



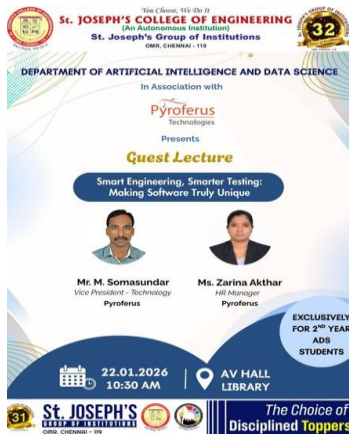
You Choose, We Do It
St. JOSEPH'S COLLEGE OF ENGINEERING
 (An Autonomous Institution)
St. Joseph's Group of Institutions
 OMR, CHENNAI - 119

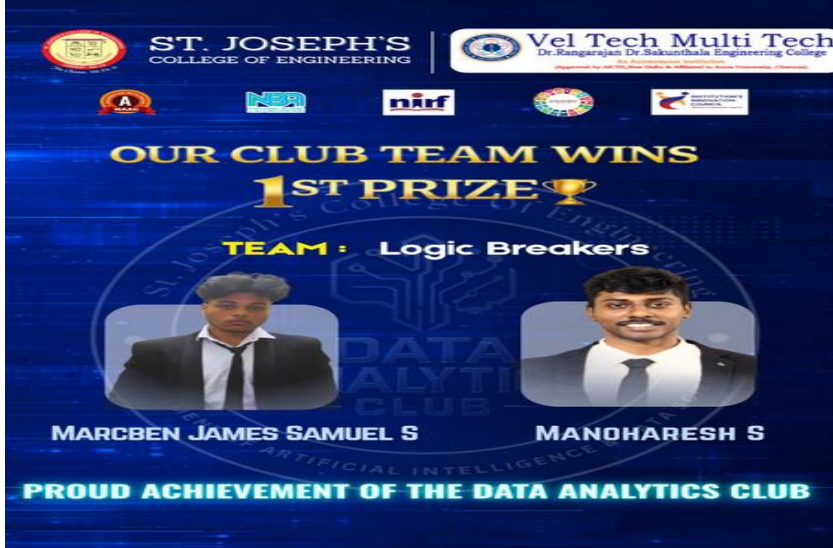


JANUARY 2026

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

S.No.	Title of the Events and Photographs	Details of the Event
1.	COLLABARATIVE QUALITY INITIATIVES WITH OTHER INSTITUTIONS 	<i>The Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, OMR, Chennai, organized an Industry–Institute Interaction as part of its continuous efforts to strengthen industry collaboration. On 20th January 2026, Mr. K. Vinodh Kumar, Assistant Professor, visited Codeworks AI to explore avenues for academic–industry partnership and innovation. During the visit, he interacted with Ms. Madumitha, Executive Director, Ms. Trinita Rex, Director – Business Development, and Mr. Neaven Christopher, Head – Training and</i>

		<i>Development. The discussions focused on establishing a Memorandum of Understanding (MoU), facilitating industrial visits for students, introducing value-added courses to enhance industry-relevant skills</i>
2.	INDUSTRIAL VISIT	-
3.	GUEST LECTURE 	<i>The Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, OMR, Chennai, in association with Pyroferus Technologies, organized a Guest Lecture titled "Smart Engineering, Smarter Testing: Making Software Truly Unique" on 22nd January 2026 at the AV Hall Library. The session was delivered by Mr. M. Somasundar, Vice President – Technology, Pyroferus, and Ms. Zarina Akthar, HR Manager, Pyroferus. The lecture</i>

		provided valuable insights into modern software engineering practices, intelligent testing strategies, and industry expectations in developing high-quality software solutions.
4.	ADS CLUB ACTIVITY 	<i>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.</i> <i>The Data Analytics Club of St. Joseph's College of Engineering proudly celebrates</i>



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. <i>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.</i>
5.	FDP/WORKSHOP/CONFERENCE/HACKATHON (ATTENDED /ORGANIZED)	<i>Students from Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering achieved a</i>



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. Sneha



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, Marchen 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.

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DEPARTMENT OF
ARTIFICIAL INTELLIGENCE AND DATA SCIENCE
IEEE ORGANIZES SMC
TWO-DAYS FACULTY DEVELOPMENT PROGRAMME (FDP)
ON
AI SOFTWARE
&
SYSTEM TECHNOLOGY

RESOURCE PERSON

MR. GNANAPRAKASH R
AI Solution Architect
Micropoint Computers Private Limited

21 & 22 January 2026
8:00 AM - 3:00 PM
AI Innovation and
Research Centre

TOPICS COVERED
Day 1 - 21.01.2026
• Hardware & Architecture (GPU for AI)
• Docker
• Triton Inference Server & TensorRT
Day 2 - 22.01.2026
• Distributed Training
• Kubernetes
• Jetson Orin

St. JOSEPH'S
The Choice of Disciplined Toppers

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,

		<i>providing participants with strong foundational and practical insights.</i>
6.	SYMPOSIUM	-
7.	STTP	-
8.	VALUE ADDED COURSES	-
9.	STUDENT ACHIEVEMENTS/COMPETITION ATTENDED BY STUDENTS 	<i>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</i>



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.

STAFF NPTEL CERTIFICATION/ STAFF ACHIEVEMENTS

10.



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.

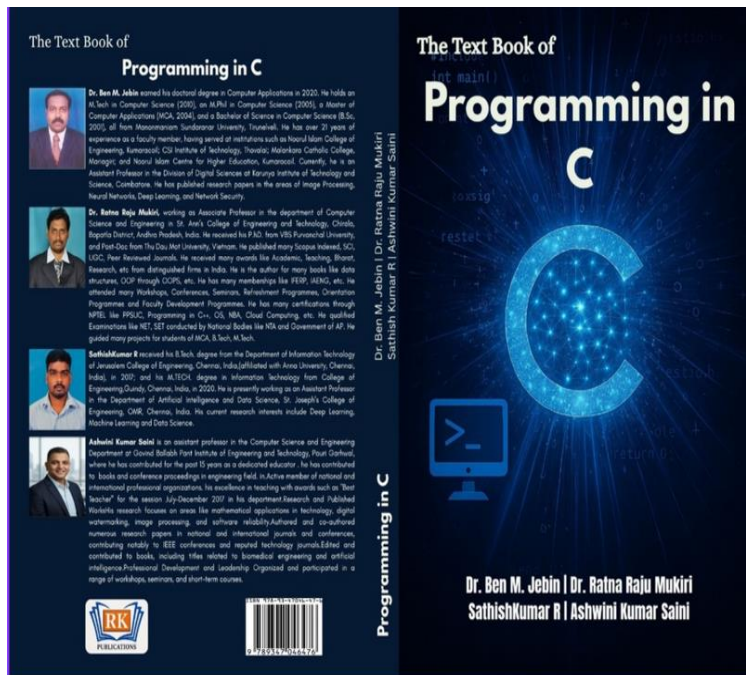
Dr. M. P. Rajakumar, from the Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, has been awarded the Certificate of Appreciation by NPTEL for



being recognized as an NPTEL MEGASTAR for the July–December 2025 session.

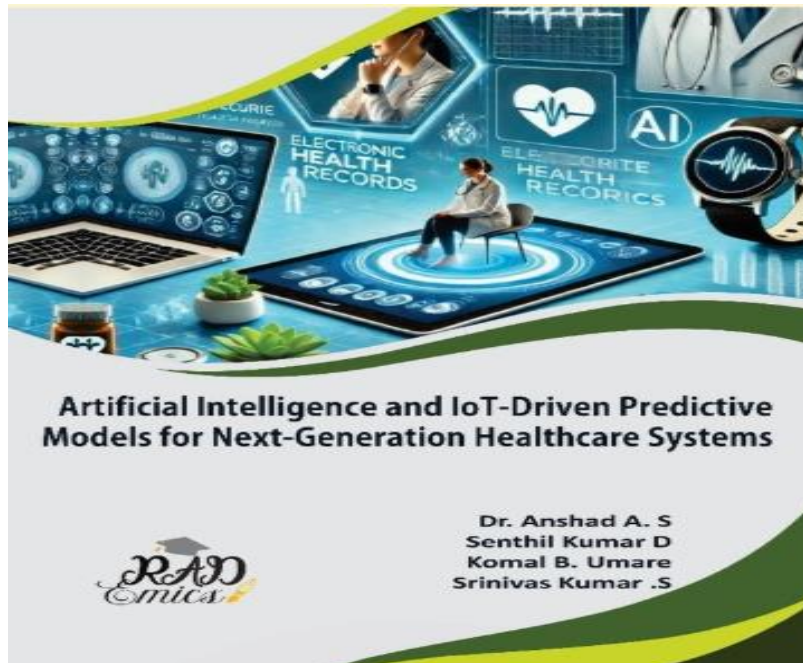


Dr. J. Vijayalakshmi, Associate Professor in the Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, Chennai, has been honored with the Best Professor Award. The recognition was presented as part of the Indira Gandhi Women Leadership and Empowerment Excellence 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-



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)

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

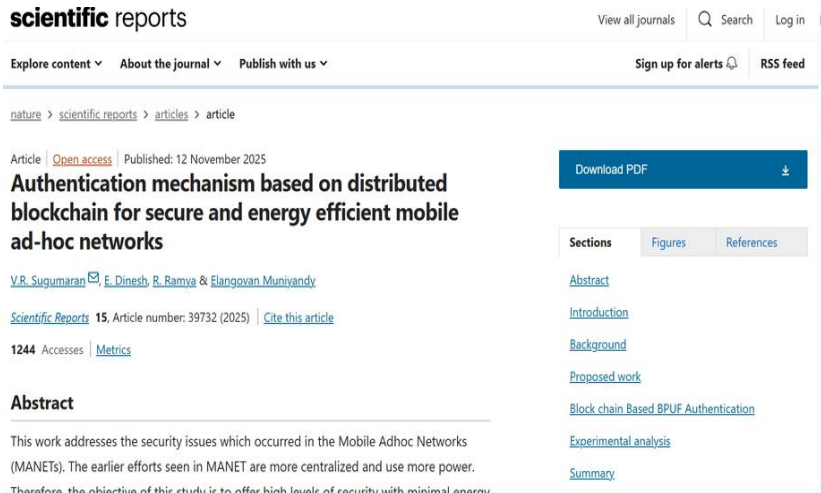
*Ms. D. Evangeline Nesa Priya, Assistant
 Professor, Department of Artificial
 Intelligence and Data Science, St. Joseph's
 College of Engineering, has successfully
 authored and published a book titled "Deep
 Learning for AI-Powered Video
 Surveillance Systems", released by Pandit
 Publications. The 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. Arunmozhikalanchiam, 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.
11.	INDUSTRIAL PROJECTS DONE BY STUDENTS	-
12.	JOURNAL PUBLICATIONS(ONLY PUBLISHED) DETAILS 	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.

