnostic data to be securely transmitted to a cloud-based server in real-time where diagnostics can be monitored and made accessible to medical professionals. Validation of experimentation shows improvement accuracy and significantly reduced processing time compared to standard methods using this hybrid model. An example of a horizontally scalable solution that could represent the smart healthcare of the future address's potential for early intervention and effective patient management in urology. FIG. 1
No. of Pages : 13 No. of Claims : 1

The Patent Office Journal No. 52/2025 Dated 26/12/2025 132775

Dr. Vijayalakshmi J has successfully published a patent titled "IoT-Enabled Machine Learning Framework for Automated Kidney Stone Detection Using Medical Image Processing", which was published in the Patent Office Journal No. 52/2025 dated 26th December 2025.



ORIGINAL

पेटेंट कार्यालय, भारत सरकार | The Patent Office, Government Of India
डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

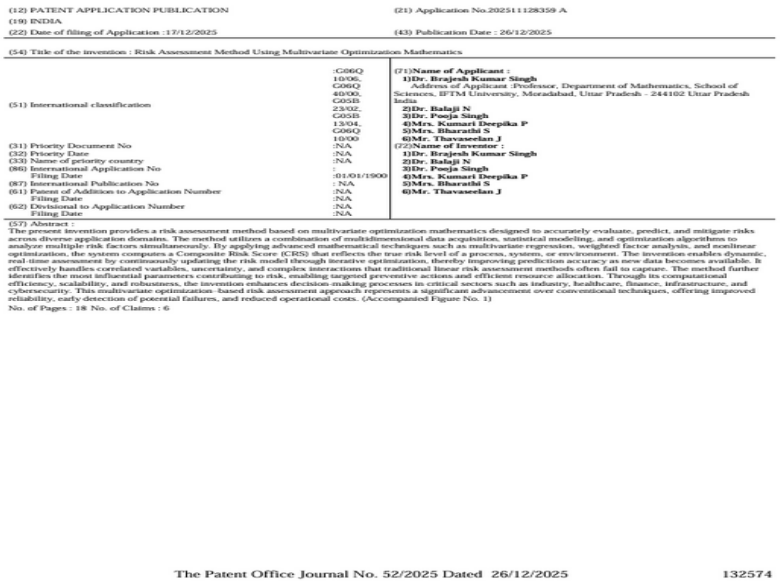
डिजाइन सं. / Design No. 478140-001
तारीख / Date 28/10/2025
परस्परिकता तारीख / Reciprocity Date*
देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *PROTEIN STRUCTURE PREDICTION DEVICE FOR DRUG DISCOVERY* से संबंधित है, का पंजीकरण, श्रेणी 24-01 में 1.DR. D. SUDHAGAR 2. MR. SRINIVAS O 3.DR. PON CHRISTINAL 4.DR. SURESH ANAND M 5.MRS. T. SIVAPRABHA 6.N. SANGEETHA के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 24-01 in respect of the application of such design to *PROTEIN STRUCTURE PREDICTION DEVICE FOR DRUG DISCOVERY* in the name of 1.DR. D. SUDHAGAR 2. MR. SRINIVAS O 3.DR. PON CHRISTINAL 4.DR. SURESH ANAND M 5.MRS. T. SIVAPRABHA 6.N. SANGEETHA.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन शर्तों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

Ms. Sivaprabha T from St. Joseph's College of Engineering has successfully published a patent/design titled "Protein



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/12/2025

(21) Application No.202511128359 A
(43) Publication Date : 26/12/2025

(54) Title of the invention : Risk Assessment Method Using Multivariate Optimization Mathematics

(51) International classification
:G06Q 10/06, G06Q 40/00, G05B 23/02, G05B 13/04, G06Q 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 :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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3)Dr. Pooja Singh
4)Mrs. Kumari Deepika P
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3)Dr. Pooja Singh
4)Mrs. Kumari Deepika P
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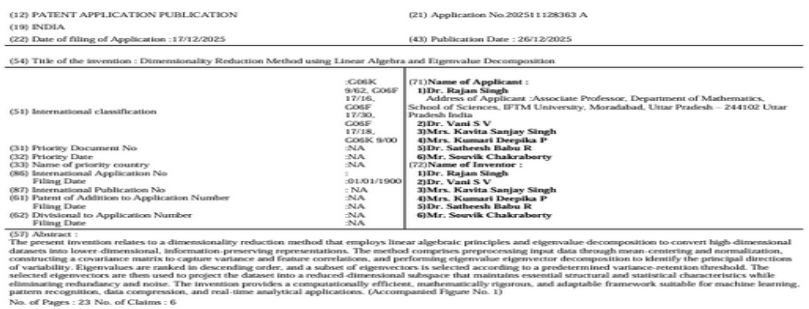
6)Mr. Thavaseelan J

(57) Abstract :
The present invention provides a risk assessment method based on multivariate optimization mathematics designed to accurately evaluate, predict, and mitigate risks across diverse application domains. The method utilizes a combination of multidimensional data acquisition, statistical modelling, and optimization algorithms to analyze multiple risk factors simultaneously. By applying advanced mathematical techniques such as multivariate regression, weighted factor analysis, and nonlinear optimization, the system computes a Composite Risk Score (CRS) that reflects the true risk level of a process, system, or environment. The invention enables dynamic, real-time assessment by continuously updating the risk model through iterative optimization, thereby improving prediction accuracy as new data becomes available. It effectively handles correlated variables, uncertainty, and complex interactions that traditional linear risk assessment methods often fail to capture. The method further identifies the most influential parameters contributing to risk, enabling targeted preventive actions and efficient resource allocation. Through its computational efficiency, scalability, and robustness, the invention enhances decision-making processes in critical sectors such as industry, healthcare, finance, infrastructure, and cybersecurity. This multivariate optimization–based risk assessment approach represents a significant advancement over conventional techniques, offering improved reliability, early detection of potential failures, and reduced operational costs. (Accompanied Figure No. 1)
No. of Pages : 18 No. of Claims : 6

The Patent Office Journal No. 52/2025 Dated 26/12/2025 132574

Structure Prediction Device for Drug Discovery", which has been officially registered by The Patent Office, Government of India. The design was registered on 28th October 2025 under the Designs Act, 2000, recognizing the originality and innovation of the proposed device.

Ms Kumari Deepika P from St. Joseph's College of Engineering has successfully published a patent titled "Risk Assessment Method Using Multivariate Optimization Mathematics." The patent presents an innovative approach to accurately evaluate, predict, and mitigate risks across diverse application domains.



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/12/2025
(21) Application No.202511128363 A
(43) Publication Date : 26/12/2025

(54) Title of the invention : Dimensionality Reduction Method using Linear Algebra and Eigenvalue Decomposition

(51) International classification :G06K 9/62, G06F 17/16, G06F 17/30, G06F 17/18, 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 :NA Filing Date :NA
(62) Divisional to Application Number :NA Filing Date :NA

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4)Mrs. Kumari Deepika P
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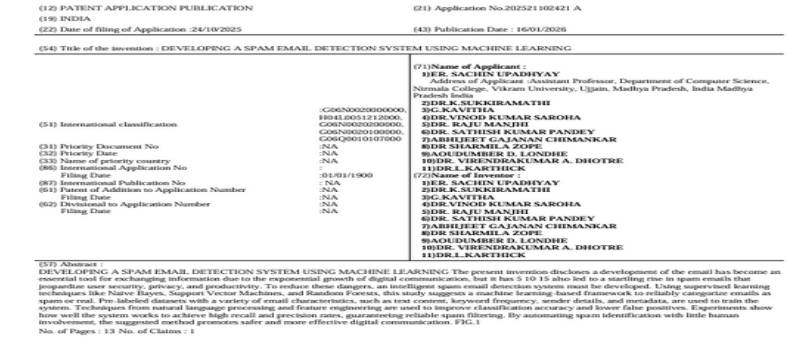
4)Mrs. Kumari Deepika P
5)Dr. Satheesh Babu R
6)Mr. Souvik Chakraborty

(57) Abstract :
The present invention relates to a dimensionality reduction method that employs linear algebraic principles and eigenvalue decomposition to convert high-dimensional datasets into lower-dimensional, information-preserving representations. The method comprises preprocessing input data through mean-centering and normalization, constructing a covariance matrix to capture variance and feature correlations, and performing eigenvalue eigenvector decomposition to identify the principal directions of variability. Eigenvalues are ranked in descending order, and a subset of eigenvectors is selected according to a predetermined variance-retention threshold. The selected eigenvectors are then used to project the dataset into a reduced-dimensional subspace that maintains essential structural and statistical characteristics while eliminating redundancy and noise. The invention provides a computationally efficient, mathematically rigorous, and adaptable framework suitable for machine learning, pattern recognition, data compression, and real-time analytical applications. (Accompanied Figure No. 1)
No. of Pages : 23 No. of Claims : 6

The Patent Office Journal No. 52/2025 Dated 26/12/2025 132584

Ms Kumari Deepika P from St. Joseph's College of Enginneering has published a patent titled "Dimensionality Reduction Method Using Linear Algebra and Eigenvalue Decomposition," which introduces a novel computational approach for reducing high-dimensional datasets into lower-dimensional, information-preserving representations



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/10/2025
(21) Application No.202521102421 A
(43) Publication Date : 16/01/2026

(54) Title of the invention : DEVELOPING A SPAM EMAIL DETECTION SYSTEM USING MACHINE LEARNING

(51) International classification :G06N0020000000, H04L0051212000, G06N0020300000, G06N0020100000, G06Q0001017000
(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 :NA Filing Date :NA
(62) Divisional to Application Number :NA Filing Date :NA

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11)DR.L.KARTHICK

(57) Abstract :
DEVELOPING A SPAM EMAIL DETECTION SYSTEM USING MACHINE LEARNING The present invention discloses a development of the email has become an essential tool for exchanging information due to the exponential growth of digital communication, but it has 5 10 15 also led to a startling rise in spam emails that jeopardise user security, privacy, and productivity. To reduce these dangers, an intelligent spam email detection system must be developed. Using supervised learning techniques like Naive Bayes, Support Vector Machines, and Random Forests, this study suggests a machine learning-based framework to reliably categorize emails as spam or real. Pre-labeled datasets with a variety of email characteristics, such as text content, keyword frequency, sender details, and metadata, are used to train the system. Techniques from natural language processing and feature engineering are used to improve classification accuracy and lower false positives. Experiments show how well the system works to achieve high recall and precision rates, guaranteeing reliable spam filtering. By automating spam identification with little human involvement, the suggested method promotes safer and more effective digital communication. FIG.1
No. of Pages : 13 No. of Claims : 1

Ms. Sivaprabha T has successfully published a patent titled "IoT-Enabled Machine Learning Framework for Intelligent Railway Ticket Reservation and Crowd Management", which was published

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/10/2025
(21) Application No.202521102421 A
(43) Publication Date : 16/01/2026

(54) Title of the invention : DEVELOPING A SPAM EMAIL DETECTION SYSTEM USING MACHINE LEARNING

(51) International classification :G06N0020000000, H04L0051212000, G06N0020200000, G06N0020100000, G06Q0010107000
(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 :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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11)DR.L.KARTHICK

(57) Abstract :
DEVELOPING A SPAM EMAIL DETECTION SYSTEM USING MACHINE LEARNING The present invention discloses a development of the email has become an essential tool for exchanging information due to the exponential growth of digital communication, but it has 5 10 15 also led to a startling rise in spam emails that jeopardize user security, privacy, and productivity. To reduce these dangers, an intelligent spam email detection system must be developed. Using supervised learning techniques like Naive Bayes, Support Vector Machines, and Random Forests, this study suggests a machine learning -based framework to reliably categorize emails as spam or real. Pre-labeled datasets with a variety of email characteristics, such as text content, keyword frequency, sender details, and metadata, are used to train the system. Techniques from natural language processing and feature engineering are used to improve classification accuracy and lower false positives. Experiments show how well the system works to achieve high recall and precision rates, guaranteeing reliable spam filtering. By automating spam identification with little human involvement, the suggested method promotes safer and more effective digital communication. FIG.1
No. of Pages : 13 No. of Claims : 1

The Patent Office Journal No. 03/2026 Dated 16/01/2026 8457

in the Patent Office Journal of India on 23 January 2026

Ms Kavitha G form Department of Artificial Intelligence and Data Science from St. Joseph's College of Engineering has published a patent titled "Developing a Spam Email Detection System Using Machine Learning," which presents an effective solution to address the growing challenge of spam emails in digital communication.