	 INASS International Journal of Intelligent Engineering & Systems http://www.inass.org/ BSLnO-2RNARFNet: Recurrent Radial Nonlinear Autoregressive Exogenous Forward Harmonic Net for Rainfall Forecasting C Vijayalakshmi^{1*} Janakiraman Vijayalakshmi² Pushpa Madasamy¹ ¹PG & Research Department of Computer Science, Quaid-E-Millath Government College for Women (Autonomous), Chennai, Tamil Nadu, 600002, India ²Department of AI & DS, St. Joseph's College of Engineering, Chennai, Tamil Nadu, 600119, India * Corresponding author's Email: vijiglory@qmgcw.edu.in Abstract: This paper proposes a rainfall forecasting model called Bird Sea Lion Optimization-enabled Recurrent Radial Nonlinear Autoregressive Exogenous Forward Harmonic Net (BSLnO-2RNARFNet). Time series data retrieved from the database serves as input and is used to extract technical indicators during the extraction phase. Feature fusion is then carried out using the Quantum Neural Network (QNN) and Mahalanobis distance. The QNN captures complex nonlinear relationships within the time series data, while the Mahalanobis distance accounts for correlations between features. Thus, the QNN enables more effective feature transformation and selection, while the Mahalanobis distance reduces redundancy and improves accuracy. Data augmentation is then performed using the Synthetic Minority Oversampling Technique (SMOTE). Furthermore, the rainfall is predicted by applying the proposed 2RNARFNet, which is trained by BSLnO. For evaluation Rainfall in India and Rain in Australia datasets are used. Among them, the Rainfall in India dataset is used as the primary dataset for performance evaluation. The metrics include normalized Mean Squared Error (MSE), normalized Root Mean Squared Error (RMSE), normalized Mean Absolute Error (MAE), and Percent Bias (PBIAS). The 2RNARFNet achieves values of 0.121, 0.348, 0.070, and 1.629%, respectively. Keywords: Rainfall forecasting, Time series data, Quantum neural network, Mahalanobis distance, Synthetic minority oversampling technique.	<i>Dr. Vijayalakshmi J has successfully published a JOURNAL research paper titled “BSLnO-2RNARFNet: 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.</i>
13.	FI Keywords: Rainfall forecasting, Time series data, Quantum neural network, Mahalanobis distance, Synthetic minority oversampling technique.	-
14.	STAFF CONFERENCE PRESENTATION and PATENT PUBLISHED 	<i>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</i>

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

Literature

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 improve efficiency in using water in agricultural setting. The given system gathers real-time measurements of soil moisture, water pressure, and flow rate, which is

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 Authors](#)

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](#)



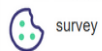
Abstract

Abstract:

Document Sections

I. Introduction

II. Literature



survey

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.

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



Certificate of Presentation

This is to certify that

Hemalatha S

has delivered an oral presentation on the topic



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

(52) PATENT APPLICATION PUBLICATION (59) INDIA (22) Date of Filing of Application :22/10/2025 (54) Title of the invention : ML-DRIVEN INTELLIGENT FRAMEWORK FOR ENGLISH COMMUNICATION SKILL DEVELOPMENT AND AUTOMATED PLACEMENT IN HIGHER EDUCATION (51) International classification: (31) Priority Document No (32) Priority Date (33) Name of priority country (86) International Application No (87) International Publication No (91) Patent of Addition to Application Number (92) Divisional to Application Number (57) Abstract		(21) Application No.202541101544 A (30) Publications Date : 28/11/2025 (71)Name of Applicant : 1)Dr. Vijayalakshmi J Address of Applicant: Associate Professor, Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, Chennai, 600119, Tamil Nadu, India Tamil Nadu India 2)Prof. Bhupendra Kumar Patel 3)Dr. Dharmajit C. P 4)Krishna Chandra Mishra 5)Dr. N. Vijaya Kumar 6)Dr. Padmaavathy R 7)Dr. Ashw Sureshder 8)N. Krishnaveni 9)Dr. S. Shetha Dharwad 10)R. C. Sangeetha 11)Abhendra Pratap Singh 12)Dr. Gugaloth Lachiram (72)Name of Invention : 1)Dr. Vijayalakshmi J 2)Prof. Bhupendra Kumar Patel 3)Dr. Dharmajit C. P 4)Krishna Chandra Mishra 5)Dr. N. Vijaya Kumar 6)Dr. Padmaavathy R 7)Dr. Ashw Sureshder 8)N. Krishnaveni 9)Dr. S. Shetha Dharwad 10)R. C. Sangeetha 11)Abhendra Pratap Singh 12)Dr. Gugaloth Lachiram 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 associates a pupils with pertinent job or academic chances, whereas a Feedback and Enhancement Cycle periodically re-evaluates 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

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		(21) Application No.202521116864 A
(18) INDIA		
(22) Date of Filing of Application :25/11/2025		(43) Publication Date : 26/12/2025
(54) Title of the invention : PREDICTIVE MAINTENANCE SYSTEM USING MACHINE LEARNING TECHNIQUES		
(51) International classification	:G06F	(71)Name of Applicant :
	17/40,	1)Ms. Bhagyashri Bhagawan Kotame
	G10B	Address of Applicant :Associate Professor, Department of Computer
	50/30,	Engineering, SRGS Sanjivani College of Engineering, Kopergaon, Maharashtra
	G10B	Maharashtra India
(31) Priority Document No	50/20,	2)Mrs. Sivaprabha T
	G16C	3)Mrs. Roopa R
	20/70,	4)Mr. Abhishash Nagilla
	G16C	5)Dr. V. Vijayaganih
	20/90	6)M. Roja
(32) Priority Date	:NA	7)Dr. C. R. Rene Robin
(33) Name of priority country	:NA	(72)Name of Inventor :
(86) International Application No	:NA	1)Ms. Bhagyashri Bhagawan Kotame
(87) International Publication No	:NA	2)Mrs. Sivaprabha T
(81) Patent of Addition to Application Number	:NA	3)Mrs. Roopa R
(82) Divisional to Application Number	:NA	4)Mr. Abhishash Nagilla
(83) Filing Date	:01/01/1900	5)Dr. V. Vijayaganih
(84) Filing Date	:NA	6)M. Roja
(85) Filing Date	:NA	7)Dr. C. R. Rene Robin
(57) Abstract :		
[002] 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
PATENT | DESIGN | TRADE MARKS
GEOGRAPHICAL INDICATIONS

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.

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

(12) PATENT APPLICATION PUBLICATION
(13) PRIORITY
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APPLICANT NAME	1 . Anuradha Anumolu 2 . Dr. Nimma Harathi 3 . Dr. Deepika Saravagi 4 . Dr. S. Hemalatha 5 . Mr. M. Saravanakumar 6 . Dr. Shanmugam Marimuthu 7 . Palla Sravani 8 . Mrs. Jagadamba A 9 . Dr. Dinesh Kumar 10 . Dr. M Dhanalakshmi
TITLE OF INVENTION	QUANTUM-RESILIENT HYBRID CRYPTOGRAPHIC ACCELERATOR FOR POST-QUANTUM SECURE DATA TRANSACTIONS
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	mail2patentipr@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	12/12/2025

<https://ipsearch.ipindia.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus>

1/2

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.



(42) PATENT APPLICATION PUBLICATION
(19) INDIA

(22) Date of filing of Application : 19/12/2025

(21) Application No.20251128359 A

(43) Publication Date : 26/12/2025

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

(51) International classification

(31) Priority Document No

(32) Priority Date

(33) Name of priority country

(86) International Application No

Filing Date

(87) International Publication No

(61) Patent of Addition to Application Number

Filing Date

(62) Divisional to Application Number

Filing Date

(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 modeling, 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

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	(21) Application No.20251128363 A
(19) INDIA	
(22) Date of filing of Application :17/12/2025	(43) Publication Date : 26/12/2025
(54) Title of the invention : Dimensionality Reduction Method using Linear Algebra and Eigenvalue Decomposition	
(51) International classification	(71)Name of Applicant : G06K 9/62, G06F 17/16, G06F 17/30, G06F 17/18, G06K 9/00 1)Dr. Rajan Singh Address of Applicant :Associate Professor, Department of Mathematics, School of Sciences, IPTM University, Moradabad, Uttar Pradesh – 244102 Uttar Pradesh India 2)Dr. Vani S V 3)Mrs. Kavita Sanjay Singh 4)Mrs. Kumari Deepika P 5)Dr. Sathesh Babu R 6)Mr. Souvik Chakraborty (72)Name of Inventor : 1)Dr. Rajan Singh 2)Dr. Vani S V 3)Mrs. Kavita Sanjay Singh 4)Mrs. Kumari Deepika P 5)Dr. Sathesh Babu R 6)Mr. Souvik Chakraborty
(31) Priority Document No	
(32) Priority Date	
(33) Name of priority country	
(86) International Application No	
Filing Date	01/01/1900
(87) International Publication No	
(61) Patent of Addition to Application Number	
Filing Date	
(62) Divisional to Application Number	
Filing Date	
(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 Engineering 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	(21) Application No.202521102421 A
(19) INDIA	
(22) Date of filing of Application :24/10/2025	(43) Publication Date : 16/01/2026
(54) Title of the invention : DEVELOPING A SPAM EMAIL DETECTION SYSTEM USING MACHINE LEARNING	
(51) International classification	(71)Name of Applicant : G06N20/00,G06F16/00,G06N20/00,G06F16/00,G06N20/00,G06F16/00,G06N20/00,G06F16/00 1)DR. SACHIN UPADHYAY Address of Applicant :Assistant Professor, Department of Computer Science, Nirmala College, Vikram University, Ujjain, Madhya Pradesh, India Madhya Pradesh India 2)DR. R. SUKRAMATHI 3)G.KAVITHA 4)DR. VINOD KUMAR SAROHA 5)DR. RAJU MANJHI 6)DR. SATISH KUMAR PANDEY 7)ABHILEET GAJANAN CHIMANKAR 8)DR. SHARMILA ZOPE 9)ABHIDUBBER D. LONDHE 10)DR. VIRENDEKAR KUMAR A. DHOTRE 11)DR.L.KARTHIK (72)Name of Inventor : 1)DR. SACHIN UPADHYAY 2)DR. R. SUKRAMATHI 3)G.KAVITHA 4)DR. VINOD KUMAR SAROHA 5)DR. RAJU MANJHI 6)DR. SATISH KUMAR PANDEY 7)ABHILEET GAJANAN CHIMANKAR 8)DR. SHARMILA ZOPE 9)ABHIDUBBER D. LONDHE 10)DR. VIRENDEKAR KUMAR A. DHOTRE 11)DR.L.KARTHIK
(31) Priority Document No	
(32) Priority Date	
(33) Name of priority country	
(86) International Application No	
Filing Date	01/01/1900
(87) International Publication No	
(61) Patent of Addition to Application Number	
Filing Date	
(62) Divisional to Application Number	
Filing Date	
(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 communications, but it has 5 to 10 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 Naïve 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

in the Patent Office Journal of India on 23 January 2026

(12) PATENT APPLICATION PUBLICATION	(21) Application No.202521102421 A
(19) INDIA	
(22) Date of filing of Application :24/10/2025	(43) Publication Date : 16/01/2026
(54) Title of the invention : DEVELOPING A SPAM EMAIL DETECTION SYSTEM USING MACHINE LEARNING	
(51) International classification	(71)Name of Applicant : HIEE. SACHIN UPADHYAY Address of Applicant :Assistant Professor, Department of Computer Science, Nirmala College, Vikram University, Ujjain, Madhya Pradesh, India Madhya Pradesh India 2DR.K.SUKKIRAMATHI 3G.KAVITHA 4DR.VINOD KUMAR SAROHA 5DR. RAJU MANJHI 6DR. SATHISH KUMAR PANDEY 7ABHIJEET GAJANAN CHIMANKAR 8DR SHARMILA ZOPE 9ADUDUMBER D. LONDHE 10DR. VIRENDRAKUMAR A. DHOTRE 11DR.L.KARTHICK
(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
(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 Naïve Bayes, Support Vector Machines, and Random Forests, this study suggests a machine learning-based framework to reliably categorize emails as spam or not. 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 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	(21) Application No.202541123002 A
(19) INDIA	
(22) Date of filing of Application :05/12/2025	(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	(71)Name of Applicant : 1)Dr. L. Thenmozhi Address of Applicant :Assistant Professor, Department of Computer Science and Applications (AI&ML), Faculty of Science and Humanities, SRMIST, Ramapuram, Chennai, Tamil Nadu, India Tamil Nadu India 2)Prof. Divya Kumawat 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 (72)Name of Inventor : 1)Dr. L. Thenmozhi 2)Prof. Divya Kumawat 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
(31) Priority Document No	:N/A
(32) Priority Date	:N/A
(33) Name of priority country	:N/A
(86) International Application No	:
Filing Date	:01/01/1900
(87) International Publication No	:N/A
(61) Patent of Addition to Application Number	:N/A
Filing Date	:N/A
(62) Divisional to Application Number	:N/A
Filing Date	:N/A
(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	