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/12/2025

(21) Application No.202541123002 A
(43) Publication Date : 02/01/2026

(54) Title of the invention : ADAPTIVE MACHINE LEARNING FRAMEWORK FOR REAL-TIME MONITORING OF NANOPARTICLE-MEDIATED CANCER TREATMENT

(51) International classification	:A61N 5/10, G16H 50/20, G06N 20/00, G16H 20/10, 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	

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3)Dr. Rani Venkata Satya Praveen
4)Dhanabhavithra Kaliyannan
5)Dr. B. Geetha
6)Dr Srinivasarao Gajula
7)Dr. R. Myna
8)Muralidharan A
9)RaviTeja Aida
10)M. M. Poornima
11)Dr. Mohd Faiz Afzal
12)Pranabes Gangopadhyay

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6)Dr Srinivasarao Gajula
7)Dr. R. Myna
8)Muralidharan A
9)RaviTeja Aida
10)M. M. Poornima
11)Dr. Mohd Faiz Afzal
12)Pranabes Gangopadhyay

(57) Abstract :
ADAPTIVE MACHINE LEARNING FRAMEWORK FOR REAL-TIME MONITORING OF NANOPARTICLE-MEDIATED CANCER TREATMENT The invention discloses a framework for real-time monitoring and management of cancer therapies delivered with the aid of nanoparticles through a machine learning (ML) adaptive architecture. This framework allows for the real-time assessment of therapeutic responses, intratumoral drug delivery, and toxicity risks by leveraging multi-modal data from both in-situ nanoscale delivery systems and other sources. It uses online learning methods to facilitate continuous improvement of the predictive strength and reliability of models as they are employed at multiple clinical sites while maintaining patient confidentiality through federated aggregation. The system employs drift detection for managing a changing tumor microenvironment, supports theranostic nano systems, and supports closed loop dosages, schedules, and triggers via stimuli-responsive nanocarriers. Utilising smart, sophisticated nanocarriers along with real-time adaptive federated ML-designed imaging/modulation systems fills critical knowledge gaps about accurate, patient-specific control of nanoparticle therapies and facilitates enhanced efficacy and patient safety. FIG.1
No. of Pages : 14 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/12/2025

(21) Application No.202511120084 A
(43) Publication Date : 16/01/2026

(54) Title of the invention : AN INTELLIGENT IOT–ML FRAMEWORK FOR PREDICTING PSYCHOLOGICAL AND BEHAVIORAL STRESS FACTORS AMONG STUDENTS IN HIGHER EDUCATION

(51) International classification	:A61B5/16, G16H20/70, G06N3/04	
(31) Priority Document No	:NA	
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(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	

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(57) Abstract :
The current innovation offers an advanced Internet of Things Machine Learning (IoT–ML) framework for the real-time prediction, monitoring, and analysis of psychological and behavioural stressors affecting students in higher education. The system amalgamates multimodal data from wearable physiological sensors, smartphone behavioural trackers, and smart campus ambient sensors to provide comprehensive insights into student well-being. An edge computing module preprocesses incoming data via noise filtering, normalisation, segmentation, and feature extraction, while a cloud-based analytics engine utilises sophisticated machine learning and deep learning models including ensemble classifiers, CNN architectures, and LSTM/GRU networks to accurately detect, classify, and predict stress levels. A contextual fusion method links physiological, behavioural, and environmental variables to extract significant interpretations of stress patterns and detect early warning signs of stress escalation. The framework delivers individualised feedback, wellness suggestions, and preventive notifications to students via a specialised mobile or online interface, while authorised counsellors obtain decision-support insights for focused academic and psychological interventions. The invention provides a comprehensive, secure, and proactive solution for ongoing mental health monitoring and stress management in higher education settings, utilising robust privacy-preserving methods including encryption, anonymisation, and role-based access restriction. FIG.1
No. of Pages : 17 No. of Claims : 10

Ms. Dhanabhavithra K, from St. Joseph's College of Engineering, has successfully published a patent titled "Adaptive Machine Learning Framework for Real-Time Monitoring of Nanoparticle-Mediated Cancer Treatment". The patent was published in the Patent Office Journal of India with the publication date 02 January 2026.

Mr Vijay A has successfully published a patent titled "An Intelligent IoT–ML Framework for Predicting Psychological and Behavioral Stress Factors among Students in Higher Education". The patent application was filed on 1st December 2025 and officially published on 16th January 2026 in the Patent Office Journal.

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/11/2025

(21) Application No.202521117103 A
(43) Publication Date : 16/01/2026

(54) Title of the invention : AN INTELLIGENT MACHINE LEARNING FRAMEWORK FOR ASSESSING SPEAKING AND LISTENING PROFICIENCY OF EFL LEARNERS IN HIGHER EDUCATION

(51) International classification :G06B 43/04, B63B 43/10, E02D 3/02, H02K 13/10, H02K 13/14
(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 :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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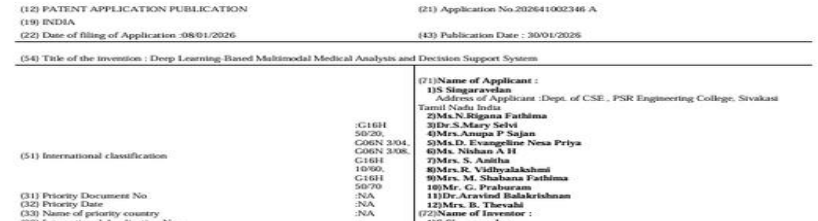
(57) Abstract :
AN INTELLIGENT MACHINE LEARNING FRAMEWORK FOR ASSESSING SPEAKING AND LISTENING PROFICIENCY OF EFL LEARNERS IN HIGHER EDUCATION The current innovation presents an Intelligent Machine Learning Framework aimed at assessing, evaluating, and improving the speaking and listening skills of English as a Foreign Language (EFL) students in higher education. The system incorporates sophisticated speech recognition, natural language processing, acoustic analysis, and machine learning-based scoring models to provide immediate, objective, and adaptive assessment of learners' communicative proficiency. The invention functions via a multimodal assessment pipeline that captures audio inputs, analyses phonetic patterns, identifies pronunciation discrepancies, evaluates fluency, intonation, rhythm, and coherence, and assesses listening comprehension through AI-driven question-response evaluation mechanisms. The platform integrates supervised and unsupervised learning methodologies to adjust scoring, identify individual learner challenges, and produce tailored feedback with implementable enhancement plans. The system integrates advanced linguistic analytics, acoustic modelling, predictive performance analysis, and adaptive recommendation engines to provide a comprehensive platform that guarantees accuracy, fairness, and scalability in language proficiency evaluation. The invention seeks to overcome the constraints of conventional manual assessment techniques by providing automated, impartial, and ongoing monitoring of student advancement, thereby assisting higher education institutions in enhancing EFL learning results. FIG.1
No. of Pages : 15 No. of Claims : 10



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/01/2026

(21) Application No.202641002346 A
(43) Publication Date : 30/01/2026

(54) Title of the invention : Deep Learning Based Multimodal Medical Analysis and Decision Support System

(51) International classification :G16H 50/20, G06N 3/04, G06N 3/08, G16H 10/60, G16H 50/70
(31) Priority Document No :NA
(32) Priority Date :NA
(33) Name of priority country :NA

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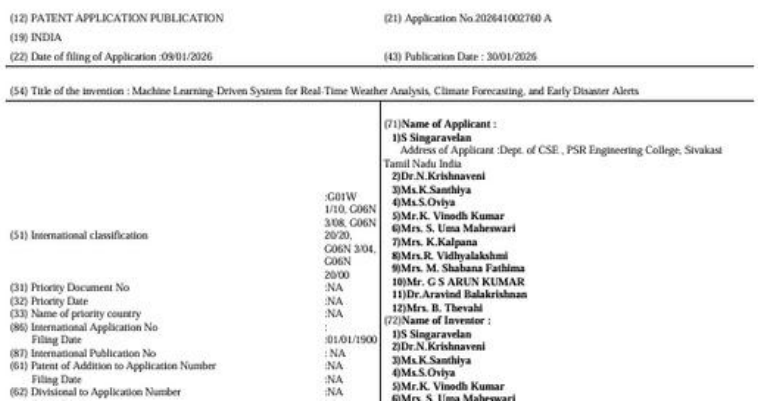
Mr. Vijay A has published a patent titled "An Intelligent Machine Learning Framework for Assessing Speaking and Listening Proficiency of EFL Learners in Higher Education". The patent application was submitted on 25th November 2025 and officially published on 16th January 2026 in the Patent Office Journal.



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/01/2026

(21) Application No.202641002760 A
(43) Publication Date : 30/01/2026

(54) Title of the invention : Machine Learning-Driven System for Real-Time Weather Analysis, Climate Forecasting, and Early Disaster Alerts

(51) International classification :G01W 1/10, G06N 3/08, G06N 20/20, G06N 3/04, 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 :NA
Filing Date :NA
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Ms. Evangeline Nesa Priya D is an author of the patent titled "Deep Learning-Based Multimodal Medical Analysis and Decision Support System", which was published in the Patent Office Journal of India. The patent application (Application No. 202641002346 A) was filed on 08 January 2026 and published on 30 January 2026.

Mr. Vinodh Kumar K is an author of the patent titled "Machine Learning-Driven System for Real-Time Weather Analysis, Climate Forecasting, and Early Disaster

		Alerts", which was published in the Patent Office Journal of India. The patent application (Application No. 202641002760 A) was filed on 09 January 2026 and published on 30 January 2026 *Ms Dharanika S has successfully published a patent titled "Quantum Inspired*

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/01/2026

(21) Application No.202641002320 A
(43) Publication Date : 30/01/2026

(54) Title of the invention : Quantum Inspired Machine Learning Framework for Predicting Chemical Reaction in Nano-Materials

(51) International classification :G06N 10/00, G06N 10/20, G06N 10/40, G06N 10/60, G06F 30/27
(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 :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention proposes a Quantum Inspired Machine Learning (QIML) framework for predicting chemical reactions and transformation dynamics in nano-material systems, where classical modelling techniques face challenges due to quantum-scale effects, complex interatomic interactions, and high-dimensional feature spaces. The framework emulates quantum mechanical principles such as superposition, entanglement-inspired correlations, and probabilistic state evolution to enhance classical machine learning models without reliance on physical quantum computing hardware. In the proposed approach, nano-material characteristics including atomic composition, lattice structure, particle size, surface defects, electronic properties, reaction temperature, pressure, and chemical environment are encoded into quantum-inspired state representations. These representations enable efficient exploration of reaction pathways, energy barriers, and intermediate states associated with nano-scale chemical processes. The framework integrates quantum-inspired optimization techniques with learning models such as neural networks, ensemble predictors, and probabilistic classifiers to predict reaction outcomes, kinetics, thermodynamic feasibility, and material stability. The system supports hybrid learning through the integration of simulation-generated datasets and experimental observations, allowing adaptive model refinement and improved generalization. Dimensionality reduction and noise-resilient learning mechanisms are employed to handle uncertainty and variability inherent in nano-material data. The proposed framework significantly reduces computational cost compared to conventional quantum chemistry simulations while maintaining high prediction accuracy. The invention finds applications in nano-catalyst optimization, advanced material synthesis, energy storage systems, nano-electronics, and pharmaceutical nano-formulations. By enabling accurate, scalable, and data-driven prediction of chemical reactions in nano-materials, the proposed quantum-inspired machine learning framework accelerates material discovery and supports informed decision-making in nano-scale chemical engineering.
No. of Pages : 6 No. of Claims : 5

The Patent Office Journal No. 05/2026 Dated 30/01/2026 13227

Machine Learning Framework for Predicting Chemical Reaction in Nano-Materials" in the Indian Patent Office Journal. The patent focuses on proposing a novel quantum-inspired machine learning (QIML) framework to accurately predict chemical reactions and transformation dynamics in nano-material systems.

DEPARTMENT OF ARTIFICAL INTELLIGENCE AND MACHINE LEARNING

Sl. No.	Photographs Captured During Event	Corresponding remarks in regarding the status of activity execution
1.	**Dr. Adlin Sheeba** **WOS** 	**Title of the Paper** : Privacy-Aware Federated Graph Neural Networks for Adaptive and Explainable Cancer Drug Personalization **Abstract :** Personalized cancer treatment remains challenging due to the complexity of genomic data and variability in drug responses. Previous federated learning (FL) approaches handled distributed patient data to preserve privacy but treated genomic and pharmacological features as flat, tabular inputs, limiting the ability to capture gene–drug interactions. In this study, we propose a Graph Neural Network (GNN)-based framework, FedGraphOnco, which models patient-specific gene–drug interactions as structured graphs, enabling the network to learn complex relational patterns that are difficult or impractical for FL-only models. Attention mechanisms and SHapley Additive exPlanations (SHAP) are incorporated to provide interpretable insights into important genes, pathways, and drug interactions, increasing clinical trust. Using the GDSC dataset with gene expression, mutation status, copy number variation, and IC50 drug responses, the model demonstrates high predictive accuracy (Pearson correlation = 0.85, RMSE = 2.6, MAE = 1.9, dosage deviation = 2.8%), robustness to noise and non-IID data, and adaptive, personalized dosage recommendations. The approach highlights the advantages of combining privacy-preserving FL, GNNs, multi-omics data integration, explainability, and adaptive dosing, offering a scalable and interpretable solution for precision oncology.
	Dr. Adlin Sheeba **Published Patent**	

2.		**Title of Innovation :** Decentralized Edge-Intelligence Framework for Real-Time IoT Data Processing and Analytics
3.	**Mr. Raja Mohamed N** **Published Patent** 	**Title of Innovation :** IoT-Integrated Smart Water Quality Monitoring System for Sustainable Civil Infrastructure
	Dr. Raman C J **Reviewer**	

4.		**Title of Conference :** 5th International Conference on Advanced Network Technologies and Intelligent Computing (ANTIC-2025).
5.	**Dr. Manikandan G** **NPTEL** 	**Title of Recognition :** NPTEL DISCIPLINE STAR JUL – DEC 2025

DEPARTMENT OF CHEMICAL ENGINEERING

S.No.	Title of the Events and Photographs	Details of the Event
1.	**SMART INDIA HACKATHON**	Among the six victorious teams, Team "**Fluid Fusion"** emerged as winners for the **Ministry of Jal Shakti** problem statement. The team was mentored by **Dr. S. Vinod Kumar, Associate Professor, Department of Chemical Engineering,** along with **Dr. B. Uma Maheswari G, Professor, Department of Computer Science and Engineering.** The team developed an innovative software solution addressing rural drinking watermanagement, focusing on efficiency, monitoring, and sustainable water distribution. Their solution was highly appreciated by the jury for its scalability, real-time applicability, and alignment with national priorities on water security. The team members include: **Lewyn D** – Team Leader **Sam Daniel T** – Technical Expert **Junaid Abdul Alim** – Software Developer **Jasmine Ramola J** – Data Scientist **Sindhukavi S** – Researcher **Abhijith Kanna M A** – Data Analyst