The Patent Office Journal No. 01/2026 Dated 02/01/2026

1429

(12) PATENT APPLICATION PUBLICATION	(21) Application No.202541120084 A
(19) INDIA	
(22) Date of filing of Application :01/12/2025	(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	(71)Name of Applicant : 1)Dr Manoj Kumar Sharma Address of Applicant :Principal and Head of Botany Department, Sri Matsya College of Education, Gangapur, Sawai Madhopur, Rajasthan, 322201, India Rajasthan India 2)Dr. Sabina A Nair 3)Dr. Satish Gangaram Sasane 4)Dr. Ratna Raju Mukheri 5)Dr. Soumya Devasia 6)A. Vijay 7)Dr. R. Navaneethakrishnan 8)R. Nihya 9)Mahan D 10)Dr. T Sreenivasula Reddy 11)C. Sakumar 12)Dr. K. Mageshwar (72)Name of Inventor : 1)Dr Manoj Kumar Sharma 2)Dr. Sabina A Nair 3)Dr. Satish Gangaram Sasane 4)Dr. Ratna Raju Mukheri 5)Dr. Soumya Devasia 6)A. Vijay 7)Dr. R. Navaneethakrishnan 8)R. Nihya 9)Mahan D 10)Dr. T Sreenivasula Reddy 11)C. Sakumar 12)Dr. K. Mageshwar
(31) Priority Document No	:N/A
(32) Priority Date	:N/A
(33) Name of priority country	:N/A
(86) International Application No	:
Filing Date	:01/01/1900
(87) International Publication No	:N/A
(61) Patent of Addition to Application Number	:N/A
Filing Date	:N/A
(62) Divisional to Application Number	:N/A
Filing Date	:N/A
(57) Abstract : The current invention 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/RNN 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 module 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.

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	(21) Application No.20252117103 A
(19) INDIA	
(22) Date of filing of Application :25/11/2025	(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	(71)Name of Applicant : 11Dr. Aniket Sane Address of Applicant :Assistant Professor, Faculty of Management Studies, Machilipatnam University, Indore, Madhya Pradesh, India Madhya Pradesh India 21Nilesh Bhandarkarwar 31Dr. Smita T G 41Dr. Abhinandan Jadhav 51Vashwanthi Patil 61Thanga Kumaran M 71Rahul Bharsadwaj 81A. Vijay 91Dr. Shashura Thewari 101J A Jeeva 11T. Hemalatha 121Dr. J. Azad Mohamed 131Dr. Aniket Sane 14Nilesh Bhandarkarwar 15Dr. Smita T G 16Dr. Abhinandan Jadhav 17Vashwanthi Patil 18Thanga Kumaran M 19Rahul Bharsadwaj 20A. Vijay 21Dr. Shashura Thewari 22J A Jeeva 23T. Hemalatha 24Dr. J. Azad Mohamed
(31) Priority Document No.	35638
(32) Priority Date	43/04/
(33) Name of priority country	IN
(86) International Application No.	43/04/
(87) International Publication No.	43/04/
(61) Patent of Addition to Application Number	43/04/
(62) Divisional to Application Number	43/04/
(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, analyzes linguistic 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 provide tailored feedback with implementable enhancement plans. The system integrates advanced linguistic analytics, acoustic modeling, 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 engaging 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	(21) Application No.202641002346 A
(19) INDIA	
(22) Date of filing of Application :08/01/2026	(43) Publication Date : 30/01/2026
(54) Title of the invention : Deep Learning-Based Multimodal Medical Analysis and Decision Support System	
(51) International classification	(71)Name of Applicant : 11S. Singaravelan Address of Applicant :Dept. of CSE, PSR Engineering College, Sivakasi Tamil Nadu India 21Mrs.N.Rigana Fathima 31Mrs.S.Mary Selvi 41Mrs.Amupa P Sajjan 51Ms.D. Praveen Nesa Priya 61Ms. Nishara A H 71Mrs. S. Anitha 81Mrs.R. Vidhyalakshmi 91Mrs. M. Shabana Fathima 101Mrs. G. Prashanth 111Dr.Aaravind Balakrishnan 121Mrs. B. Thevaldi (72)Name of Inventor :
(31) Priority Document No.	G1611
(32) Priority Date	50/20/
(33) Name of priority country	G06N 3/04, G06N 3/08, G1611 10/50, G1611 50/70

		<i>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.</i> <i>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</i>
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(12) PATENT APPLICATION PUBLICATION	(21) Application No.202641002320 A
(19) INDIA	
(22) Date of filing of Application :08/01/2026	(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	(71)Name of Applicant : 1)S Singaravelan Address of Applicant :Dept. of CSE , PSR Engineering College, Sivakasi Tamil Nadu India 2)Ms.S.M. Madhumathi 3)Dr.B.Suvitha 4)Ms.S.Oviya 5)Ms.S.Dharanika 6)Mrs. M.Yasmin 7)Dr.M.Seema 8)Mrs. R.Vidhyalakshmi 9)Mrs. M. Shabana Fathima 10)Mr. P. Chandra Sekhar 11)Dr.Aravind Balakrishnan 12)Mrs. B. Thevahi (72)Name of Inventor : 1)S Singaravelan 2)Ms.S.M. Madhumathi 3)Dr.B.Suvitha 4)Ms.S.Oviya 5)Ms.S.Dharanika 6)Mrs. M.Yasmin 7)Dr.M.Seema 8)Mrs. R.Vidhyalakshmi 9)Mrs. M. Shabana Fathima 10)Mr. P. Chandra Sekhar 11)Dr.Aravind Balakrishnan 12)Mrs. B. Thevahi
(57) Abstract : The present invention proposes a Quantum Inspired Machine Learning (QIML) framework for predicting chemical reactions and transformation dynamics in nano-material system, 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-catalysis 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 30/01/202613227

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 ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Sl. No .	Photographs Captured During Event	Corresponding remarks in regarding the status of activity execution
1.	Dr. Manikandan G IEEE Conference 	Title of the Paper : Medicine Expiry and Donation System: Implementation with AI and OCR.
2.	Ms. Kiruba Wesley and Ms. Adlin Layola J A IEEE Conference 	Title of the Paper : Multi-Modal AI-Driven Medical Consultation System: Integrating Remote Photoplethysmography, Vision Language Models, and Large Language Models for Enhanced Preliminary Diagnosis.

3.	Ms. Kiruba Wesley IEEE Conference 	Title of the Paper : Agentic AI Job Consultant: Autonomous System for Personalized Job Search and Career Coaching.
4.	Ms. Umayal A R IEEE Conference 	Title of the Paper : AI-IoT Integrated Vital and Behavioural Monitoring System for Astronauts and Elderly in Offline Environments.
	Dr. Adlin Sheeba Published Patent	Title of Innovation : Stealth surveillance quadruped robot with night vision and iot connectivity.

5.



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



Application Details

APPLICATION NUMBER:	30/2017/DEL
APPLICATION TYPE:	(ORDINARY) APPLICATION
DATE OF FILING:	07/10/2017
APPLICANT NAME:	1. DR. ANJANA SHARMA 2. DR. ANJANA LEE MEHTA
TITLE OF INVENTION:	SYSTEM FOR INTELLIGENTLY GUARANTEED RESORT WITH NEAR VISUAL AND HOT CONNECTIVITY
FIELD OF INVENTION:	ELECTRONICS
E MAIL (As Per Section 2(126) of the Act):	anb@anb.in@gmail.com
ADDITIONAL EMAIL (As Per Section 2(126) of the Act):	
E MAIL (As Per Section 2(126) of the Act):	
PRIORITY DATE:	--
REQUEST FOR EXAMINATION DATE:	--
PUBLICATION DATE (S 11A):	03/01/2024

6.



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



Application Details

APPLICATION NUMBER:	20/2017/DEL
APPLICATION TYPE:	(ORDINARY) APPLICATION
DATE OF FILING:	12/11/2017
APPLICANT NAME:	1. DR. ANJANA SHARMA 2. DR. ANJANA LEE MEHTA 3. DR. ANJANA LEE MEHTA 4. DR. ANJANA LEE MEHTA 5. DR. ANJANA LEE MEHTA 6. DR. ANJANA LEE MEHTA 7. DR. ANJANA LEE MEHTA 8. DR. ANJANA LEE MEHTA
TITLE OF INVENTION:	ARTIFICIAL INTELLIGENCE BASED MULTI-SCALE FEATURE FUSION FRAMEWORK FOR GASTRIC CANCER CLASSIFICATION
FIELD OF INVENTION:	COMPUTER SCIENCE
E MAIL (As Per Section 2(126) of the Act):	anb@anb.in@gmail.com
ADDITIONAL EMAIL (As Per Section 2(126) of the Act):	
E MAIL (As Per Section 2(126) of the Act):	
PRIORITY DATE:	--
REQUEST FOR EXAMINATION DATE:	--
PUBLICATION DATE (S 11A):	03/01/2024

Title of Innovation :

Artificial intelligence based multi-scale feature fusion framework for gastric cancer classification.

DEPARTMENT OF BIOTECHNOLOGY

S.No.	Title of the Events and Photographs	Details of the Event
1.	NGO VISIT  <i>A copy of proof</i>	Our third year recently embarked on a visit to Kalaivani Old Age Home, Madambakkam on 22nd January 2026
2.	POSTER PRESENTATION	Our third year and second year students had actively participated in the poster presentation on “Emerging Plastic Contamination: A Risk to Blue Ecosystems and a Critical Challenge for Life Below Water” on 29th January 2026.

	 <i>A copy of proof</i>	
3.	REVIEWER CERTIFICATE	Dr. M. Chamundeeswari from the Department of Biotechnology has served as a reviewer for manuscripts in the journal Discover Nano and Environmental Processes in 2026, in recognition of her scholarly contribution

	 <i>A copy of proof</i>	
4.	PATENT PUBLICATION	Ms. Anli Dino A and her students from the Department of Biotechnology have published a patent entitled “Portable Biosensor For Detecting Food Spoilage Bacteria”

	(12) PATENT APPLICATION PUBLICATION (19) INDIA (22) Date of filing of Application : 13/12/2025 (21) Application No. 202541126218 A (43) Publication Date : 02/01/2026 (54) Title of the invention : PORTABLE BIOSENSOR FOR DETECTING FOOD SPOILAGE BACTERIA <table><tr><td>(51) International classification</td><td>:C12Q 1/04, G01N 27/327, G01N 33/02, G01N 33/569, C12Q 1/68</td><td>(71)Name of Applicant : 1)G ASHWIN PRABHU Address of Applicant :No. 11, Thirumagal Nagar, II Street, Karthick Avenue, Flat No. F1, First Floor, "Sai Guru Apartments", Chitlapakkam Tamil Nadu India 2)Ms. Kereen Boaze. C 3)Ms. Rakshana. R 4)Mrs. A. Anli Dino</td></tr><tr><td>(31) Priority Document No</td><td>:NA</td><td>(72)Name of Inventor :</td></tr><tr><td>(32) Priority Date</td><td>:NA</td><td>1)Ms. Kereen Boaze. C</td></tr><tr><td>(33) Name of priority country</td><td>:NA</td><td>2)Ms. Rakshana. R</td></tr><tr><td>(86) International Application No</td><td>:</td><td>3)Mrs. A. Anli Dino</td></tr><tr><td>Filing Date</td><td>:01/01/1900</td><td></td></tr><tr><td>(87) International Publication No</td><td>:NA</td><td></td></tr><tr><td>(61) Patent of Addition to Application Number</td><td>:NA</td><td></td></tr><tr><td>Filing Date</td><td>:NA</td><td></td></tr><tr><td>(62) Divisional to Application Number</td><td>:NA</td><td></td></tr><tr><td>Filing Date</td><td>:NA</td><td></td></tr></table> (57) Abstract : The present invention relates to a portable biosensor for rapid detection of food spoilage bacteria. Food contamination and microbial spoilage pose serious health risks and economic losses worldwide. Traditional detection methods, such as culture-based techniques and molecular assays, are accurate but time-consuming, expensive, and require laboratory infrastructure, making them unsuitable for on-site monitoring. The proposed portable biosensor integrates biorecognition elements, such as antibodies or enzymes, with electrochemical or optical transducers, allowing quick, sensitive, and specific detection of spoilage bacteria in various food products. The device is compact, user-friendly, and cost-effective, enabling real-time monitoring at production sites, retail stores, or households. Food spoilage caused by bacterial contamination poses a major risk to public health and leads to significant economic losses. Traditional methods for detecting spoilage bacteria are often time-consuming, and require laboratory facilities, which are unsuitable for rapid, on-site testing. To address these limitations, this project focuses on the development of a portable biosensor integrating microfluidic sample handling, sensitive signal transduction, and AI-based data analysis. The microfluidic module allows precise handling of small food samples, including filtration, bacterial concentration, and reagent mixing, ensuring efficient sample preparation. The sensor module employs specific biological recognition elements (such as antibodies or aptamers) to detect bacteria and convert their presence into measurable signals via electrochemical or optical transduction. These signals are then processed by an AI-based analysis system, which rapidly interprets complex patterns, identifies bacterial types, and predicts contamination levels. This innovation provides a practical solution for enhancing food safety, reducing the risk of foodborne illnesses, and minimizing food wastage. Its portability, rapid response, and reliability make it suitable for widespread adoption in the food industry and by consumers. No. of Pages : 21 No. of Claims : 10	(51) International classification	:C12Q 1/04, G01N 27/327, G01N 33/02, G01N 33/569, C12Q 1/68	(71)Name of Applicant : 1)G ASHWIN PRABHU Address of Applicant :No. 11, Thirumagal Nagar, II Street, Karthick Avenue, Flat No. F1, First Floor, "Sai Guru Apartments", Chitlapakkam Tamil Nadu India 2)Ms. Kereen Boaze. C 3)Ms. Rakshana. R 4)Mrs. A. Anli Dino	(31) Priority Document No	:NA	(72)Name of Inventor :	(32) Priority Date	:NA	1)Ms. Kereen Boaze. C	(33) Name of priority country	:NA	2)Ms. Rakshana. R	(86) International Application No	:	3)Mrs. A. Anli Dino	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		Dr. Poornimaa Mu and her students from the Department of Biotechnology have published a patent entitled “Identification and Screening of Antineoplastic Secondary Metabolites from Bacillus licheniformis for Cancer Treatment”
(51) International classification	:C12Q 1/04, G01N 27/327, G01N 33/02, G01N 33/569, C12Q 1/68	(71)Name of Applicant : 1)G ASHWIN PRABHU Address of Applicant :No. 11, Thirumagal Nagar, II Street, Karthick Avenue, Flat No. F1, First Floor, "Sai Guru Apartments", Chitlapakkam Tamil Nadu India 2)Ms. Kereen Boaze. C 3)Ms. Rakshana. R 4)Mrs. A. Anli Dino																																	
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		<table><tr><th colspan="2">Application Details</th></tr><tr><td>APPLICATION NUMBER</td><td>202541123205</td></tr><tr><td>APPLICATION TYPE</td><td>ORDINARY APPLICATION</td></tr><tr><td>DATE OF FILING</td><td>06/12/2025</td></tr><tr><td>APPLICANT NAME</td><td>1 . G ASHWIN PRABHU 2 . Ms. Theevika K 3 . Ms. Ferlinsa J 4 . Ms. Joselin Reina J 5 . Ms. Poornima Mu</td></tr><tr><td>TITLE OF INVENTION</td><td>Identification and Screening of Antineoplastic Secondary Metabolites from Bacillus licheniformis for Cancer Treatment</td></tr><tr><td>FIELD OF INVENTION</td><td>BIO-CHEMISTRY</td></tr><tr><td>E-MAIL (As Per Record)</td><td>ashwin.prabhu1990@gmail.com</td></tr><tr><td>ADDITIONAL-EMAIL (As Per Record)</td><td>mechanicalmotivator@gmail.com</td></tr><tr><td>E-MAIL (UPDATED Online)</td><td></td></tr><tr><td>PRIORITY DATE</td><td></td></tr><tr><td>REQUEST FOR EXAMINATION DATE</td><td>--</td></tr><tr><td>PUBLICATION DATE (U/S 11A)</td><td>02/01/2026</td></tr></table> <i>A copy of proof</i>	Application Details		APPLICATION NUMBER	202541123205	APPLICATION TYPE	ORDINARY APPLICATION	DATE OF FILING	06/12/2025	APPLICANT NAME	1 . G ASHWIN PRABHU 2 . Ms. Theevika K 3 . Ms. Ferlinsa J 4 . Ms. Joselin Reina J 5 . Ms. Poornima Mu	TITLE OF INVENTION	Identification and Screening of Antineoplastic Secondary Metabolites from Bacillus licheniformis for Cancer Treatment	FIELD OF INVENTION	BIO-CHEMISTRY	E-MAIL (As Per Record)	ashwin.prabhu1990@gmail.com	ADDITIONAL-EMAIL (As Per Record)	mechanicalmotivator@gmail.com	E-MAIL (UPDATED Online)		PRIORITY DATE		REQUEST FOR EXAMINATION DATE	--	PUBLICATION DATE (U/S 11A)	02/01/2026		Dr. Poornimaa Mu and her students, Ms. Joselin Reina J, Ms. Ferlinsa J and Ms. Theevika K from the Department of Biotechnology have published a patent titled “Reverse Docking Study Unravels the Potential Human Targets of Ectoine and Auriculamide”
Application Details																														
APPLICATION NUMBER	202541123205																													
APPLICATION TYPE	ORDINARY APPLICATION																													
DATE OF FILING	06/12/2025																													
APPLICANT NAME	1 . G ASHWIN PRABHU 2 . Ms. Theevika K 3 . Ms. Ferlinsa J 4 . Ms. Joselin Reina J 5 . Ms. Poornima Mu																													
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	(12) PATENT APPLICATION PUBLICATION (19) INDIA (22) Date of filing of Application :06/12/2025 (21) Application No.202541123204 A (43) Publication Date : 02/01/2026 (54) Title of the invention : REVERSE DOCKING STUDY UNRAVELS THE POTENTIAL HUMAN TARGETS OF ECTOINE AND AURICULAMIDE <table border="1"> <tr> <td data-bbox="456 389 631 400">(51) International classification</td> <td data-bbox="757 338 824 595"> :C12Q 1/68, G01N 33/50, C12Q 1/02, C12P 17/18, G01N 33/68 :NA :NA : :01/01/1900 :NA :NA :NA :NA :NA </td> <td data-bbox="835 338 1176 539"> (71)Name of Applicant : 1)G-ASHWIN PRABHU Address of Applicant :No. 11, Thirumagal Nagar, II Street, Karthick Avenue, Flat No. F1, First Floor, "Sai Guru Appartments", Chitlapakkam Tamil Nadu India 2)Ms. Joselin Reina J 3)Ms. Ferlinsa J 4)Ms. Theevika K 5)Ms. Poornimaa Mu (72)Name of Inventor : 1)Ms. Joselin Reina J 2)Ms. Ferlinsa J 3)Ms. Theevika K 4)Ms. Poornimaa Mu </td> </tr> </table> (57) Abstract : This invention presents an integrated computational approach for identifying the human targeting potential of two natural compounds, ectoine and auriculamide, obtained from the under explored bacterium Saccharopolyspora erythraea NRRL 2338. Although this strain is well known for erythromycin production, its secondary metabolites have not been studied in detail. Genome mining confirms the presence of a complete ectoine biosynthesis cluster and genetic signatures that support auriculamide production. ADMET analysis shows that both compounds have good absorption, low toxicity and safe pharmacokinetic behaviour. Reverse target prediction identifies eighty-five human protein targets for ectoine and two hundred ninety-nine targets for auriculamide. Many of these targets are involved in stress protection, immune balance, cell repair and tissue recovery. Reverse docking through CB Dock validates these findings, with ectoine showing stronger binding for twelve proteins and auriculamide showing stronger binding for two hundred sixty-four proteins compared to native ligands. These results present strong evidence that ectoine and auriculamide possess significant biological relevance. The invention establishes Saccharopolyspora erythraea NRRL 2338 as a valuable source of multifunctional natural compounds with potential applications in medicine, cosmetics and environmentally responsible technologies. No. of Pages : 10 No. of Claims : 10	(51) International classification	:C12Q 1/68, G01N 33/50, C12Q 1/02, C12P 17/18, G01N 33/68 :NA :NA : :01/01/1900 :NA :NA :NA :NA :NA	(71)Name of Applicant : 1)G-ASHWIN PRABHU Address of Applicant :No. 11, Thirumagal Nagar, II Street, Karthick Avenue, Flat No. F1, First Floor, "Sai Guru Appartments", Chitlapakkam Tamil Nadu India 2)Ms. Joselin Reina J 3)Ms. Ferlinsa J 4)Ms. Theevika K 5)Ms. Poornimaa Mu (72)Name of Inventor : 1)Ms. Joselin Reina J 2)Ms. Ferlinsa J 3)Ms. Theevika K 4)Ms. Poornimaa Mu	
(51) International classification	:C12Q 1/68, G01N 33/50, C12Q 1/02, C12P 17/18, G01N 33/68 :NA :NA : :01/01/1900 :NA :NA :NA :NA :NA	(71)Name of Applicant : 1)G-ASHWIN PRABHU Address of Applicant :No. 11, Thirumagal Nagar, II Street, Karthick Avenue, Flat No. F1, First Floor, "Sai Guru Appartments", Chitlapakkam Tamil Nadu India 2)Ms. Joselin Reina J 3)Ms. Ferlinsa J 4)Ms. Theevika K 5)Ms. Poornimaa Mu (72)Name of Inventor : 1)Ms. Joselin Reina J 2)Ms. Ferlinsa J 3)Ms. Theevika K 4)Ms. Poornimaa Mu			

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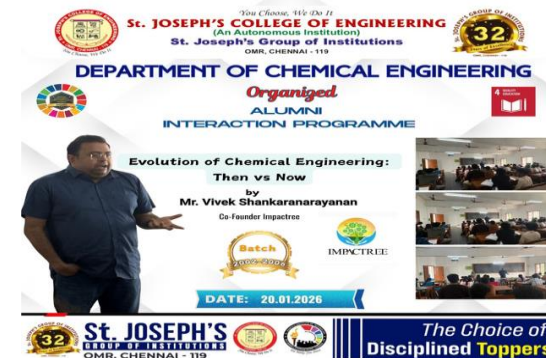
DEPARTMENT OF CHEMICAL ENGINEERING		
S.No.	Title of the Events and Photographs	Details of the Event
5.	NGO VISITED	The III Year students visited Amma Appa Old Age Home, Padapai, on 22 January 2026. The students spent quality time with the residents, interacting with them through friendly conversations and simple activities. The visit created a warm and cheerful atmosphere, bringing smiles to the faces of the elders and offering students a meaningful experience beyond the classroom. This outreach programme helped students understand the importance of empathy, compassion, and social responsibility, reminding them that engineering education also involves giving back to society. The visit was a heart-warming and memorable experience for everyone involved.