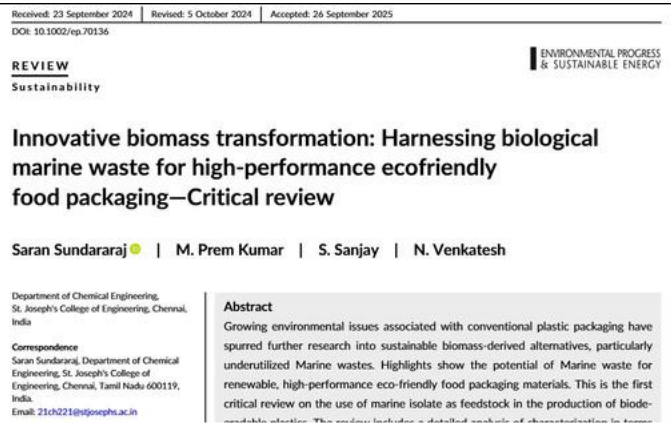
		 
2.	**PLACEMENT**	10 students from the 2022–2026 batch in **VISHNU Chemicals Ltd., Srikalahasti, Andhra Pradesh**. The selected students have been offered the position of Graduate Engineer Trainee (GET) with a **CTC of ₹3 LPA after internship,** along with a monthly stipend of **₹12,000** during the internship period. The students who secured placements are: **Ms. Thanushri M** **Mr. Santhosh K J** **Mr. Vishal A**

		Mr. Sanjay S **Mr. Kamatchi Nathan N** **Ms. Viveka Jayasree U G** **Ms. Trisha S** **Mr. Kaviamuthan S** **Ms. Manohari A U** **Mr. Srivatsan S**  **Mr. Syed Ajmal Basha A (2022 – 2026)** has been offered a position with a Cost to Company (CTC) of **₹3 Lakh** per annum. **YHills**, known for its commitment to learning and professional development under the mott "Learning Beyond Expectations", provides a dynamic platform for young engineers to enhance their technical and professional skills.

		
3.	**STUDENT ACHIEVEMENT**	**Mr. Santhosh K.J.,** Final Year student, has been selected for the **NPTEL Winter Internship 2025**, a highly competitive and **prestigious national-level internship program** conducted under the National Programme on Technology Enhanced Learning (NPTEL). Mr. Santhosh K.J. has received his internship offer from **IIT Roorkee,** one of India's premier technical institutions, to carry out an 8-week in-person internship under the guidance of Prof. Prathan Arora. THE internship is scheduled from 20 January 2026 to 16 March 2026, with a stipend of **₹30,000.**

		 **Mr. KUPERAN G (2022– 2026 Batch) and Mr. SUSINDHIRAN S** (2023–2027 Batch) for being recognized as **NPTEL Discipline Stars** for the July–December 2025 session. This prestigious recognition is awarded by NPTEL (National Programme on Technology Enhanced Learning) to students who demonstrate exceptional academic discipline by successfully completing more than 50 weeks of learning in courses from the same discipline and securing a minimum score of 55% in each course.

		 
4.	**PUBLICATIONS(ONLY PUBLISHED) DETAILS (BY STAFF)**	**Dr. N. Venkatesh, Professor and Head of the Department**, has co-authored a significant critical review article published in the reputed international journal Environmental Progress & Sustainable Energy (Wiley). Th review paper, **titled "Innovative biomass transformation: Harnessing biological marine waste for high-performance ecofriendly food packaging – A critical review**," explores advanced strategies for converting underutilized marine biological waste into sustainable, high-performance food packaging materials.



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DOI: 10.1002/ep.70136

REVIEW

Sustainability

ENVIRONMENTAL PROGRESS & SUSTAINABLE ENERGY

Innovative biomass transformation: Harnessing biological marine waste for high-performance ecofriendly food packaging—Critical review

Saran Sundararaj | M. Prem Kumar | S. Sanjay | N. Venkatesh

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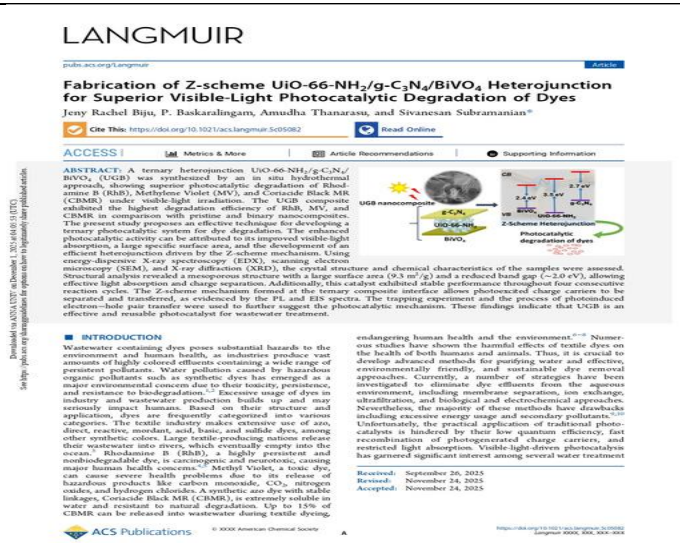
Abstract

Growing environmental issues associated with conventional plastic packaging have spurred further research into sustainable biomass-derived alternatives, particularly underutilized Marine wastes. Highlights show the potential of Marine waste for renewable, high-performance eco-friendly food packaging materials. This is the first critical review on the use of marine isolate as feedstock in the production of biode-

Dr. T. Amudha, Assistant Professor has achieved a significant academic milestone with the publication of her research in a reputed international peer-reviewed journal. Her work focuses on the development of advanced photocatalytic materials for efficient wastewater treatment under visible-light irradiation.

The published study reports **the fabrication of a novel Zscheme ternary heterojunction photocatalyst composed of UiO-66-NH_2, graphitic carbon nitride (g-C_3N_4), and bismuth vanadate ($BiVO_4$).**



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Article

Fabrication of Z-scheme UiO-66-NH_2/g-C_3N_4/$BiVO_4$ Heterojunction for Superior Visible-Light Photocatalytic Degradation of Dyes

Jeny Rachel Biju, P. Baskaralingam, Amudha Thanarasu, and Sivanesan Subramanian*

Cite This: https://doi.org/10.1021/acs.langmuir.5c05082

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ABSTRACT: A ternary heterojunction UiO-66-NH_2/g-C_3N_4/$BiVO_4$ (UGB) was synthesized by an in situ hydrothermal approach, showing superior photocatalytic degradation of Rhodamine B (RhB), Methylene Violet (MV), and Coriacide Black MR (CBMR) under visible-light irradiation. The UGB composite exhibited the highest degradation efficiency of RhB, MV, and CBMR in comparison with pristine and binary nanocomposites. The present study proposes an effective technique for developing a ternary photocatalytic system for dye degradation. The enhanced photocatalytic activity can be attributed to its improved visible-light absorption, a large specific surface area, and the development of an efficient heterojunction driven by the Z-scheme mechanism. Using energy-dispersive X-ray spectroscopy (EDX), scanning electron microscopy (SEM), and X-ray diffraction (XRD), the crystal structure and chemical characteristics of the samples were assessed. Structural analysis revealed a mesoporous structure with a large surface area (9.3 m^2/g) and a reduced band gap (~2.0 eV), allowing effective light absorption and charge separation. Additionally, this catalyst exhibited stable performance throughout four consecutive reaction cycles. The Z-scheme mechanism formed at the ternary composite interface allows photoexcited charge carriers to be separated and transferred, as evidenced by the PL and EIS spectra. The trapping experiment and the process of photoinduced electron−hole pair transfer were used to further suggest the photocatalytic mechanism. These findings indicate that UGB is an effective and reusable photocatalyst for wastewater treatment.

■ INTRODUCTION

Wastewater containing dyes poses substantial hazards to the environment and human health, as industries produce vast amounts of highly colored effluents containing a wide range of persistent pollutants. Water pollution caused by hazardous organic pollutants such as synthetic dyes has emerged as a major environmental concern due to their toxicity, persistence, and resistance to biodegradation.[1,2] Excessive usage of dyes in industry and wastewater production builds up and may seriously impact humans. Based on their structure and application, dyes are frequently categorized into various categories. The textile industry makes extensive use of azo, direct, reactive, mordant, acid, basic, and sulfide dyes, among other synthetic colors. Large textile-producing nations release their wastewater into rivers, which eventually empty into the ocean.[3] Rhodamine B (RhB), a highly persistent and nonbiodegradable dye, is carcinogenic and neurotoxic, causing major human health concerns.[4−6] Methyl Violet, a toxic dye, can cause severe health problems due to its release of hazardous products like carbon monoxide, CO_2, nitrogen oxides, and hydrogen chlorides. A synthetic azo dye with stable linkages, Coriacide Black MR (CBMR), is extremely soluble in water and resistant to natural degradation. Up to 15% of CBMR can be released into wastewater during textile dyeing, endangering human health and the environment.[6−8] Numerous studies have shown the harmful effects of textile dyes on the health of both humans and animals. Thus, it is crucial to develop advanced methods for purifying water and effective, environmentally friendly, and sustainable dye removal approaches. Currently, a number of strategies have been investigated to eliminate dye effluents from the aqueous environment, including membrane separation, ion exchange, ultrafiltration, and biological and electrochemical approaches. Nevertheless, the majority of these methods have drawbacks including excessive energy usage and secondary pollutants.[9,10] Unfortunately, the practical application of traditional photocatalysts is hindered by their low quantum efficiency, fast recombination of photogenerated charge carriers, and restricted light absorption. Visible-light-driven photocatalysis has garnered significant interest among several water treatment

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Accepted: November 24, 2025

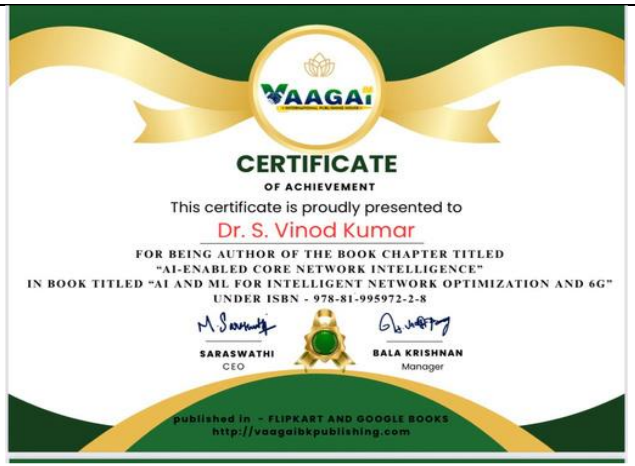
ACS Publications

PATENT

Dr. S. Vinod Kumar, Associate Professor, has achieved a significant academic milestone with the successful publication of a patent titled "**Explainable Deep Learning System for Medical Diagnosis Using Visual Heatmaps"** in The Patent Office Journal No. 48/2025 dated 28 November 2025, issued by the Indian Patent Office. The patent application (Application No. 202541109255 A) was filed on 11 November 2025.

		 (12) PATENT APPLICATION PUBLICATION (19) INDIA (22) Date of filing of Application :11/11/2025 (21) Application No 202541109255 A (43) Publication Date : 28/11/2025 (54) Title of the invention : EXPLAINABLE DEEP LEARNING SYSTEM FOR MEDICAL DIAGNOSIS USING VISUAL HEATMAPS (51) International classification: G06V 30/20; G06N 5/022; G06V 10/20; G06V 10/10; G06V 30/16 (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)Dr. V. Rajesh Address of Applicant :Department of Chemistry, School of Engineering, Siddhartha Academy of Higher Education (An Institution Deemed to be University), Vijayawada, Andhra Pradesh, India. Pin Code:520007 Andhra Pradesh India 2)Dr. D. Vijayalakhmi 3)Ms. Sumathi Rani Mauukonda 4)Mrs. Vari Sri Sasthi 5)Dr. Amit Kumar Mehar 6)Mr. Vibhav Krishan Chaurasiya 7)Dr. Murali Kanthi 8)Mr. Ravishankar Chandrakantrao Bhoganagare 9)Mr. Dhinakaran M 10)Dr. S. Vinod Kumar (72)Name of Inventor : 1)Dr. V. Rajesh 2)Dr. D. Vijayalakhmi 3)Ms. Sumathi Rani Mauukonda 4)Mrs. Vari Sri Sasthi 5)Dr. Amit Kumar Mehar 6)Mr. Vibhav Krishan Chaurasiya 7)Dr. Murali Kanthi 8)Mr. Ravishankar Chandrakantrao Bhoganagare 9)Mr. Dhinakaran M 10)Dr. S. Vinod Kumar (57) Abstract : [036] The present invention discloses an explainable deep learning system for medical diagnosis using visual heatmaps that enhances interpretability and clinical trust in AI-assisted healthcare. The system comprises a data acquisition module, preprocessing unit, deep learning model, and explainability engine that collaboratively generate diagnostic predictions and corresponding visual explanations. The explainability engine produces heatmaps indicating image regions that most influence the model's decision, which are then overlaid on the original medical image for clinician interpretation. An interactive visualization interface enables parameter adjustments and expert feedback, while a feedback mechanism allows continuous model refinement based on clinical input. The system ensures secure handling of sensitive medical data and supports integration with existing hospital infrastructures, providing an accurate, transparent, and adaptive diagnostic framework for diverse medical imaging applications. Accompanied Drawing [FIGS. 1-2] No. of Pages : 19 No. of Claims : 10 **Ms. R. Lavanya, Assistant Professor**, has achieved a notable academic milestone by contributing as an inventor to two patent applications published by the Indian Patent Office Journal No. 49/2025 dated 05 December 2025. The first patent, titled **"Analysis of Human Resource Management in Promoting Employees Performance" (Application No. 202541112213 A**). The second patent, titled "**Impact of AI Technology for Digital Marketing in E-Commerce" (Application No. 202541112226 A),** explores the application of artificial intelligence in transforming digital marketing strategies within e-commerce platforms.