		
6.	GUEST LECTURE	We successfully organized a Guest Lecture titled “Chatbot Development with Generative AI: A Career Learning Roadmap” on 30 January 2026 from 9.30 a.m. to 11.00 a.m., at the AV Library Hall. The session was delivered by Mr. Thennarasu Sugumar, Center Director, Boston Institute of Analytics (BIA), Sholinganallur, Chennai. The lecture provided valuable insights into chatbot development, the role of Generative AI, and emerging career opportunities in the AI and analytics domain. Mr. Thennarasu Sugumar highlighted industry-relevant skills, real-world applications of AI driven chatbots, and effective learning roadmaps for aspiring engineers. He emphasized the importance of interdisciplinary knowledge and continuous upskilling to succeed in the rapidly evolving technological landscape.

		  
7.	ALUMNI INTERACTION	An Alumni Interaction Programme on 20 January 2026 as part of its continuous efforts to bridge academia and industry. The session was delivered by Mr. Vivek Shankaranarayanan, alumnus of the 2002–2006 batch and Co-Founder of Impactree, on the theme “Evolution of Chemical Engineering: Then vs Now.” He shared valuable insights on the transformation of the chemical engineering profession over the years, emerging interdisciplinary roles, and the skills required to remain

industry-relevant in the current technological era.

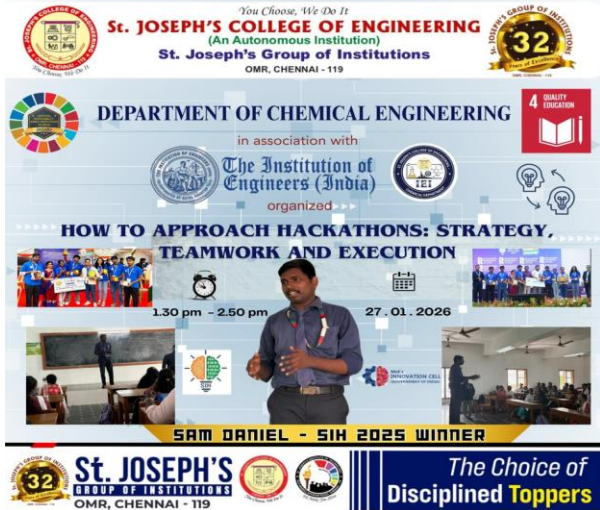
The interaction was highly engaging, with students actively participating in discussions and clarifying career-related queries. The programme provided meaningful exposure to real-world industry perspectives and inspired students to align their academic learning with evolving professional demands.



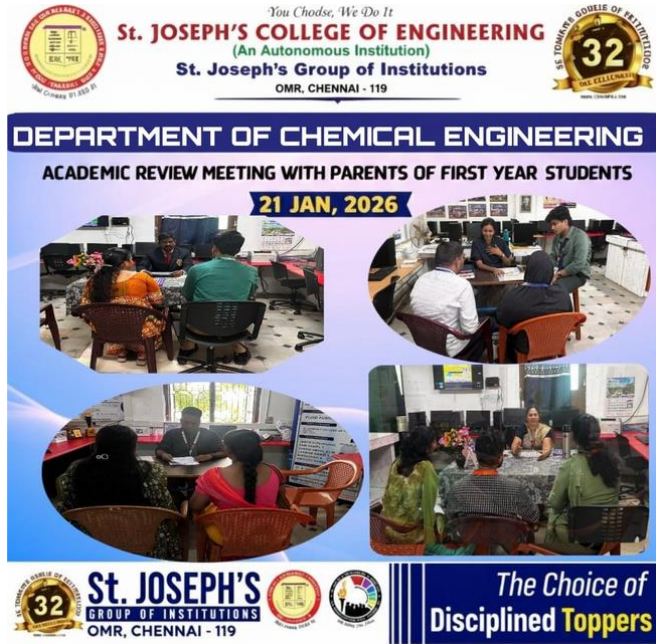
An Alumni Interaction Session on 07 January 2026 for the benefit of its students. The session was delivered by **Ms. Kaviya S M, Project Engineer at Mindtree, a proud alumna of the 2019–2023** batch of the Department of Chemical Engineering.

The interaction session, titled “**From Campus to Corporate: Navigating the Early Career Journey**”, focused on bridging the gap between academic learning and industry expectations. Ms. Kaviya shared her professional journey, insights into the IT and engineering services sector,

		and the importance of adaptability, continuous learning, and skill development for young engineers
8.	IEI Program	The Department of Chemical Engineering in association with The Institution of Engineers (India), successfully organized an Experience Sharing Session titled “How to Approach Hackathons: Strategy, Teamwork and Execution” on 27 January 2026 from 1.30 pm to 2.50 pm. The session aimed to motivate and guide students on effective participation in hackathons, focusing on problem identification, team dynamics, planning, and execution strategies. The programme featured accomplished student innovators Lewyn D, Sam Daniel T, Sindhukavi S, and Abhijith Kanna A M, who shared their real-time experiences, challenges faced during national-level hackathons, and practical insights for success. A special highlight was the address by Sam Daniel, SIH 2025 Winner, who emphasized the importance of innovation mindset, collaboration, and perseverance. The interactive session witnessed active participation from students, with engaging discussions and queries that enriched the learning experience.

		
9.	STUDENT ACHIEVEMENT	We proudly announces the commendable academic performance of its students in the recent examinations, achieving an impressive overall pass percentage of 93. The department congratulates the Overall Semester Toppers across various batches who have secured CGPA of 8.5 and above, reflecting consistent academic excellence, discipline, and strong subject knowledge. For the 2022–2026 batch (up to VII Semester), Ms. Dynisha D emerged as the department first by securing a highest CGPA of 9.26. In this batch, 4 students scored above 9.0 CGPA, while 17 students achieved 8.5 CGPA and above, showcasing sustained academic commitment at the advanced stage of the programme. In the 2023–2027 batch (up to V Semester), Ms. Subasri V secured the first position with aCGPA of 9.08. The batch recorded 2 students scoring

		above 9.0 CGPA and 14 students securing 8.5 CGPA and above, reflecting steady academic progress and dedication. Among the junior batch (up to Semester III), Ms. Gokulalakshmi G secured the highest CGPA of 9.49, emerging as the batch topper. Overall, 3 students scored above 9.0 CGPA, and 18 students secured 8.5 CGPA and above, highlighting a strong academic foundation at the entry level 
10.	PARENT REVIEW MEETING	Academic Review Meeting with the parents of First Year students on 21 January 2026 at the department premises. The meeting aimed to brief parents on the academic performance, attendance, learning outcomes, and overall progress of their wards. Faculty members interacted individually with parents, discussing students' strengths, areas for improvement, and strategies to enhance academic excellence and discipline. Parents were

		also informed about the department's academic structure, mentoring system, co-curricular activities, and support mechanisms provided for students' holistic development. The interaction fostered transparency and strengthened the collaborative relationship between parents and faculty.  The collage features four circular images showing various groups of people, likely parents and faculty, engaged in discussions. The text 'St. JOSEPH'S COLLEGE OF ENGINEERING' and 'St. Joseph's Group of Institutions' is visible at the top, along with the date '21 JAN, 2026'. At the bottom, there is a logo for 'St. JOSEPH'S GROUP OF INSTITUTIONS' and the slogan 'The Choice of Disciplined Toppers'.
11.	STAFF RECOGNITION	Dr. S. Vinod Kumar, Associate Professor, attended the 4th Edition of the Industry– Institutions Partnership Summit (IIPS) held on 23 January 2026 in Chennai. The summit, organized by the Indian Chemical Council (ICC), focused on the theme “From Lab to Market: Accelerating Chemical Innovation through Collaboration.” The event brought together eminent industry leaders, academicians, policymakers, and researchers to discuss strengthening collaboration between academia and the chemical

industry.



Dr. S. Vinod Kumar, Ms. R. Lavanya, and Dr. S. Sujatha, Assistant Professors, were honoured for their distinguished service as Session Chairs at **IICHE CHEMCON 2025, the 78th Annual Session of the Indian Institute of Chemical Engineers (IIChE)**. Their role in chairing technical sessions reflected their expertise, leadership, and active involvement in the professional chemical engineering community.



12. STAFF ACTIVITY

Dr. S. Sujatha and Dr. S. Sivaranjane, Assistant Professors, Department of Chemical Engineering, actively participated in a **one-day national-level workshop titled “Art of Writing Scientific Research Papers”**, held on 16 December 2025. The workshop was organized by the Centre for Pollution Control and Environmental Engineering, Pondicherry University, and focused on enhancing research writing skills, including manuscript structuring, journal selection, ethical publishing practices, and effective presentation of research findings. The program provided valuable insights to strengthen the quality of scientific publications and research dissemination.



Dr. N. Venkatesh, Head of the Department, was honoured for his distinguished service as a **Screening Evaluator at the Smart India Hackathon (SIH) 2025**. His role involved evaluating innovative student solutions, thereby contributing to the promotion of creativity, technological innovation, and problem-solving skills among young engineers at the national level.



In addition, **Dr. N. Venkatesh** successfully completed the AICTE-ATAT Faculty Development Programme titled “**The Future of Pedagogy: ChatGPT and AI Tools as Teaching Assistants**”, conducted at AVS Engineering College from 5 to 10 January 2026. The programme focused on the effective integration of artificial intelligence and generative AI tools in teaching–learning processes to enhance student engagement and learning outcomes.

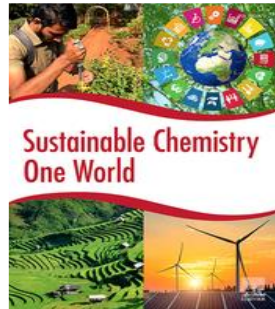


Dr. S. Vinod Kumar, Associate Professor, actively participated in a Short-Term Training Programme (STTP) on “**Software Applications**

in Chemical Engineering” conducted from 29 December 2025 to 05 January 2026. The programme emphasized the application of advanced software tools for process simulation, modeling, and optimization in chemical engineering education and research. Along with him, **Mr. P. Anand Kumar, Assistant Professor**, successfully participated in the same STTP on **“Software Applications in Chemical Engineering”** held from 29 December 2025 to 05 January 2026, enhancing his expertise in modern computational tools relevant to industry and academia.