		  **BOOK CHAPTER** **Dr. Vinod Kumar** is the author of the book chapter titled "**AI-Enabled Core Network Intelligence"**, published in the edited volume "AI and ML for Intelligent Network Optimization and 6G". The book carries the ISBN 978-81-995972-2-8 and is published by VAAGAI International Publishing House. The publication is available on major platforms including Flipkart and Google Books.

		
5.	**FDP/ CONFERENCE/ WORKSHOP (ATTENDED BY STAFF)**	**Dr. N. Venkatesh, Professor and Head of the Department**, has successfully completed the **AICTE–QIP PG Certificate Programme** on "**Advanced Metallic Alloys for Energy Storage Applications." The programme was conducted by Sardar Vallabhbhai National Institute of Technology(SVNIT), Surat,** under the aegis of the All India Council for Technical Education (AICTE), during the period June 2025 to December 2025**.** 

Dr. N. Venkatesh, Professor, has successfully participated in and completed the **AICTE Training and Learning (ATAL)** Academy Faculty Development Programme (FDP) on **"Electrochemical Energy Storage: Materials and Devices."ectrochemical energy storage technologies"**.


ATAL/2025/1760064897

Skill India

ATAL

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Nelson Mandela Marg, Vasant Kunj, New Delhi -110070

AICTE Training and Learning (ATAL) Academy

Certificate

It is certified that ***Dr. N Venkatesh, Professor*** *of* ***St. Joseph's College of Engineering*** *has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on* ***Electrochemical Energy Storage: Materials and Devices*** *at* ***SYMBIOSIS INSTITUTE OF TECHNOLOGY*** *from 17/11/2025 to 22/11/2025.*

Meena Laad
Professor Level (AICTE Institute), Coordinator
SYMBIOSIS INSTITUTE OF TECHNOLOGY

Dr. Sunil Luthra
Director & Bureau Head
Training and Learning Bureau, AICTE

Dr. Renuka Viswanathan, Professor, Department of Chemical Engineering, St. Joseph's College of Engineering, Tamil Nadu, successfully participated in and completed an **AICTE Training and Learning (ATAL**) Academy Faculty

		Development Programme **on "Advanced Materials, Rare-earth & Critical Minerals."**  ATAL/2025/1764925889 Skill India ATAL AICTE vidya ALL INDIA COUNCIL FOR TECHNICAL EDUCATION Nelson Mandela Marg, Vasant Kunj, New Delhi -110070 AICTE Training and Learning (ATAL) Academy Certificate It is certified that Dr. Renuka Viswanathan, Faculty members of the AICTE approved institutions of St. Joseph's College of Engg has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Advanced Materials, Rare-earth & Critical Minerals at VIDYA ACADEMY OF SCIENCE AND TECHNOLOGY TECHNICAL CAMPUS from 08/12/2025 to 13/12/2025. SARGUNAN K Professor Level (AICTE Institute), Coordinator VIDYA ACADEMY OF SCIENCE AND TECHNOLOGY TECHNICAL CAMPUS Dr. Sunil Luthra Director & Bureau Head Training and Learning Bureau, AICTE **Dr. Renuka Viswanathan, Professor**, successfully participated in a **Five-Day National Level Online Faculty Development Programme (FDP)** titled **"Research-driven Sustainable Materials and Manufacturing Systems (RSMM '25)".** The programme was organized by the Department of Mechanical Engineering, Velammal Engineering College, Chennai–66, from 08 December 2025 to 12 December 2025.

		 Velammal Engineering College, Chennai - 66 VELAMMAL (An Autonomous Institution, Affiliated to Anna University, Chennai) Department of Mechanical Engineering PARTICIPATION CERTIFICATE This is to Certify that Dr. RENUKA VISWANATHAN *Professor, Chemical Engineering, St. Joseph's College of Engineering , Tamil Nadu.* has successfully completed the Five days National Level online Faculty Development Programme on *"Research-driven Sustainable Materials and Manufacturing Systems (RSMM '25)"* organized by Department of Mechanical Engineering, Velammal Engineering College, Chennai-66 from *08.12.2025 to 12.12.2025*. Coordinator Dr. S. Suresh HoD-Mechanical Dr. E. Ganapathy Sundaram Principal Dr. S. Satishkumar Certificate No: RSMM'25-44 **Mr. P. Anand Kumar, Assistant Professor** has successfully completed a Faculty Development Programme (FDP) organized by the **AICTE Training and Learning (ATAL) Academy.** The programme, titled "**Smart Water Management: Applications of Remote Sensing, GIS, and SWAT in Real-Time,"** was conducted at SRM Valliammai Engineering College from 15 December 2025 to 20 December 2025.

		 ATAL/2025/1763785580 Skill India ATAL ALL INDIA COUNCIL FOR TECHNICAL EDUCATION Nelson Mandela Marg, Vasant Kunj, New Delhi -110070 AICTE Training and Learning (ATAL) Academy *Certificate* *It is certified that* ***Mr. Anand Kumar P, Assistant Professor*** *of* ***St Joseph's College of Engineering*** *has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on* ***Smart Water Management: Applications of Remote Sensing, GIS, and SWAT in Real-Time*** *at* ***SRM VALLIAMMAI ENGINEERING COLLEGE*** *from 15/12/2025 to 20/12/2025.* S.PACKIALAKSHMI Professor Level (AICTE Institute), Coordinator **SRM VALLIAMMAI ENGINEERING COLLEGE** Dr. Sunil Luthra Director & Bureau Head **Training and Learning Bureau, AICTE**
6.	**STAFF RECOGNITION**	**Dr. N. Venkatesh, Professor and Head** has been conferred with the prestigious **NPTEL Believer Award** for the July–December 2025 session. The recognition was awarded by the National Programme on Technology Enhanced Learning (NPTEL), an initiative of the Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc), under the Ministry of Education, Government of India.  CERTIFICATE OF APPRECIATION TO VENKATESH N for being recognized as NPTEL BELIEVER JUL-DEC 2025 Prof. Andrew Thangaraj Prof. Vignesh Muthuvijayan NPTEL swayam **Dr. S. Vinod Kumar, Associate Professor** was honoured for his distinguished service as a **Session Chair** at the **IICHE CHEMCON 2025**,

		the **78th Annual Session of the Indian Institute of Chemical Engineers (IIChE).** The prestigious international conference, **themed "AI Driven Chemical Engineering Processes: Transformation and Sustainability,"** was organized by the Indian Institute of Chemical Engineers, **Annamalai Regional Centre, in association with the Department of Chemical Engineering, FEAT, Annamalai University.** The event was held at Annamalai University, Tamil Nadu, from December 27 to 30, 2025. 

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	Event with Photo	Description
1	Youth Empowerment Program	**Date** : 8.12.2025 **Venue** : **Conference hall** **Nature of Event** : Youth Empowerment Program Participants : 60 - IV Year students Objective : • To build confidence and leadership skills among young people. • To develop life, social, and career skills for personal and future success. • To encourage positive participation in the community and responsible citizenship. • Outcome : • Youth develop a stronger sense of self-worth and feel more confident in expressing their ideas and abilities. • Participants gain skills such as communication, teamwork, problem-solving, and decision-making that help them in daily life.

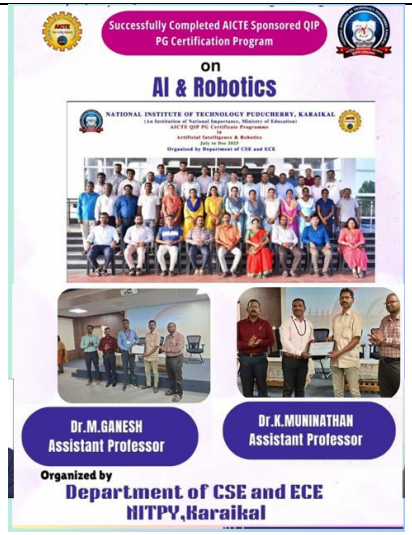
		• Participants take part in community activities, showing responsibility, teamwork, and a willingness to contribute positively to society.

DEPARTMENT OF MECHANICAL ENGINEERING

Sl No	Name of the Activity	Remarks
1	➢ Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering Published an article titled "Evaluating the Mechanical Properties and Microstructure of Basalt-Kenaf Polyester Composites with Cellulose Fillers" in Scopus Indexed Q2 Journal "Journal of The Institution of Engineers (India): Series D" on 5th December 2025. ➢ Mr.K. Gnanasekaran ,Assistant Professor from the department of mechanical engineering published a PATENT titled DESIGN AND FABRICATION OF A DUAL-FUNCTIONAL HEAT STORAGE TUBE INTEGRATED SOLAR AIR HEATER Application Number .202541099570 ➢ Mr. N. Sathishkumar, Assistant Professor, Department of Mechanical Engineering, published a Journal article titled “Tribological behaviour of detonation gun spray coated steel fabricated by laser powder bed fusion technique” in “Surface Engineering” Journal. (Q1, SCIE & Scopus indexed, Anna University Annexure I Journal with Impact Factor 2.6). ➢ Mr. N. Sathishkumar, Assistant Professor, Department of Mechanical Engineering, published an Indian Utility Patent titled “Hybrid Post Processing Technique for Enhancing Surface Finish and Mechanical Properties of 3D Printed Metal Parts” (Application Number: 202541103121). ➢ Mr. N. Sathishkumar, Assistant Professor, Department of Mechanical Engineering, acted as a reviewer for the manuscript “EDB-YOLO: An Enhanced Multi-Scale Feature Fusion Model for Steel Surface Defect Detection” submitted to “Engineering Research Express” Journal. (ESCI & Scopus indexed Q2 Journal with Impact Factor 1.6) ➢ Mr. N. Sathishkumar, Assistant Professor, Department of Mechanical Engineering, acted as a reviewer for the manuscript “LETS-YOLO : Improved YOLOv11 Based Lightweight Metal Roof Welds Defect Detection Method” submitted to “Engineering Research Express” Journal. (ESCI & Scopus indexed Q2 Journal with Impact Factor 1.6).	

	➢ Mr. N. Sathishkumar, Assistant Professor, Department of Mechanical Engineering, has successfully participated & completed AICTE Training and Learning (ATAL) Academy Faculty Development Program on AI Driven Materials Discovery and Design: A new frontier in materials science at Dr. MAHALINGAM COLLEGE OF ENGINEERING AND TECHNOLOGY from 01/12/2025 to 06/12/2025 ➢ Mr. N. Sathishkumar, Assistant Professor, Department of Mechanical Engineering, published a Journal article titled "Enhancing Biofunctional Coatings on Selective Laser Sintered Polyamide Using Pulsed Laser Deposition for Implant Applications" in "Materials Chemistry and Physics" Journal. (Q1, SCIE & Scopus indexed, Anna University Annexure I Journal with Impact Factor 4.7). ➢ Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering has published a Scopus Indexed Book Chapter entitled "Integrating Emerging Technologies for Organizational Agility: An Interdisciplinary Approach to Digital Transformation", IGI Global Scientific Publishing on 10th December 2025 ➢ Dr. Vaddi Seshagiri Rao, Professor, Department of Mechanical Engineering, has published a patent titled "AI-Integrated VLSI System for Intelligent and Adaptive Smart City Energy Management" (App. No. 202541130191 A). ➢ Mr. G. Ashwin Prabhu, Assistant Professor from the Department of MechanicalEngineering has presented twp papers entitled 1- "Influence of Aerosil- 200 Nanofiller on the Flexural and Compressive Behavior of Glass Fiber Reinforced Epoxy Composites", 2- "Thermal Enhancement of Stir Casted Al6061-Cu Metal Matrix Composite Fins: Experimental Evaluation Under Forced Convection", in the International conference Sustainable Technologies and Advances in Automation, Aerospace and Robotics (STAAAR-2025) on December 17th & 18th 2025 at VIT Bhopal University, Madhya Pradesh, India. ➢ Mr. Subramanian M from Department of Mechanical Engineering has successfully completed Six-Day Virtual Faculty Development Program on Innovations in Advanced Materials, Optimization and Sustainable Energy systems from 15/12/2025 to 20/12/2025 organized by Department of Mechanical Engineering, SRM Institute of Science and Technology, Ramapuram Campus. ➢ Mr. T. Balasubramanian, Assistant Professor from the Department of Mechanical Engineering received an NPTEL–SWAYAM Certificate of Appreciation for Mentoringthe course " DRONE SYSTEMS& CONTROLS" (Jul Dec 2025).With 3 Students Enrolled and all threecleared with 2 students above 90% and 1 student above 60%. This course is 12 week Problematic course apart from Syllabus. ➢ Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering received an NPTEL–SWAYAM Certificate of