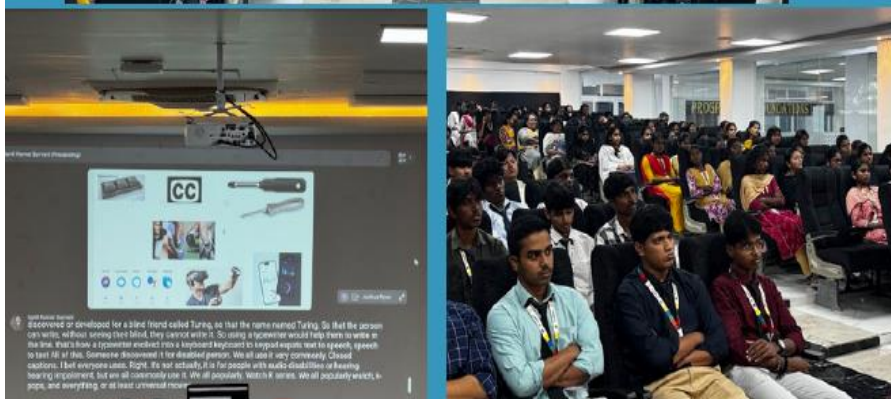
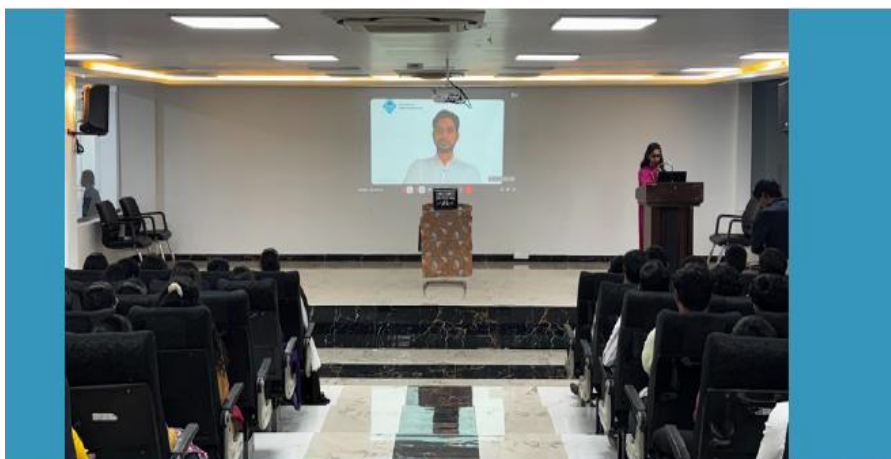
To gain hands-on industrial exposure, Dr. S. Sujatha and Dr. S. Sivaranjanee, Assistant Professors, successfully completed an Industrial Training Programme at Metric Measurement Technologies from 07 to 13 January 2026. The training provided practical insights into industrial measurement techniques, quality standards, and real-time applications of instrumentation and metrology in engineering industries.

		
13.	STAFF PUBLICATION	Dr. S. Sujatha, Assistant Professor, Department of Chemical Engineering, has published a research paper titled “Sustainable Utilization of Green Solvent in Emulsion Liquid Membrane Process for Rhodamine Dye Removal: Performance, Thermodynamics, and Regeneration Studies” in the reputed Elsevier journal Sustainable Chemistry One World. 

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	Event with Photo	Description
1	ALUMNI GUEST LECTURE	Date : 27.1.2026 Venue : Placement Block Nature of Event : ALUMNI GUEST LECTURE Participants : II Year students Objective : • To bridge the gap between classroom learning and real-world industry practices through alumni experience sharing. • To guide students on career pathways, job roles, required skills, and higher studies opportunities. • To motivate and prepare students for employability through insights on trends, tools, internships, and interviews. • Outcome : • Improved student awareness of current industry practices, tools, and expectations related to the topic. • Clear career direction gained by students on job roles, skills to develop, certifications/higher studies, and placement preparation. • Enhanced motivation and engagement, with better readiness for internships, interviews, and professional communication.
		

2 Industry Expert Interaction Webinar



Date : 30.1.2026
Venue : Conference Hall
Nature of Event : Webinar
Participants : III & IV Year students

Objective :

- To expose students to current industry trends, tools, and real-time practices through expert sessions.
- To bridge the gap between curriculum and industry expectations by mapping required skills and job roles.
- To enhance employability by providing guidance on internships, projects, certifications, and interview readiness.

Outcome :

- **Better understanding of industry expectations** (latest trends, tools, and workplace practices) relevant to the subject.
- **Improved skill readiness** through clarity on required competencies, job roles, and project/internship directions.
- **Enhanced employability preparation** with actionable inputs for certifications, resume building, and interview preparation.

3	CSI - QUIZ	
		Date : 28.1.2026 Venue : Conference Hall Nature of Event : QUIZ Participants : II & III Year students Objective : • To assess students' understanding of key concepts covered in the course/topic. • To reinforce learning by identifying gaps and improving retention through quick recall and application questions. • To motivate active participation and healthy competition, improving confidence and exam readiness. Outcome : • Improved learning clarity by identifying students' strong areas and topics needing improvement. • Better retention and application of key concepts through practice and immediate recall. • Enhanced engagement and confidence leading to improved exam readiness and performance.

DEPARTMENT OF MECHANICAL ENGINEERING

SI No	Name of the Activity	Remarks
1	➤ 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” (Application No. 202541130191 A). ➤ Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering has presented a paper entitled "Influence of Aerosil-200 Nanofiller on the Flexural and Compressive Behavior of Glass Fiber Reinforced Epoxy Composites", 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 presented a paper entitled "Thermal Enhancement of Stir Casted Al6061-Cu Metal Matrix Composite Fins: Experimental Evaluation Under Forced Convection", 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. 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. Pravinkumar K, Assistant Professor; Mr. N. Sathishkumar, Assistant Professor; UG students Mr. R. Gokul and Mr. G. H. Rhodison; and Dr. R. Sathish & Dr. V. S. Rao have published a research article titled “Development and analysis of hybrid composite helmets using glass fiber and hair fiber” in the International Journal of Vehicle Structures & Systems, Vol. 17, No. 5, pp. 814–819 (2025). The journal is Scopus-indexed with an estimated impact factor of ~0.48. ➤ Mr. Pravinkumar K, Assistant Professor, Department of Mechanical Engineering, along with collaborators, has 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. The journal is a Scopus-indexed Q2 journal with an impact factor of 4.3. ➤ Mr. N. Sathishkumar, Assistant Professor from the Department of Mechanical Engineering received an NPTEL–SWAYAM Certificate of Appreciation as a "Top Performing Mentor" for the course “Rapid Manufacturing” (Jul–Dec 2025). With 20 enrolments and 15 participants appearing. ➤ Mr. N. Sathishkumar, Assistant Professor, Department of Mechanical Engineering, acted as a reviewer for the manuscript submitted to “Polymer-Plastics Technology and Materials” Journal. (Anna University Annexure I, SCI & Scopus indexed Q2 Journal with Impact Factor 3.0) ➤ Mr. N. Sathishkumar, Assistant Professor, Department of Mechanical Engineering, acted as a reviewer for the manuscript submitted to “Engineering Research Express” Journal. (ESCI & Scopus indexed Q2 Journal with Impact Factor 1.6). ➤ Mr. T. Balasubramanian, Assistant Professor, Department of Mechanical Engineering have successfully completed the AICTE-sponsored 6 Months QIP PG Certification Program on “Robotics,” conducted at the Indian Institute of Technology (IIT), Palakkad. ➤ Mr. M. Subramanian Assistant Professor, Department of Mechanical Engineering have successfully completed the AICTE-sponsored 6 Months QIP – PG Certification Program on “Machine Learning” Conducted at Indian institute of Information Technology (IIIT), Surat. ➤ Dr. M. Ganesh and Dr. K. Muninathan , Assistant Professors, Department of Mechanical Engineering have successfully completed the AICTE-sponsored 6 Months QIP – PG Certification Program on “AI & Robotics” conducted at National Institute of Technology (NIT), Karaikal. ➤ Mr. KMB. Karthikeyan & Mr. R. Elakkiyadasan, Assistant Professors, Department of Mechanical Engineering have successfully completed the AICTE-sponsored 6 Months QIP – PG Certification Program on “Advanced Aerospace Material Development, Characterization and Testing” at Indian Institute of Technology (IIT) Bhilai, Chattisgarh ➤ Mr. Ruskin Bruce, Assistant Professor, Department of Mechanical Engineering, has been certified as a charter member of an officially chartered toastmasters club. ➤ Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering Published an article titled "Development of Ecofriendly Automobile Brake Liner using Different Grades Sizes of Pulverized Cow Hooves Powder" in Scopus Indexed Q4 Journal
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"International Journal of Vehicle Structures & Systems (IJVSS)," on 10th January 2026.

- Mr. T. Balasubramanian, Assistant Professor from the Department of Mechanical Engineering has Design Patent Grant on the title “ IOT-Powered Device for Dynamic Business Model Analysis and Tracking “ Design no: 463388-001 Date of submission 24/06/2025 Date of grant 09/01/2026.
- Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering has published a Scopus Indexed Book Chapter entitled "Strategic Transformation and Sustainability in CASE Mobility: Redefining Business Models and Value Chains for the Electric and Autonomous Future", IGI Global Scientific Publishing on 17th January 2026.
- Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering has published a paper entitled "Drone-Based AI Solutions for Livestock Tracking and Behavioral Monitoring in Extensive Pasture Systems", IEEE Xplore Scopus Indexed Conference on 23rd January 2026
- Dr. R. Sathish, Professor from the Department of Mechanical Engineering has published a paper entitled “ Optimization of Polypropylene granules and the fine aggregates for mechanical strength in nanomaterial based concrete”, Interaction 247,7(2026).
- Mr.K. Gnanasekaran ,Assistant Professor from the department of mechanical engineering published a research article titled in Experimental investigation of corrosion behaviour in Al alloy reinforced with SiC functionally graded composite in EPJ Web of Conferences 345, 01055 (2026).
- Mr.K. Gnanasekaran ,Assistant Professor from the department of mechanical engineering published a book chapter titled in GFRP Parabolic Trough Solar Concentrator Performance Analysis with Al₂O₃ Nanofluid in lecture notes in mechanical engineering.
- Mr. A. Ruskin Bruce, Assistant Professor from the Department of Mechanical Engineering has completed a two days hands-on workshop on Design the Thinking by Fintech Design Center - Siruseri, Chennai. on 21 & 22 January 2026. Mr.K. Gnanasekaran ,Assistant Professor from the department of mechanical engineering published a research article titled in Performance Evaluation of Rice Bran Oil—Waste Cooking Oil Binary Blend-Based Biodiesel With Normal Diesel in CI Engine in Engineering reports wiley publications Q2 Journal.
- Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering Published an article titled "Design, Fabrication and Performance Evaluation of a 3D-Printed Microgripper based on Compliant Mechanisms for Precision Manipulation" in Scopus Indexed

	Q3 Journal "Journal of Micro and Bio Robotics," on 26th January 2026	
2	Industry Interaction: 	➤ On 27.01.26, an industry–academia interaction was held at Robonetics Automation Solutions, Singaperumal Kovil, Kanchipuram, aimed at bridging academia and industry for mechanical engineering excellence. Robonetics, a pioneer in robotics and automation for manufacturing, specializes in AI-driven autonomous mobile robots (AMRs), collaborative robots (cobots), and vision guided systems for automotive and logistics applications. Dr. Vijayanand J. and Mr. Gnansekar K. visited the organization and engaged in detailed discussions focusing on student-centric benefits, including collaborative training programs to enhance practical skills, internship opportunities for hands-on industry exposure, and strategic placement drives to support career development and future readiness of mechanical engineering students.
3		➤ Mr. Gokul R, (2021-2025 Batch) Mechanical Engineering at St. Joseph's College of Engineering, fabricated a prototype model for Jaggery powder production unit for farmers. This automated jaggery production unit integrates advanced mechanization conveyor belt, heating pan, boiling pan with extruders, cooling pan and grinding units which has been developed to modernize from traditional jaggery manufacturing to reduce manual labour. This system automates the entire process from conveyor-based sugarcane feeding to packing of jaggery powder. The advantages of this machine are reduces labour fatigue, shortens processing time and increased production rate.