	Appreciation as a "Top Performing Mentor" for the course “Product Design and Development” (Jul–Dec 2025). With 63 enrolments and 50 participants appearing, the outcomes included15 students scoring≥90% and 2 toppers, reflecting strong mentorship impact and the department’s continued focus on studentskill development throughNPTEL initiatives. ➢ Mr. K. Gnanasekaran, Assistant Professor from the Department of Mechanical Engineering received an NPTEL–SWAYAM Certificate of Appreciation as a "Top Performing Mentor" for the course “ProductDesign and Development” (Jul–Dec 2025). With 34 enrolmentsand 22 participants appearing. ➢ Mr.K. Pravinkumar, Assistant Professor from the Department of Mechanical Engineering, has been recognized as a Top Performing Mentorby NPTEL SWAYAM. This appreciation is for mentoring the NPTEL course Manufacturing Processes – Casting and Joining (Jul Dec2025).With 37 enrolments and 28 participants appearing ➢ Mr. D. Sakthivel, Assistant Professor from the Department of Mechanical Engineering, has Completed the 6 Months QIP program on Drone Technologies in IIT Ropar. ➢ Mr. K. Gnanasekaran & Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering has presented a paper entitled "Investigation of microstructural and mechanical behavior on cryogenically treated Aluminium 7075 alloy", International conference Sustainable Technologies and Advances in Automation, Aerospace and Robotics (STAAAR-2025) on December 17th & 18th 2025 at VIT Bhopal University, Madhya Pradesh, India ➢ Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering has been awarded with NPTEL Discipline Star for Jul- Dec 2025. ➢ Mr. T. Balasubramanian, Assistant Professor from the Department of Mechanical Engineering has been awarded with NPTEL Discipline Star for Jul- Dec 2025. ➢ Mr.K. Gnanasekaran ,Assistant Professor from the department of mechanical engineering published a research article titled Taguchi analysis of machining parameters in cryogenically treated EN8 steel in AIP Conference Proceedings . ➢ Mr. Pravinkumar K, Mechanical Engineering, participated in training program conducted by ICT Academy, in collaboration with Autodesk, is organizing a three-day Faculty Workshop on Autodesk Product Design Engineering using Fusion from December 08–10, 2025. The

	workshop will be held at St. Joseph's Institute of Technology	
2	 	➢ Our Mechanical Engineering faculty, Mr. Sakthivel D has successfully completed the AICTE Sponsored QIP PG certification on 'Drone Technologies' from IIT Ropar. ➢ Department of Mechanical Engineering faculty member Mr. M. Subramanian have successfully completed the AICTE-sponsored 6 Months QIP – PG Certification Program on "Machine Learning" conducted at the Indian Institute of Information Technology (IIIT), Surat ➢ Department of Mechanical Engineering faculty members Mr. K.M.B.Karthikeyan and Mr.R.Elakkiyadasan have successfully completed the AICTE-sponsored 6 Months QIP – PG Certification Program on "Advanced Aerospace Material Development, Characterization and testing" conducted at the Indian Institute of Technology (IIT), Bhila ➢ Department of Mechanical Engineering faculty members Dr. M. Ganesh and Dr. K. Muninathan have successfully completed the AICTE-sponsored QIP – PG Certification Program on "AI & Robotics," conducted at the National Institute of Technology Puducherry (NITPY), Karaikal. ➢ Department of Mechanical Engineering faculty member Mr. T. Balasubramanian have successfully completed the AICTE-sponsored 6 Months QIP – PG Certification

		Program on “Robotics,” conducted at the Indian Institute of Technology (IIT), Palakkad
3		➢ Two of our Mechanical staff members have been recognized as “NPTEL STARS” by NPTEL.

5		➢
		Mr. Balasubramanian, Assistant progessor, Department of Mechanical Engineering, gave a guest lecture on focusing Design to Dynamic Performance on how to build an ATV vehicle for the BAJA event" at Acharya College of Engineering & Technology, on 22/12/2025, from 10:00 AM to 12:00 PM

		Dr. George Sahaya Nixon, Associate Professor, Department of Mechanical, visited Diamond Engineering (Chennai) PVT.LTD as part of the Industry–Institute Interaction program. During the visit, the company assured us of their support in offering internship cum placement opportunities for our students
		➢ Our Mechanical Department organized a outreach program, as part of the Department of Atomic Energy (DAE) outreach programme, Mr. P. Vijaya Gopal, Scientific Officer and Head, Publication & Outreach Section, Planning & Human Resource Management Division, and Ms. Bakkiam D., Scientific Officer (F), Radiation Dosimetry Section, Environmental Assessment Division, visited our college on 15/12/2025. The session introduced around 300 students to the activities of their Department and explained the different modes of recruitment and the application procedure.

		➢ Dept of Mechanical Engineering successfully conducted a technical training sessions for Caterpillar recruitment drive on 04/12/2025 (8 AM - 3 PM). Key sessions: Engineering Thermodynamics by Dr. G.M. Lionus Leo, Thermal Engineering by Dr. K. Muninathan, and Fluid Mechanics & SOM by Mr. Siva M
	STUDENT ACHIEVMENTS HACKATHON WINNERS 	➢ Stellantis Vehicle Process Engineering conducted a hackathon as part of their Innovation Fair 2025 for our institutions, spanning a duration of six months. They provided real industry problem statements and company data to our seven student teams, mentored by Mr. N. Sathishkumar, Assistant Professor, Mechanical Engineering and CAD & 3D Printing faculty. After completing both online and offline reviews, a team of four Stellantis leads visited our campus on 25/11/2025 and shortlisted three teams for the final round. These teams presented at the Stellantis Chennai One corporate office on 05/12/2025 and performed exceptionally well, securing winner and runner-up positions
	BAJA -STUDENT ACHIEVEMENTS	➢ The students of the Department of Mechanical Engineering

		have successfully designed, manufactured and tested two Baja ATVs Hbaja and Ebaja for the Baja SAE india 2026 competition. This achievement marks their continuous effort, technical competence, hardwork and sacrifice towards their passion. The college management wishes them a succesful and thriving journey ahead

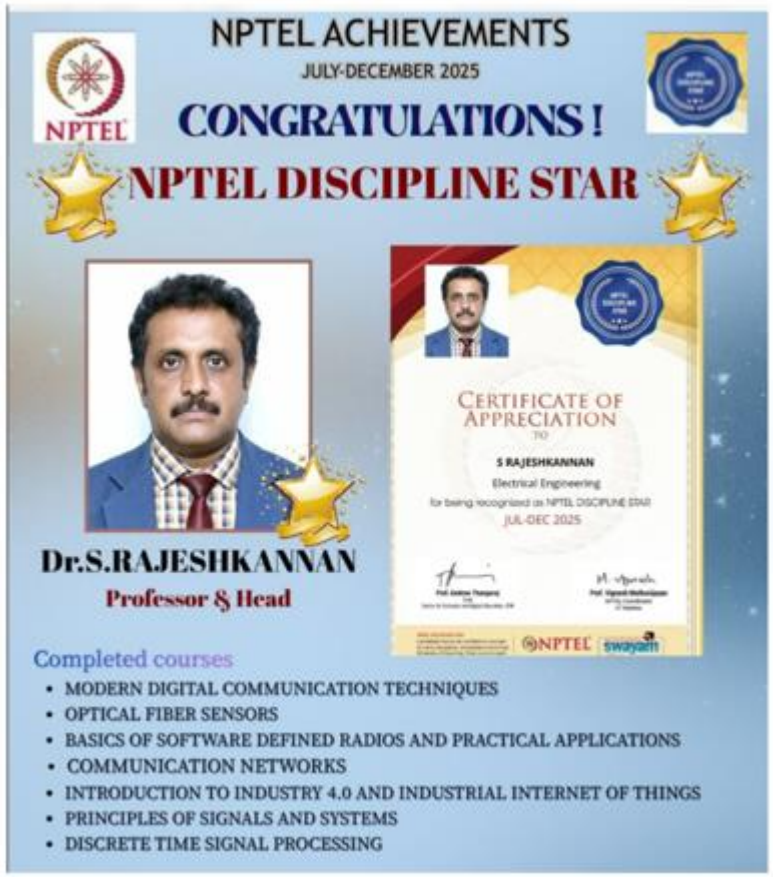
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Events conducted:

The following events have been conducted during December 2025 at College Level

1. International Conference ICNEXTS'25	**Report**
a) Activity 1	
	The first day of ICNEXTS 2025, 11th Dec, organized by the Department of ECE, was conducted successfully and smoothly. Out of 100 papers received, 40 papers were presented, with 20 offline and 20 online sessions. The offline track featured 16 external papers from reputed institutions including Anna University, MIT, Vel Tech, and Pondicherry University. The online track included 14 papers from international and national institutions such as Western Sydney University, NTU Singapore, and BITS Dubai. The sessions were honored by the presence of Dr. N. Sridharan, IETE Chairman–Chennai, and Mr. Pragash Mangalpandian, Associate Director, Microchip Technology.

   	   
2. STAFF ACHIEVEMENTS	**Report**

	The Department of Electronics and Communication Engineering proudly congratulates Dr. S. Rajeshkannan, Professor & Head, on being recognized as an NPTEL Discipline Star for July–December 2025. This prestigious achievement reflects his consistent academic excellence and dedication to continuous learning. His accomplishment brings great pride to the ECE Department and reinforces its commitment to quality education and professional growth.

	The ECE Department proudly congratulates Dr. K. Ramachandra Reddy, Dr. E. Jayanthi, Mrs. P. Thenmozhi, and Mrs. K. R. Kayalvizhi on receiving the NPTEL Top Performing Mentor Recognition for July–December 2025. This prestigious honor reflects their exceptional mentoring skills and commitment to academic excellence. Their guidance has significantly contributed to student success in NPTEL courses across diverse technical domains. The achievement brings great pride to the ECE Department and reinforces its culture of quality teaching and innovation.
	The Department of Electronics and Communication Engineering proudly congratulates all faculty members for receiving the NPTEL Mentor Recognition for July–December 2025.Dr. S. Rajeshkannan, Dr. J. Martin Leo Manickam, Dr. R. Avudaiammal were honored for their exemplary mentoring contributions. Each mentor demonstrated outstanding commitment to guiding learners through NPTEL courses. Their consistent academic support helped students achieve better understanding and performance.


Congratulations
NPTEL MENTOR RECOGNITION
(JULY – DEC 2025)
Dr. S RAJESHKANNAN
Professor & Head
Basics of Software Defined Radios
and Practical Applications
Dr. J Martin Leo Manickam
Professor
Basics of Software Defined Radios
and Practical Applications
Dr. R Avudaiammal
Professor
IIT Kharagpur

	The Department of Electronics and Communication Engineering proudly congratulates all faculty members for receiving the NPTEL Mentor Recognition for July–December 2025. Mr. G. D. Vignesh, Mrs. K. Jasmine Mystica, Mrs. M. Angelin Ponrani, Dr. A. Sivanandam, Mrs. S. Meenakshi, and Ms. M. Divyashree were honored for their exemplary mentoring contributions. Each mentor demonstrated outstanding commitment to guiding learners through NPTEL courses. Their consistent academic support helped students achieve better understanding and performance.
3. IEEE Volunteer Leadership Training Program (VoLT)	
	Our Faculty Mr. G. D. Vignesh, Assistant Professor, Dept. of ECE attended the Volunteer Leadership Training Program (VoLT) 2.0 organised by the Young Professionals Group of IEEE Madras Section on 6th December 2025 at Trista Global Pvt. Ltd., Guindy. The program covered important aspects related to technical volunteering, professional leadership, humanitarian engineering, funding mechanisms and entrepreneurship.Participants strengthened volunteer leadership skills, including event organization, team

motivation, and student mentoring through IEEE activities. Clear insights were gained into IEEE, Region 10, and MGA grant procedures, supporting future funded technical and outreach initiatives. The importance of a humanitarian mindset in engineering was emphasized, focusing on empathy, social responsibility, and community-driven solutions. The program also offered guidance on entrepreneurship and innovation, while fostering valuable networking with IEEE Young Professionals for future collaboration.

6) Publications

Patent Publications

1) Ms. Meenakshi S, Assistant Professor, Department of ECE published a Patent titled “Artificial Intelligence Enabled Image Analysis for Battery Performance Optimization Using Deep Neural Networks”.

2) Ms. Beaulah Princiba D , Assistant Professor, Department of ECE published a Patent titled “Blockchain Backed IoT Ecosystem for Supply Chain Traceability Using Drone Navigation System”.

3) G. D. Vignesh, Assistant Professor, Department of ECE published a Patent titled “AI-Driven Cybersecurity Framework for Automated Threat Detection and Mitigation”.

FDP Attended

1) Dr. P. Elaveni, Assistant Professor, Department of ECE participated in a 6-day National FDP on “Exploratory Data Analysis” organized by ATAL from 24.11.2025 to 29.11.2025.

2) Ms. M. Divya Shree, Assistant Professor, Department of ECE, attended a 5-day National FDP on “Generative AI and Prompt Engineering” conducted by R. P. Sarathy Institute of Technology from 27.10.2025 to 31.10.2025.

3) Dr. J. Martin Leo Manickam, Professor, Department of ECE, successfully participated in a 3-day National FDP on “IBM Qiskit Fall Fest” organized by NIT Karaikal from 17 to 19 November 2025.

4) Dr. S. Vinayagapriya, Associate Professor, Department of ECE, completed a 5-day National FDP on “Advanced Research Tools

for Electronic and Photonic System Design" conducted by Loyola–ICAM College of Engineering and Technology from 08.12.2025 to 12.12.2025.

5) Ms. G. Anitha, Assistant Professor, Department of ECE participated in a 3-day National FDP on "IBM Qiskit Fall Fest" organized by NIT Karaikal from 17 to 19 November 2025.

6) Dr.B.Victoria Jancee, Assistant Professor, Department of ECE participated in 6 Days Faculty Development Program on "Advancements in Antenna Technologies for next generation wireless communications and Bio-EM Applications" from 15th December to 20th December 2025.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

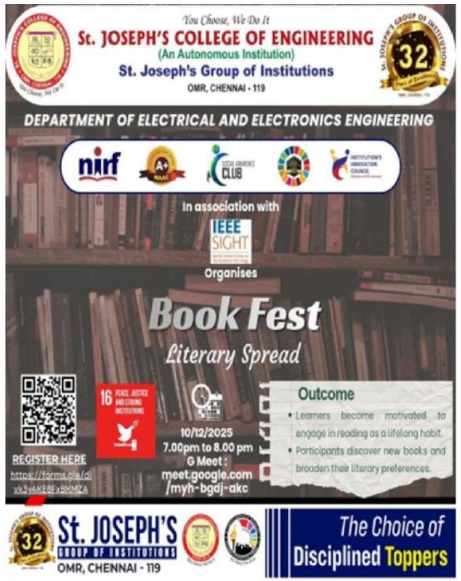
Sl. No.	Photographs Captured During Events	Corresponding remarks (Minimum 300 words)
1.	**Faculty Development program**  *PIC: EVENT PHOTO*	Department of Electrical and Electronics engineering organized one week faculty development program INNOVATIONS AND CHALLENGES IN ELECTRIC MOBILITY SYSTEMS FOR SMART CITIES (ICEMSSC) sponsored by IEEE from dec 1 to dec 5 2025. FDP was inaugurated by chief guests Dr. Radha S, Secretary, IEEE Madras Section and Principal, SSN College of Engineering and Mr. Mahadevan V.C, Manager and Team Leader, Renault Nissan Technology and Business Centre India Pvt. Ltd., Experts Mr. Balamanikandan A.R, R&D Engineer at Power Lab Instruments, Chennai, Dr. K. Gayathri, Power Electronics Engineer at GGS Engineering Service Company (Caterpillar), Chennai, Mr. Sreekanth Reddy Chalapala, Ford Motors, USA, Mr. Sreeraj S V, Director – Technical and Operations, EmCog Solutions, Chennai, Dr. Lenin N C, Professor, VIT Chennai handled the session. Industrial visit to centre of mobility, L&T Edutech, Manapakkam provided hands on exposure to EV testing facilities, simulation tools and real-world engineering practices.

2.	**National Entrepreneurship Challenge**  ***PIC: EVENT PHOTO***	E-Cell St.Joseph's team secured 13th position in National Entrepreneurship Challenge (NEC) Finals at IIT Bombay on dec 10 to 12 2025 at IIT Bombay. Ms.S.P.Vedavalli, AP, EEE was the mentor for this team.
3.	**IEEE activities**	"Entrepreneurship: From Idea to Execution" WEBINAR SESSION 1 on 19/12/2025 The session was delivered by **Ms. Akshaya Suresh, Co-Founder of Aptitude Guru and an experienced Hackathon Mentor.** She shared her entrepreneurial journey and practical experiences with students. The speaker emphasized the importance of developing an entrepreneurial mindset. She explained simple ways to turn ideas into workable business models. The session covered problem identification, idea validation, and handling early challenges. It motivated students to confidently pursue entrepreneurship with clarity and confidence.

PIC: EVENT POSTER

4.	**IEEE activities**  ***PIC: EVENT POSTER***	"Entrepreneurship: From Idea to Execution" WEBINAR SESSION 1 on 26/12/2025 The webinar session was delivered by M**s. Kamalika Krishmy, Founder of The Brown Box Co., BNI Senior Trainer, and Entrepreneur Mentor.** The talk focused on redefining success from a women-centric entrepreneurial perspective, emphasizing how women leaders are breaking traditional barriers, embracing innovation, and building ventures driven by purpose and passion. Drawing from her personal entrepreneurial journey, the speaker highlighted key aspects such as resilience, adaptability, leadership, personal branding, and the critical role of mentorship in sustaining entrepreneurial growth.
5.	**ISTE Activities**	The ISTE Student Chapter, in association with the IEEE Photonics & Automation Society, organized "QUANTUM TALK" on December 10, 2025, from 6:00 PM to 7:00 PM via Google Meet. The technical session saw active participation from 33 members and focused on introducing the fundamentals of quantum computing. Participants gained insights into key concepts such as qubits, superposition, entanglement, and quantum gates, while understanding the differences between classical and quantum computing. **The event sparked curiosity toward real-world applications and future research in quantum technologies.**

	 ***PIC: EVENT POSTER***	
6.	**CLUB Activities**	The Social Awareness Club, in collaboration with the IEEE Special Interest Group on Humanitarian Technology, organized "BOOK FEST" on December 10, 2025, from 7:00 PM to 8:00 PM via online mode. The event saw active participation from 30 members and featured two engaging rounds—Word Scramble and Just a Minute. **The program encouraged reading as a lifelong habit, sparked interest in books, and helped participants explore diverse genres, enhancing their appreciation of literature and continuous learning.**

	 ***PIC: EVENT POSTER***	
7.	**CLUB Activities**	The Robotics Club (EEE) of St. Joseph's College of Engineering, in association with the IEEE Robotics and Automation Society, successfully organized "ROBO QUEST" on December 12, 2025, via Google Meet. The one-hour technical event (7:00 PM – 8:00 PM) witnessed enthusiastic participation from 34 club members. **The event focused on the role of robotics and automation in shaping future industries and daily life.** Participants gained valuable insights into smart automated systems and enhanced their creative and practical skills. The event proved to be informative, engaging, and future-oriented for aspiring engineers.

	 *PIC: EVENT POSTER*	
8.	**CLUB Activities**	The ENSAVE Club, in collaboration with the IEEE Special Interest Group on Humanitarian Technology, organized "ECO FUSION" on December 12, 2025, via Google Meet. The one-hour technical event (6:00 PM – 7:00 PM) saw active participation from 21 members. The program featured two engaging rounds—a Quiz and a Debate—focused on environmental protection and sustainability. **The event encouraged eco-friendly thinking, promoted green living practices, and highlighted the importance of reducing waste and conserving natural resources through collective action.**

	 ***PIC: EVENT POSTER***	
9.	**CLUB Activities**	The Electrical Club, in collaboration with the IEEE IAS Society, organized a technical event titled “Spark Fest” on 15th December 2025 at St. Joseph’s College of Engineering. The event was conducted online via Google Meet from 6:00 pm to 7:00 pm and witnessed the participation of 33 students. Spark fest **consisted of a single challenging round focused on solar energy, photovoltaic systems, and power calculations**. Participants showcased strong analytical and problem-solving skills while addressing real-world solar-based scenarios. The event successfully promoted technical learning, logical reasoning, and awareness of sustainable energy solutions.

	 ***PIC: EVENT POSTER***	
10.	**CLUB Activities**	The Choppers Club (EEE) of St. Joseph's College of Engineering, in association with the IEEE Power Electronics Society, successfully organized "MOTOR MANIA" on December 15, 2025, via Google Meet from 7:00 PM to 8:00 PM. The event witnessed enthusiastic participation from 30 members and focused on exploring students' hidden talents while connecting concepts of motors, power electronics, and control systems. **Participants gained valuable insights into modern power-switching techniques, switching devices, and their role in achieving efficient, safe, and reliable motor operation**.

	 *PIC: EVENT POSTER*	
11.	**FACULTY PARTICIPATION**  *PIC: EVENT PHOTO*	1. **Dr.M.Venmathi, ASP, EEE, Mr.H.Umesh Prabhu, AP, EEE, Mr.R.Sreekanth, AP, EEE, Ms.S.P.Vedavalli, AP, EEE, Ms.S.Gomathi, AP, EEE obtained Entrepreneurship Educator by WADHWANI FOUNDATIONS.** 2. **Dr.T.V.Narmadha, Professor, EEE, Dr.M.Ramesh Babu, Professor, EEE, Dr.T.D.Sudhakar, Professor, EEE, Dr.V.Krishnakumar, ASP, EEE, Dr.A.Jamna, AP, EEE, Ms.R.G.Nirmala, AP, EEE, Ms.C.Ramadevi, AP, EEE obtained Applied proficiency in Entrepreneurship by WADHWANI FOUNDATIONS.** 3. **Dr.P.Velmurugan, ASP, EEE, Dr.C.Venkatesh Kumar, AP, EEE, Mr T Sri Ananda Ganesh, AP/EEE, Mr.A.Sadeesh Kumar, AP, EEE, Mr.S.Nishant, AP, EEE Participation in Entrepreneurship program by WADHWANI FOUNDATIONS.** 4. **Dr.Jayarama Pradeep, Professor &Head EEE, Dr.S.Sridharan, ASP,EEE attended Faculty Quality improvement program on "Intelligent transportation systems: Synergy of Artificial Intelligence, Drone & EV" at ABV- IIITM Gwalior.** 5. **Dr.T.Babu, ASP, EEE attended Faculty Quality improvement program: Machine Learning and Cyber Physical Systems" at IIIT Trichy.** 6. **Mr R Elanthirayan AP/EEE attended Faculty Quality improvement program: AI & Robotics, at NIT Puducherry.**

		7. **Mr.N.Jeyaprakash, AP/EEE, attended Faculty Quality improvement program: Artificial Intelligence & Machine Learning" at IIIT Lucknow.** 8. **Dr V Krishnakumar, ASP/EEE attended ATAL FDP on The Future of Movement: Smart Cities.** 9. **Mr T Sri Ananda Ganesh, AP/EEE attended ATAL FDP on Charging infra for EVs**
12.	**Faculty Recognition**	**1. Dr.T.V.Narmadha, Professor, EEE, Dr.A.Jamna, AP, EEE, Mr.H.Umesh Prabhu, AP, EEE recognised as top mentors by NPTEL for the session Jul-Dec 2025.** **2. Mr.H.Umesh Prabhu AP/EEE recognised by NPTEL as a) Enthusiasts, b) Believer, c) Data Science Domain scholar, d) Discipline star.** **3. Mr.V.Balasubramanin recognised by NPTEL as a) Robotics Domain scholar, b) Discipline star.** **4. Mr.H.Prasad AP/EEE recognized by NPTEL as Data Science Domain scholar.** **5. Mr.S.S.Harish AP/EEE recognised by NPTEL as Discipline star.**
13.	PLACEMENT DETAILS FOR THE MONTH OF DECEMBER 2025	**2022-2026 Batch** No of students placed = 91 Students Total No of Offers = 119 Offers Total No of Students (UG) = 171

		Total No of Students Sports Causals (UG) = 01 Total No of Eligible Students (UG) = 141 (All Clear) % of students Placed (UG) = 91/170 = 53.22% No of students having single offers = 69 No of students having Double offers = 17 No of students having Triple offers = 4 No of students having 4 offers =1

DEPARTMENT OF MATHEMATICS AND ENGLISH

Events	Remarks
Awards/Prize won by students	1. M. Mohamed Fadhil, Praveen K. S., and N. Mohammed Shahrukhuddeen demonstrated exceptional performance at SIMATS, Chennai, by securing First Prize in Math Quiz, Dumb Charades, and Math Adventure, winning Second Prize in Math Logo Creation, and earning the Overall Best Team Medal for their outstanding achievements. 2. Mr. Hari Prasanth L., Ms. Bhavishya R., Ms. Bhavya R., Mr. GaneshMoorthy P.,and Mr. Gunasekaran M., students from the ADS and CSE Departments, representing the team Hackaholics, were awarded a cash prize of ₹3,000 in the Business & EdTech Solutions domain at the National Level Hackathon 360° – 2.0, under the theme "Innovate Today, Impact Tomorrow"
Industial Projects done by students	
Publications(only published) details	1. K. Suresh, G. Purushothaman, E. Thandapani, and E. Tunç, " Investigation of Oscillation Properties in Fourth-Order Emden–Fowler Type Advanced Differential Equations: A Study on Canonical and Noncanonical Forms," *Mathematical Methods in the Applied Sciences* (2025): 16424–16432, https://doi.org/10.1002/mma.70096. 2. Nguyen Van Minh, B. Poorani, R. Vijayakumar, M. Varalatchoumy, R.C. Sreevidya, Prajith Prabhakar,, Experimental and machine learning-based analysis of peanut drying using solar Photovoltaic-Thermal (PVT) collectors with forced convection and latent heat storage, Thermal Science and Engineering Progress,Volume 68,2025,104334,ISSN 2451-9049,https://doi.org/10.1016/j.tsep.2025.104334. (SCOPUS) 3. Savari Prabhu, Simili Abraham, Bibin K. Jose, **M. Arulperumjothi**, Tony Augustine, Ambient-Stable Electroactive Graphene Nanoribbons: A Comprehensive Analysis of Distance, Degree, Energetics and ^{13}C NMR Signals, Combinatorial Chemistry & High Throughput Screening; Volume 28, Issue , Year 2025, e13862073408572. DOI: 10.2174/0113862073408572250925161251