5	 Onboarding Incubatees: Niral Thiruvizha Hackathon 2.0 Winners iTNT Pavilion@ UmagineTN 2026	➤ The cost of the machine is around ₹10 lakhs. The Hon'ble Deputy Chief Minister, Thiru Udhayanidhi Stalin, felicitated Mr. Gokul and Mentor Mr. Pravinkumar K, at Valluvar Kottam, Chennai, for being the top team in Niral Thiruvizha 2.0. Thiru Udhayanidhi Stalin told that these models are to be incubated with start-up incubation with iTNT to make the real time product for farmers. They were also invited to "Umagine TN 2026" at the Chennai Trade Centre to showcase their product to investors, with a sponsored stall provided for the two-day event held on 8–9 January 2026. They achieved a major milestone by successfully onboarding to the iTNT Hub during the Umagine TN 2026 event, under the facilitation of PTR Palanivel Thiaga Rajan, Hon'ble Minister for Information Technology and Digital Services, Government of Tamil Nadu
	 BAJA-Hydrogen Edition	➤ As a part of SAE student Chapter Activity our college is participating in an All terrain vehicle (ATV) building competition, The Aurelian Racing Team comprising Final, Third and Second year Mechanical, Electrical & Mechatronics students participating in the SAE h-BAJA Main event 2026 held at NATRAX, Pithampur, Madhya Pradesh from 4th to 14th January 2026, Organized by BAJA SAE INDIA. The team has brought accolades as follows. Overall - Tamil Nadu (TN) 2nd position & All India Rank (AIR) 6th position Endurance - (AIR- 5, TN-1) Design presentation (AIR -4. TN -1) Suspension & Traction (S&T) (AIR - 3 , TN -1)



BAJA-ELECTRICAL EDITION

- As a part of SAE student Chapter Activity our college is participating in an All terrain vehicle (ATV) building competition, the Inferno Racing Team comprising Final, Third and Second year Mechanical, Electrical & Mechatronics students participating in the SAE E-BAJA Main event 2026 held at NATRIP, Pithampur, Madhya Pradesh from 4th to 14th January 2026, Organized by BAJA SAE INDIA. The team has ranked Overall - All India Rank (AIR) 18th position and Tamil Nadu (TN) 3rd position,



DESIGN CHALLENGE COMPETITION IEI STUDENTS CHAPTER

- Our Mechanical Department IEI Student Chapter conducted, The Design Challenge Event won 29 January in CAD lab. Participants were shortlisted based on their performance in a 10-day Design Challenge conducted during the December activity month. A total of 109 students from 9 colleges under the IEI Kanchipuram Local Centre were initially considered, out of which 51 students qualified and participated in the final event. During the competition, participants were required to complete a given practical design component within 90 minutes. Evaluation was carried out based on predefined scoring criteria, and the winners were selected according to the final scores

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Events conducted:

The following events have been conducted during January 2026 at College Level

1. Placement Activities	Report
a) Activity 1	
	The Department of Electronics and Communication Engineering organized a Mock Interview session titled “Get Interview-Ready with Our Alumni” on 24 January 2026. The event was designed to help students understand real interview scenarios and industry expectations. It created a supportive space where students could interact freely with alumni, gain confidence, and experience how technical and HR interviews are conducted in professional environments.



St. JOSEPH'S COLLEGE OF ENGINEERING

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Department of Electronics and Communication Engineering

MOCK INTERVIEW

Get Interview-Ready with Our Alumni!



Ms. Angella C
Technology Assurance
Analyst
Deloitte USI



Mr. Franklin Johnson I
Assistant Manager
Howden, Chennai



Ms. Keerthana R M
Service operations
Specialist
Nokia Solutions and
Networks, Chennai



Ms. Harini S
Service operations Specialist
Nokia Solutions and
Networks, Chennai



Ms. Prithika Reshmi A
Packaged App Development
Analyst
Accenture



Ms. Lekhashri S
Technical Support
Engineer
Zoho



Mr. Gilbert Sam M A
Network Engineer
Lumen Technologies
Bangalore



Mr. Ebi Manuel S R
WLAN QA Engineer
Candela Technologies Chennai



Ms. Kavya C
Packaged App
Development Associate
Accenture, Chennai



Ms. Dorima Roshni R
Senior Software Engineer
HCLTech
Chennai



Ms. Akshaya M
Senior Software Engineer
HCLTech
Chennai



Mr. Suriya Prakash K
DV Engineer
Tessolve Semiconductor Pvt
Ltd
Chennai



Ms. Keerthi Varsha B
Core Hardware Engineer (R&D)
Nokia Solutions and Networks
Chennai



Ms. Jawhar Sabitha Shirin M I
Embedded Software Engineer
Valeo India Private Limited,
Chennai



Ms. Vaidyu Nandhini M
System Engineer
Infosys
Chennai

DATE : 24.01.26

TIME: 9:30 AM - 2:50 PM

VENUE: HACKATHON AND TRAINING CENTRE

PARTICIPANTS: 2024 - 2028 BATCH STUDENTS



St. JOSEPH'S
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The Choice of
Disciplined Toppers



A panel of 15 alumni from leading companies such as Deloitte, Nokia, Accenture, Zoho, Infosys, HCLTech, Valeo, and Tessolve took part as interviewers. They conducted one-to-one mock interviews and shared practical insights from their professional journeys. The alumni offered honest feedback, discussed current hiring trends, and guided students on improving communication, technical clarity, and overall interview performance.



The session benefited students from the 2024–2028 batches by giving them hands-on interview exposure and personalized suggestions for improvement. Participants gained clarity on industry work culture, skill expectations, and career paths in electronics and communication fields. The interaction also opened doors for future mentorship, internships, and placement guidance, making the event a valuable step toward career readiness.



2. EEC-SEMICONDUCTOR AND VLSI DESIGN

Report

a) Activity 1



The PEP Semiconductor and VLSI Design Centre, along with the Department of ECE, successfully conducted a six-day Employability Enhancement Course on SystemVerilog & UVM for ASIC Verification. The program saw active participation from 81 students, who gained hands-on exposure to VLSI basics, SystemVerilog fundamentals, testbench architecture, UVM, functional coverage, debugging, and industry use cases through a mini project. The course focused on practical learning and real-world verification practices, helping students build industry-ready skills and opening pathways for internships and placements in leading semiconductor and VLSI companies.



3. ALUMNI ACTIVITIES	Report



St. JOSEPH'S
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ALUMNI REUNION
St. Joseph's Legacy Fest' 26
@
UNITED KINGDOM
ALUMNI CO-ORDINATORS

Mr. Vinodh Kumar R ASSOCIATE DIRECTOR - HR & PAYROLL JANUS HENDERSON PLC LONDON CSE ALUMNUS 1998-2002 BATCH	Mr. Felix Mohan LEAD ENGINEER AT LLOYDS BANKING GROUP, LONDON, UK EEE ALUMNUS 1999-2003 BATCH	Mr. Anandakumar A SECRETARY- INDIAN YMCA LONDON MCA ALUMNUS 2006-2009 BATCH
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VENUE: YMCA, 41, FITZROY SQUARE, MAHATMA GANDHI HALL, CENTRAL LONDON, W1T 6AQ
4th January 2026 3:00 PM to 7:00 PM GMT

St. JOSEPH'S | **St. JOSEPH'S**
COLLEGE OF ENGINEERING | INSTITUTE OF TECHNOLOGY
AUTONOMOUS INSTITUTIONS, AFFILIATED TO ANNA UNIVERSITY

St. Joseph's Legacy Fest – 2026 was a memorable international alumni reunion held in the United Kingdom on 4 January 2026. The event brought together alumni from different batches and disciplines, creating a lively platform to reconnect, reminisce, and celebrate shared memories. With participants traveling from various locations across the UK, the gathering reflected the strong global bond of the alumni community and highlighted the institution's lasting impact beyond borders.

The reunion took place at the YMCA Indian Students Hostel, Mahatma Gandhi Hall, London, from 3:00 PM to 7:00 PM (GMT). The program featured warm interactions, networking sessions, and engaging conversations that strengthened alumni relationships. The festive atmosphere, combined with cultural pride and nostalgia, made the event truly special. Overall, St. Joseph's Legacy Fest – 2026 successfully reinforced alumni connections and celebrated the institution's legacy on an international stage.

	
4. PROFESSIONAL SOCIETY ACTIVITIES	Report
a) Activity 1	



You Choose, We Do It
St. JOSEPH'S COLLEGE OF ENGINEERING
(An Autonomous Institution)
St. Joseph's Group of Institutions
OMR, CHENNAI - 119



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



organized

Spark Talk - Entrepreneurship Unplugged *From Idea to Impact: Building, Scaling and Sustaining Ventures*



Mr. P Deepak Kumar
Founder
The Base - DNA Community



OUTCOMES

- Understood real-world startup journeys, common challenges, funding opportunities
- Gained clarity on entrepreneurial thinking, risk-taking and innovation
- To identify real-life problems and convert them into scalable business ideas

II Year students!!



LIBRARY AV HALL



7-1-2026 Wednesday



10:00 AM - 11:30 AM

The SparkUp Talk by Deepak Kumar, Founder of DNA Community, held on 7 January 2025, was an engaging session for II Year ECE students. He shared insights on startups, innovation, and real-life experiences, encouraging students to think creatively and explore entrepreneurship alongside engineering. The talk gave students a clear view of the startup ecosystem, skills beyond academics, and career opportunities in entrepreneurship.





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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



Memorandum of Understanding (MoU) Signed with ACTION DnA to collaborate in developing the Entrepreneurial mindset and to improve the associated skills that helps to build an startup ecosystem.

MEMORANDUM OF UNDERSTANDING



**BUILDING BUDDING
ENTREPRENEURS**



The MoU Signing Ceremony was held on 23 January 2026, with Action DNA, an organization dedicated to promoting entrepreneurship and allied skill development. The collaboration marks a significant step toward strengthening industry-academia interaction and encouraging innovation-driven learning among students and faculty members. Through this partnership, Action DNA will support entrepreneurship development programs, skill-based workshops, startup mentoring, and experiential learning initiatives. The MoU aims to bridge the gap between academic knowledge and real-world business needs, promote a startup culture, and enhance employability by developing leadership, problem-solving, and enterprise-building skills aligned with today's dynamic professional ecosystem.

	
5. STAFF ACHIEVEMENTS	Report
	Dr. P. Latha, Associate Professor, ECE, was invited as a resource person to conduct a workshop on “Analysis of Emerging CMOS Logic and its FPGA Implementation” at Achariya College of Engineering Technology, Pondicherry, on 19 January 2026. The session offered practical insights into CMOS logic concepts and their FPGA applications.