DEPARTMENT OF SCIENCE

Sl. No.	Events	Remarks
1	**Collabarative Quality initiatives with other institutions**	***Association Membership*** ***1.*** Dr. S. Suresh received the Association Membership from American Chemical Society on 02-12-2025. ***2.*** Dr. A. Mahalakshmi, Dr. A. Uma Devi, Dr. N.R. Rajagopalan, Dr. N. Punitha, Dr. T.L. Ajeesha, Dr. S. Rama, Dr. G. Sasikumar received the Association Membership from the Elavenil – Indian Science and Technology Association on 02-12-2025. ***3.*** Dr. N. Punitha, Dr. P. Krishnan, S. Rama, received the Association Membership from the Indian Association of Physics Teachers on 02-12-2025. ***Doctoral Committee Member*** ***1.*** Dr. P. Krishnan has been appointed as "Doctoral Committee Member" for a Ph.D research scholar of Velammal Engineering College, Chennai, on 31.12.25.
2	**Industrial Visits,Inplant Training,Internships**	--
3	**Guest Lecture**	--

4	**FDP/Workshop/Conference**	***Invited Talk*** 1. Dr. G. Senthil Murugan had delivered an invited talk at the National workshop cum hands-on training program on Crystal growth, Characterization and Applications, held on 22-12-25, conducted by "SSN College of Engineering, Chennai". 2. Dr. S. Suresh had delivered an invited talk at the guest lecture series session on Quantum materials technological applications, held on 24-12-25, conducted by "University of Buraimi, Oman". 3. Dr. N. Punitha, as a resource person, had delivered an invited talk at the online FDP on "Smart Composite Materials: Technologies and applications", held on 24-12-25, conducted by "Sant Longowal Institute of Engineering and Technology, Punjab". ***Session Chair*** 1. Dr. K. Jayamoorthy had acted as Session Chairperson at the International conference on sustainable materials and technologies for bio and energy applications and the Indo-Taiwan workshop on renewable energy, held on 22-12-25, conducted by "SSN College of Engineering, Chennai". 2. Dr. P. Saravanan had acted as Session Chairperson at the International Conference on Research, Engineering, and Advanced Technologies in Computing & Managemen , held between 27-12-25 and 28-12-25, conducted by "Ballari Institute of Technology & Management, Karnataka". ***Presented the paper*** Dr. N.R. Rajagopalan, Dr. J. Sharmila, Ms. S. Savitha, Dr. B. Subash, Dr. S. Rama had presented their papers in the International conference on sustainable materials

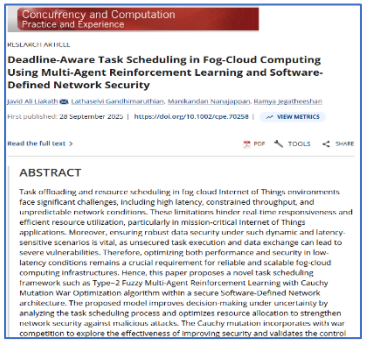
		and technologies for bio and energy applications and the Indo-Taiwan workshop on renewable energy, held on 22-12-25, conducted by “SSN College of Engineering , Chennai”. ***Attended:*** 1. Dr. J. Sharmila had attended workshop on “Information Literacy and Cyber Safety " held on 05.12.25, conducted by “Department of Youth Welfare and Sports Development, Government of Tamil Nadu, at the University of Madras, Chepauk, Chennai.”. 2. Dr. S. Manikandan had attended “National workshop cum hands-on training program on Crystal growth, Characterization and Applications” , held on 22-12-25, conducted by “SSN College of Engineering, Chennai”. 3. Dr. P. Saravanan, Dr. S. Rama had attended online faculty development program on “Emerging materials and advanced technologies for sustainability " held from 22-12-25 to 27-12-25, conducted by “Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College, Chennai”. 4. Dr. P. Krishnan had attended ATAL - online Faculty Development Program on "Clean Energy Technologies and Innovations in India: A Vision for Viksit Bharat @2047 " held from 22-12-25 to 27-12-25, conducted by “IIITDM , Karnool”.
9	**Awards/Prize won by students / Staff**	***Staff awards:*** 1. Dr. S. Suresh, Dr. N.R. Rajagopalan, Dr. G. Sasikumar received NPTEL Discipline star award on 12-12-25 awarded by NPTEL, IIT Madras. ***Students prize winners:***

		1. Ms. S.S. Boomi Nachi , Ms. S. Karunya Adhvaithi, Ms. C. Darathy Mektalene (I- ECE) , won Best Innovator Award along with a cash prize of Rs. 3000/- in the "National level online Hackathon event – Hackathon 360º – 2.0, held on 21-12-25conducted by the Department of Science, St. Joseph's College of Engineering, in association with Eclearnix (P) Ltd., 2. Mr. Lohit Ashwa Saritha Edison, Mr. S.R. Karthikeyan, Ms. M. Aishwarya, Ms. L. Monisha (I- ADS) , won Best Innovator Award along with a cash prize of Rs. 3000/- in the "National level online Hackathon event – Hackathon 360º – 2.0, held on 21-12-25conducted by the Department of Science, St. Joseph's College of Engineering, in association with Eclearnix (P) Ltd., 3. Mr. L. Hari Prasanth (I ECE), Ms. R. Bhavishya & Ms. R. Bhavya (I ADS) won Best Innovator Award along with a cash prize of Rs. 3000/- in the "National level online Hackathon event – Hackathon 360º – 2.0, held on 21-12-25, conducted by the Department of Science, St. Joseph's College of Engineering, in association with Eclearnix (P) Ltd., 4. Ms. Gadamsetty Venkata Nagalakshmi Sanjana, Ms. Ashwandhika R., (I ADS) won the best paper presentation award in the International conference on sustainable materials and technologies for bio and energy applications and the Indo-Taiwan workshop on renewable energy, held on 23-12-25, conducted by "SSN College of Engineering , Chennai".
11	**Publications(only published) details**	***Journal Publications:*** 1. Dr. P. Saravanan published a research article titled "A Photoluminescent Polycarbazole–Polythiophene Nanosheets Bridging Biomolecular Sensing in Food

		Samples and Energy Storage ” in the Journal “Luminescence”, 40 (2025) e70378, DOI: 10.1002/bio.70378 2. Dr. P. Saravanan published a research article titled “Solvent-free Selective Hydrogenation of D-glucose to D-sorbitol Using Different Metal-supported on Mesoporous Titanium Dioxide Catalysts ” in the journal “Chemical Physics Impact”, 11 (2025) 100982 doi: https://doi.org/10.1016/j.chphi.2025.100982 3. Dr. P. Saravanan published a research article titled “Tunable Band Gap Engineering and Photocatalytic Efficiency of Mn_3O_4/CuO/ZnO Ternary Nanocomposites for Efficient Photocatalytic Degradation” in the journal “Inorganic Chemistry Communications”, 184 (2025) 115894 Doi: 10.1016/j.inoche.2025.115894 4. Dr. N. Punitha published a review article titled Synergistic Integration of Artificial Intelligence, Organoid Models, and Multi-Omics Technologies in Contemporary Drug Discovery, ” in the journal “Advanced Therapeutics,” (2025) e00532 doi: https://doi.org/10.1002/adtp.202500532 5. Dr. K. Jayamoorthy, Dr. N.R. Rajagopalan published a research article titled “Synthesis, Spectral Studies, Solvent Effect and On–Off Fluorescence of 1-benzyl-4-fluoro-2-phenyl-1H-benzo[d]imidazole: Fe^{3+}-Induced Quenching and Reversal by H_3PO_4 ” in the journal “Phosphorus, Sulfur, and Silicon and the Related Elements,”(2025) doi: https://doi.org/10.1080/10426507.2025.2595277 ***Book Chapters*** 1. Dr. S. Kiruba has published a book chapter titled “Monitoring Vehicle Emissions

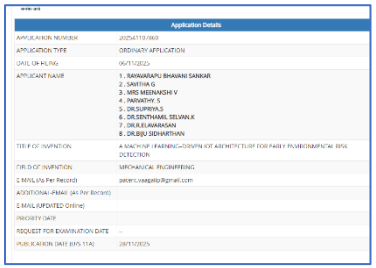
		Through Intelligent Transportation Systems for Smart City Development" in the book "AI, Cyber security and next generation mobility in smart cities" published "IGI Global Scientific Publishers ".(2025): DOI: 10.4018/979-8-3373-8133-6.ch003 2. Dr. A. Arulmozhi has published a book chapter titled "Micro learning and Nano–Learning in Transforming Pedagogy in the Digital Education Era" in the book "New Media Applications in Digital Education" published "IGI Global Scientific Publishers ".(2025): DOI: 10.4018/979-8-3373-5157-5.ch008 ***Patents*** 1. Dr. A. Uma Devi published a patent titled "Nano Enabled Biosensors for Real-Time Detection of Infectious Diseases - in the "Patent Office Journal 52/2025" – Application Number 202541091360, , dt 26.12.25. 2. Dr. G. Sasikumar published a patent titled "Thermodynamic modelling method using differential equation Mathematics" - in the "Patent Office Journal 52/2025" – Application Number 202511128358 , dt 26.12.25. ***Reviewers:*** 1. Dr. P. Saravanan - European Food research and Technology 2. Dr. S. Suresh - Current Organic chemistry 3. Dr. P. Krishnan – Current Nano Science, Journal of Chemical Data Collection 4. Dr. S.M. Prakash – Discover Chemistry

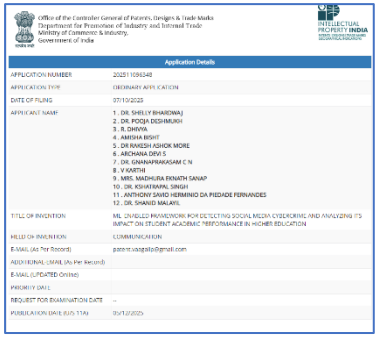
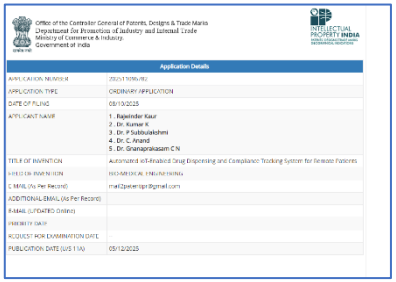
DEPARTMENT OF INFORMATION TECHNOLOGY

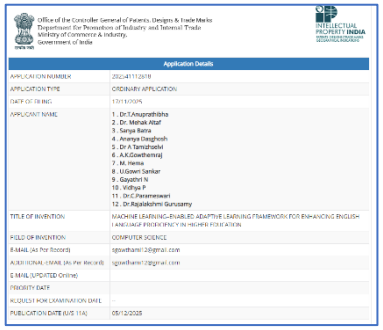
	Photographs Captured During Event/Screenshot	Corresponding remarks in regarding the status of activity execution
1.	 **Co-Author** **Ms. G Lathaselvi,** published a SCIE paper	**Staff Publication** Javid Ali Liakath, **Lathaselvi Gandhimaruthian**, Manikandan Nanajappan, Ramya Jegatheeshan, "Deadline-Aware Task Scheduling in Fog-Cloud Computing Using Multi-Agent Reinforcement Learning and Software-Defined Network Security", Journal name: Concurrency and Computation: Practice and Experience, 30 November 2025, e70258, wiley online library, First published: 28 September 2025, Volume37, Issue25-26, https://doi.org/10.1002/cpe.70258. (SCIE Paper) **Abstract:** Task offloading and resource scheduling in fog-cloud Internet of Things environments face significant challenges, including high latency, constrained throughput, and unpredictable network conditions. These limitations hinder real-time responsiveness and efficient resource utilization, particularly in mission-critical Internet of Things applications. Moreover, ensuring robust data security under such dynamic and latency-sensitive scenarios is vital, as unsecured task execution and data exchange can lead to severe vulnerabilities. Therefore, optimizing both performance and security in low-latency conditions remains a crucial requirement for reliable and scalable fog-cloud computing infrastructures. The Cauchy mutation incorporates with war competition to explore the effectiveness of improving security and validates the control of dynamic functionality by estimating the routing process. The results revealed that the latency is minimized for the proposed model by 43% and maximized throughput by 82.3% with better quality of service at 69%, and enhanced network security by 78.2%. Also, the proposed method diminishes response time by 37 s and optimizes resource utilization to conform to the robustness and efficiency in real-time

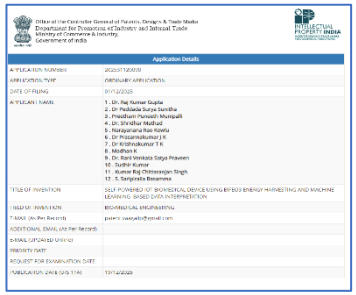
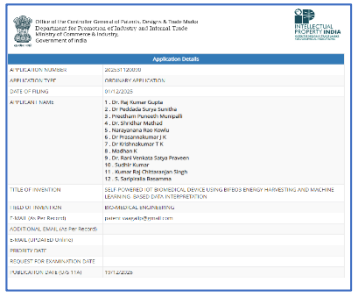
		Internet of Things applications. Thus, the results validate the capability of the proposed framework by improving offloading strategies with secure and scalable task scheduling.
2.	 Digital Renaissance: Government Scheme Notification and Smart Fund Disbursement as Catalysts for Empowerment in Social Reliability **Author** **Ms. Kavitha A,** Published a paper in Scopus	**Staff Conference Publication** **Kavitha A**, "Digital Renaissance: Government Scheme Notification and Smart Fund Disbursement as Catalysts for Empowerment in Social Reliability," 2024 International Conference on Smart Technologies for Sustainable Development Goals (ICSTSDG), Chennai - 600077, Tamil Nadu, India, 2024, pp. 1-7, doi: 10.1109/ICSTSDG61998.2024.11026562. **(Indexed in Scopus)** **Abstract:** Government policies on education, health, welfare, infrastructure, and agriculture are key to improving society, improving quality of life, meeting basic needs, encouraging economic growth and promoting sustainable development permanent presence is encouraged but a lack of awareness of these services often leads to uneven distribution of benefits. To address this gap, we developed an app that instantly notifies eligible individuals or families of the introduction of new government policies. Our solutions use technologies such as SQLite, Mobile Backend as a Service (MBaaS), and AI-driven scheduling algorithms using Monte Carlo simulation and Dynamic Programming, ensuring optimal performance for optimal performance. Additionally, by using machine learning algorithms to assess eligibility, this system streamlines the distribution of resources, providing timely information to those most in need. This new approach helps promote equitable distribution of government resources and promote positive social change. Our mission is to empower individuals by connecting them with the support they need, ultimately creating an inclusive and prosperous society. This holistic approach enables the government to make a meaningful impact, delivering a brighter and more equitable future for all.

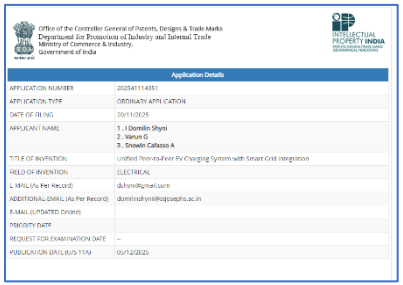
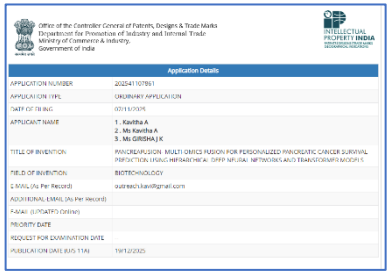
3.	 **Authors** **Dharnesh, K., Eliza, J., Mr. Radhakrishnan, K.R.,** Published a paper in Scopus indexed Conference	**Staff - Student Conference Publication** **"Dharnesh, K., Eliza, J., Radhakrishnan, K.R.", (2026),** Leveraging Attention Mechanisms for Toxic Comment Classification and Real-Time Moderation. In: Mercier-Laurent, E., Jayaraman, B., Ravisankar, P., S., A.D., Jayasimhan, A. (eds) Computational Intelligence in Data Science. ICCIDS 2025. IFIP Advances in Information and Communication Technology, vol 750. Springer, Cham. https://doi.org/10.1007/978-3-031-98364-1_4. (Indexed in Scopus) **Abstract** An optimized attention-based BiLSTM model for classifying harmful comments is presented in this research. It incorporates real-time data analysis and a live comment stream. Conventional machine learning models, such as CNNs and LSTMs, frequently have trouble identifying subtle types of toxicity including context - dependent hate speech, irony, and sarcasm. Traditional machine learning models, including CNNs and LSTMs fail to recognize subtle forms of toxicity, such as context-dependent hate speech, irony, and sarcasm. A BiLSTM network with an attention mechanism will be used in this proposed system in order to track the relationships of words and pick the important indicators of toxicity. The system produces visual reports with analysis over time of comment activity, sentiment distribution, and common toxic phrases. Automation in toxicity detection and provision of deep analysis enable the system to lead towards safer online environments while increasing moderation efficiency and scale.

4.	 **Dr.R.Elavarasan** Published an Indian Patent	**Patent Published** **Title of the invention: A MACHINE LEARNING–DRIVEN IOT ARCHITECTURE FOR EARLY ENVIRONMENTAL RISK DETECTION** **Name of Inventor:** 1. Rayavarapu Bhavani Sankar 2. Savitha G 3. Mrs Meenakshi V 4. Parvathy. S 5. Dr.Supriya.S 6. Dr.Senthamil Selvan.K 7. **Dr.R.Elavarasan** 8. Dr.Biju Sidharthan **Application Number:** 202541107860 **Date of filing of Application:** 06/11/2025 **Publication Date:** 28/11/2025

5.	 **Dr. Gnanaprakasam C N** Published an Indian Patent	**Title of the invention: ML–ENABLED FRAMEWORK FOR DETECTING SOCIAL MEDIA CYBERCRIME AND ANALYZING ITS IMPACT ON STUDENT ACADEMIC PERFORMANCE IN HIGHER EDUCATION** **Name of Inventor:** 1. Dr. Shelly Bhardwaj 2. Dr. Pooja Deshmukh 3. R. Dhivya 4. Amisha Bisht 5. Dr Rakesh Ashok More 6. Archana Devi S **7. Dr. Gnanaprakasam C N** 8. V Karthi 9. Mrs. Madhura Eknath Sanap **Patent Application Number:** 202511096348 **Date of filing of Application:** 07/10/2025 **Publication Date:** 05/12/2025
6.	 **Dr. Gnanaprakasam C N** Published an Indian Patent	**Title of the invention: SWINSHIFT-CD : TRACKING TERRESTRIAL TRANSFORMATION WITH SHIFTED WINDOWS** **Name of Inventor:** 1. Rajwinder Kaur 2. Dr. Kumar K 3. Dr. P Subbulakshmi 4. Dr. C. Anand **5. Dr. Gnanaprakasam C N** **Patent Application Number:** 202511096782 **Date of filing of Application:** 08/10/2025 **Publication Date: 05/12/2025**

7.	 **Dr A Tamizhselvi** Published an Indian Patent	**Title of the invention: MACHINE LEARNING–ENABLED ADAPTIVE LEARNING FRAMEWORK FOR ENHANCING ENGLISH LANGUAGE PROFICIENCY IN HIGHER EDUCATION** **Name of Inventor:** 1 . Dr.T.Anuprathibha 2 . Dr. Mehak Altaf 3 . Sanya Batra 4 . Ananya Dasghosh **5 . Dr A Tamizhselvi** 6 . A.K.Gowthemraj 7 . M. Hema 8 . U.Gowri Sankar 9 . Gayathri N 10 . Vidhya P **Patent Application Number:** 202541112818 **Date of filing of Application:** 17/11/2025 **Publication Date:** 05/12/2025
8.	 **Ms. Ashlin Jenitha J R** Published an Indian Patent	**Title of the invention: INTELLIGENT PREDICTIVE SYSTEM FOR DYNAMIC DATA ANALYSIS** **Name of Inventor:** 1. Dr. Sana Zeba 2. Dr. SV. Shri Bharathi 3. Dr. Divya G 4. Ms. Brintha K 5. Prof. V. Kiruthiga **6. Ms. Ashlin Jenitha J R** 7. Mr. P K Kumar **Patent Application Number:** 202541115775

		Date of filing of Application: 23/11/2025 **Publication Date:** 12/12/2025
9.	 **Mr.Madhan K** Published an Indian Patent	**Title of the invention: SELF-POWERED IOT BIOMEDICAL DEVICE USING BIFEO3 ENERGY HARVESTING AND MACHINE LEARNING–BASED DATA INTERPRETATION** **Name of Inventor:** 1. Dr. Raj Kumar Gupta 2. Dr Peddada Surya Sunitha 3. Preetham Puneeth Munipalli 4. Dr. Shridhar Mathad 5. Narayanana Rao Kowlu 6. Dr Prasannakumar J K 7. Dr Krishnakumar T K **8. Madhan K** 9. Dr. Rani Venkata Satya Praveen 10. Sudhir Kumar **Patent Application Number:** 202531120090 **Date of filing of Application:** 01/12/2025 **Publication Date:** 19/12/2025
10.	 **Dr.Sumathi S** Published an Indian Patent	**Title of the invention: HYBRID VISION-LANGUAGE SYSTEM FOR MULTILINGUAL MEDICAL REPORT GENERATION AND ABNORMALITY DETECTION IN X-RAY IMAGING** **Name of Inventor:** 1. Renjith R S 2. Packiaraj R 3. Sam V George **4. Sumathi S** **Patent Application Number:** 202541105199

		Date of filing of Application: 31/10/2025 **Publication Date:** 19/12/2025
11.	 **Ms. I Domilin Shyni, Varun G, Snowin Cafasso A,** Published an Indian Patent	**<u>Staff--Student Patent</u>** **Title of the invention: UNIFIED PEER-TO-PEER EV CHARGING SYSTEM WITH SMART GRID INTEGRATION** **Name of Inventor:** **1 . I Domilin Shyni** **2 . Varun G** **3 . Snowin Cafasso A** **Patent Application Number:** 202541114351 **Date of filing of Application:** 20/11/2025 **Publication Date:** 05/12/2025
12.	 **Ms. Kavitha A, Girisha J K** Published an Indian Patent	**Title of the invention: PANCREAFUSION- MULTI-OMICS FUSION FOR PERSONALIZED PANCREATIC CANCER SURVIVAL PREDICTION USING HIERARCHICAL DEEP NEURAL NETWORKS AND TRANSFORMER MODELS** **Name of Inventor:** **1 . Kavitha A** **2 . Ms Kavitha A** **3 . Ms Girisha J K** **Patent Application Number: 202541107861** **Date of filing of Application: 07/11/2025** **Publication Date: 19/12/2025**

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<tr><td colspan="2">Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India</td></tr>
<tr><th colspan="2">Application Details</th></tr>
<tr><td>APPLICATION NUMBER</td><td>202531120090</td></tr>
<tr><td>APPLICATION TYPE</td><td>ORDINARY APPLICATION</td></tr>
<tr><td>DATE OF FILING</td><td>01/12/2025</td></tr>
<tr><td>APPLICANT NAME</td><td>1 . Dr. Raj Kumar Gupta
2 . Dr Peddada Surya Sunitha
3 . Preetham Puneeth Munipalli
4 . Dr. Shridhar Mathad
5 . Narayanana Rao Kowlu
6 . Dr Prasannakumar J K
7 . Dr Krishnakumar T K
8 . Madhan K
9 . Dr. Rani Venkata Satya Praveen
10 . Sudhir Kumar
11 . Kumar Raj Chittaranjan Singh
12 . S. Saripiralla Basamma</td></tr>
<tr><td>TITLE OF INVENTION</td><td>SELF-POWERED IOT BIOMEDICAL DEVICE USING BIFEO3 ENERGY HARVESTING AND MACHINE LEARNING-BASED DATA INTERPRETATION</td></tr>
<tr><td>FIELD OF INVENTION</td><td>BIO-MEDICAL ENGINEERING</td></tr>
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<tr><td>REQUEST FOR EXAMINATION DATE</td><td></td></tr>
<tr><td>PUBLICATION DATE (U/S 11A)</td><td>19/12/2025</td></tr>
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Mr.Madhan K

Published an Indian Patent
</td>
<td>
Title of the invention: SELF-POWERED IOT BIOMEDICAL DEVICE USING BIFEO3 ENERGY HARVESTING AND MACHINE LEARNING–BASED DATA INTERPRETATION

Name of Inventor:
1. Dr. Raj Kumar Gupta
2. Dr Peddada Surya Sunitha
3. Preetham Puneeth Munipalli
4. Dr. Shridhar Mathad
5. Narayanana Rao Kowlu
6. Dr Prasannakumar J K
7. Dr Krishnakumar T K
8. Madhan K
9. Dr. Rani Venkata Satya Praveen
10. Sudhir Kumar

Patent Application Number: 202531120090
Date of filing of Application: 01/12/2025
Publication Date: 19/12/2025
</td>
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</table>

14.	 ICTACADEMY CERTIFICATE OF PARTICIPATION HEPSI AJIBAH A S St. Joseph's College of Engineering, Sholinganallur, Chennai has participated in one week Faculty Development Program on Cybersecurity (Cisco) conducted by ICT Academy on 15 Dec 2025 to 20 Dec 2025 at Sri Sairam Engineering College, Chennai **Sample FDP Certificate**	**Seminar/ FDP Attended by Faculty**

S.No	Title of the topic	Name of the Staff	Conducted By	Date
1	Smart Water Management applications Of Remte Sensing, Gisand SWAT	1. Dr. Tamizhselvi A 2. Mr. Radhakrishnan K R	SRM Valliyammai Engg Coll	15-12-25 To 20-12-25
2	Agentic AI For Problem Solving In Real-World Applications	1. Dr. Thresa Jennifer 2. Ms. Utthirakumari R	NITTTR,Chennai	8-12-25 To 12-12-25
3	Generative AI, Large Language Models (LLMS) And Transformers	1. Ms.Abinaya K Samy 2. Ms. Elakkiya E	Sri Sairam Institute of Technology, Chennai	15-12-25 To 20-12-25
4	Cybersecurity (Cisco)	Ms.Hepsi Ajibah A S	ICT Academy at Sri Sairam Engineering College, Chennai	15 Dec 2025 To 20 Dec 2025

			5	Data Science and Research Analytics Using R Programming	1. Ms. Kavitha A 2. Dr.Gopika	NITTTR, Tharamani Chennai	15/12/2025 To 19/12/2025	
			6	The Future of Movement: Smart Cities	Mr. Madhan K	Mailam Engineering College	08/12/2025 To 13/12/2025.	
			7	Computer Vision Technology for Biomechanics Applications	1. Ms. K.Sarika 2. Dr. Aneesh Euprazia L	Vellore Institute Of Technology Chennai Off Campus	1-12-2025 To 6-12-2025	
			8	Exploratory Data Analytics (EDA)-Tools And Techniques At	Ms. Shoba. R	Atal Velammal College Of Engineering & Technology	24.11.2025 To 29.11.2025	
			9	Emerging Trends In Machine Learning,Deep Learning And Cloud Based AI Tools	Ms. I Domilin Shyni	DMI Engineering College	2-01-2026 To 7-01-2026	

Prepared By,

Department Coordinator

Head of the Department

Dr. S.Sumathi

Dr.C.Heltin Genitha