WORKSHOP ON

“ANALYSIS OF EMERGING CMOS LOGIC AND ITS FPGA IMPLEMENTATION”



RESOURCE PERSON;
Dr. P. LATHA,
ASSOCIATE PROFESSOR,
ST. JOSEPH'S COLLEGE OF ENGINEERING,
CHENNAI



19/01/2026

EVENT ORGANIZER
Mrs. B. NAVALAKSHMI
AP/ECE

EVENT CO-ORDINATOR
Mrs. T. VALARMATHI
AP/ECE

CONVENER
Mr. F. D. ANFINSTON
HOD/ECE

DEPARTMENT OF
ELECTRONICS AND COMMUNICATION ENGINEERING



	The Department of Electronics and Communication Engineering at St. Joseph's College of Engineering is proud to announce that Dr. Jayanthi.E, Assistant Professor, served as a distinguished resource person for a guest lecture at Meenakshi Sundararajan Engineering College, Chennai, on January 5th, 2026. Delivering an expert session titled "Fundamentals of Image Processing," Dr. Jayanthi provided students with deep technical insights into digital imaging, bridging the gap between theoretical concepts and practical applications.
6) Publications	
<u>Journal Publications</u> 1) G. D. Vignesh, Assistant Professor, Department of ECE has published an article entitled "Advanced Deep Fake Detection: Leveraging Xgboost and SVM with Multi Modal Features" in the 3rd International Conference on Optimization Techniques in the Field of Engineering (ICOFE). 2) G. D. Vignesh, Assistant Professor, Department of ECE has published an article entitled "IoT-Based Landslide Monitoring and Prediction System Using NodeMCU and ThingSpeak for Real-Time Data Analysis" in the 3rd International Conference on Optimization Techniques in the Field of Engineering (ICOFE).. 3) G. D. Vignesh, Assistant Professor, Department of ECE has published an article entitled "AI Powered Cyberbot for enhancing the Workplace Efficiency" in the 3rd International Conference on Optimization Techniques in the Field of Engineering (ICOFE) 4) G. D. Vignesh, Assistant Professor, Department of ECE has published an article entitled "Advancement of Cloud-Based Ultra-Secure Communication using Quantum Key Distribution Protocols with Physical Layer Security in 6G Networks" in the 3rd International Conference on Optimization Techniques in the Field of Engineering (ICOFE).	

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Sl. No.	Photographs Captured During Events	Corresponding remarks (Minimum 300 words)
1.	STUDENT WORKSHOP  <i>PIC: EVENT POSTER & PHOTO</i>	Department of Electrical and Electronics Engineering organized SKILL DEVELOPMENT WORKSHOP ON 9W LED LAMP ASSEMBLY on 29/01/26 & 30/01/26 for 2nd year and 3rd year students respectively. Workshop enabled students to learn the art of energy efficiency of LED's also empowered for becoming entrepreneurs by innovation, repair in LED technology. Workshop provided the opportunity from campus to market.

2.

Industrial Visit



PIC: EVENT PHOTO

Department of Electrical and Electronics engineering arranged for industrial visit to **TANTRANS CO 400kV substation at Alamathy near Redhills, Chennai on 27th, 28th and 29th of January 2026 for 3rd year A,B& C section respectively.**

Visit enabled student to gain practical knowledge about grid connectivity, load balancing, stability of grid, synchronizing conditions and operating parameters of transmission. Student got exposure in High voltage insulation, circuit breakers operation, isolators, power factor correction, protection circuits of transformer.

3.

GUEST LECTURE

ROLE OF ELECTRICAL AND ELECTRONICS ENGINEERING IN UNDERWATER ROBOT SYSTEM



Outcome:

- Participants gained a strong understanding of how Electrical and Electronics Engineering (EEE) forms the backbone of underwater robotic systems, including power distribution, control circuits, and signal processing.
- Students learned about real-time challenges such as pressure, corrosion, limited visibility, and energy management, and how EEE solutions help overcome these constraints.

Resource Person:

Dr. S. Sakthivel Murugan
Professor
Department of ECE
NITTTR, Chennai

29/01/2026 8:00 AM TO 9:30 AM Library AV Hall

PIC: EVENT PHOTO

Department of Electrical and Electronics engineering organized **Guest Lecture on Role of Electrical and Electronics Engineering in Underwater Robot Systems. Lecture was delivered by Dr S Sakthivel Murugan**, Professor/ECE, NITTTR Chennai on **29/01/2026**. Students gained understanding of underwater robotic systems. Enabled students to learn about real-time challenges in underwater robotics

4.

NGO Visit

PIC: EVENT PHOTO

St. Joseph's College of Engineering organized a community service initiative for III Year Electrical and Electronics Engineering students on 22 January 2026. '**A**' Section students visited **Nirai Vaazhvu Old Age Home, Urappakkam** providing electrical maintenance support, basic health assistance, and interactive sessions for residents. '**B**' Section students engaged with underprivileged individuals at **OXFORD Home, Athanur, Guduvanchery**, and. '**C**' Section students visited **VARAM Home, Mamallapuram**, leading health awareness programs, renewable energy demonstrations, and recreational activities.

5.	Student Achievements	1. Sanchana L final year student won prestigious IEEE Richard-Merwin scholarship award fall-2025, Scholarship of 1000USD. 2. Sadhana A and Thamizhvani K III EEE received scholarship of Rs.7500/- under IEEE power and Energy society India scholarship award (IPISA) 24-25 3. Mahalaxmi P and Nadish B K III/EEE won III place in Idea Presentation with cash prize of Rs. 2,000/- Connecting the Dots 4.0- Ideathon, organized by IEEE Women in Engineering Affinity Group Madras Section, held at Sri Sai Ram Engineering College, Chennai. 4. Rithika R, Sanchana L, Hariprasath S, Yashwanth Dhanapal, Vinothini S, Sinduja B, Mythiri Janarthanan, Sivaani R P, Rithesha S received Best IEEE WIE AG Student Branch Presentation – Runner Up with Cash Prize: Rs. 2,000/- 5. Yashwanth D and Hariprasath S IV/EEE presented a paper at IEEE PuneCon 2025, organized by the IEEE Pune Section under the Eu-Reka Track. The students were granted a registration fee waiver worth ₹10,000 in recognition of their achievement as finalists of IEEE Eu-Reka 2025. The conference was held at Savitribai Phule Pune University, Pune from 12 - 15 December 2025. 6. Rahul Bharathwaj R of II Year written and published Poetry Book ‘Petals Of Love’. 7. DHARANI R won in South Indian Basketball Tournament on 22/01/2026 to 24/1/2026 held at Sacred Heart college, Kerala 8. KANISHKA S, RAKSHAYA B C, UMAMAHESHWARI M were runner -up in Police public volley ball Tournament on 19/01/2026 to 20/1/2026 held at Vellore. 9. Duraimugesh, Muvir Balaji A, Yuvaraj B, Saravana Kumar R, Vignesh Pandi D, MADHAVAN JK won in Anna university interzone Hockey Tournament on 27/12/2025 to 28/12/2025 held at Kongu nadu college of Engineering
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6.

IEEE activities



PIC: EVENT POSTER & PHOTO

The IEEE Madras Section Women in Engineering Affinity Group, in association with the IEEE St. Joseph's College of Engineering Student Branch Chapter, successfully conducted **Session 3 of the Shepreneur Summit '25** on the topic **"Opportunity Analysis and Pitching"** on **9th January 2026** at **6:30 PM (IST)**.

The session was delivered by **Ms. Ishwariya Senthilnathan**, Director, **BLINC Smart Home Pvt. Ltd.**, and witnessed the participation of **over 25 attendees**. The resource person shared valuable practical insights on identifying viable business opportunities, understanding market needs, and effectively presenting ideas through structured and impactful pitching techniques.

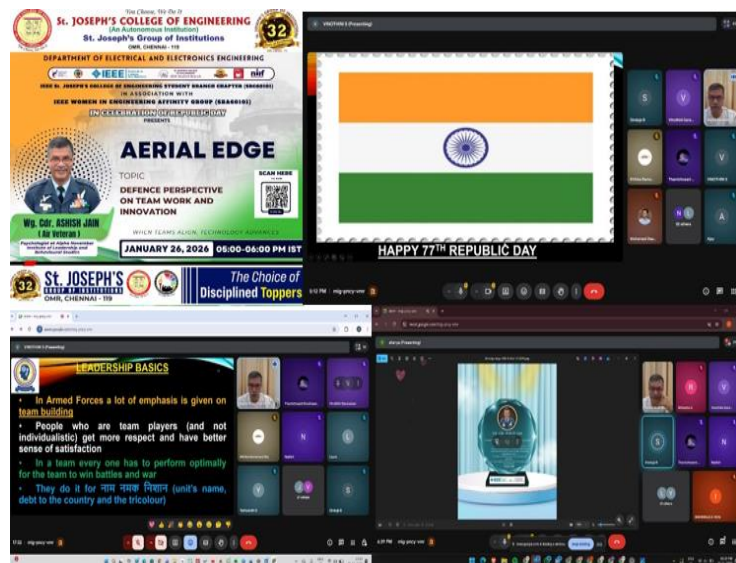
As key outcomes, participants gained a strong understanding of entrepreneurship fundamentals, developed an enhanced entrepreneurial mindset, improved their confidence in pitching ideas, and were motivated to transform innovative concepts into actionable and real-world entrepreneurial ventures.

7.

IEEE activities

The IEEE Women in Engineering Affinity Group, in collaboration with the IEEE St. Joseph's College of Engineering Student Branch Chapter, successfully organized a webinar titled **"AERIAL EDGE"** on **January 26, 2026**, from 5:00 PM to 6:00 PM IST via an online platform, in celebration of Republic Day.

The session featured **Wg. Cdr. Ashish Jain (Air Veteran)**, **Psychologist at the Alpha November Institute of Leadership and Behavioural Studies**. He delivered an engaging talk on **"Defence Perspective on Team Work and Innovation"**, sharing valuable insights drawn from his experience in the Indian Air Force. Throughout the session speaker highlighted



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how defence principles such as coordination, accountability, and resilience can be effectively applied to engineering and professional life. Real-life examples from military operations illustrated how innovation thrives when teams work with clarity of purpose and strong leadership.

The webinar witnessed enthusiastic participation from students, who gained a deeper understanding of teamwork and innovation through a defence-oriented lens. The session inspired aspiring women engineers to adopt structured thinking, collaborative leadership, and innovative problem-solving approaches in their academic and professional journeys.

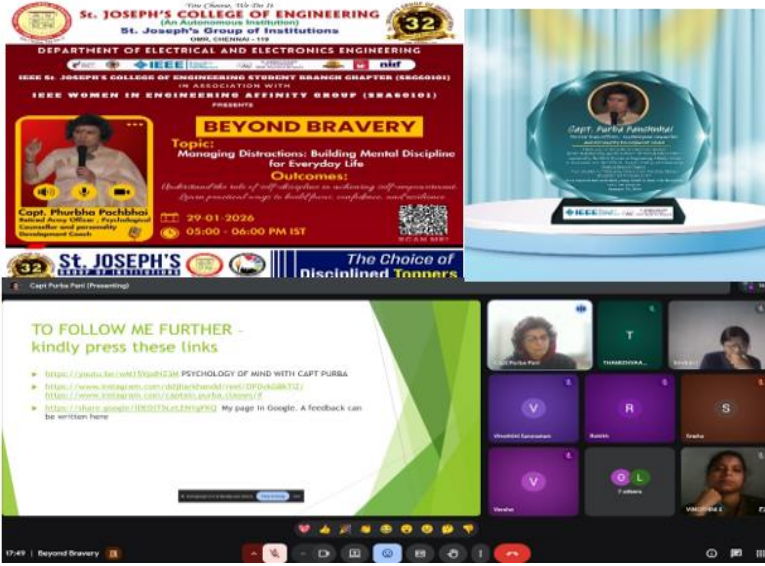
8.

IEEE activities

The IEEE Women in Engineering Affinity Group, in association with the IEEE St. Joseph's College of Engineering Student Branch Chapter, successfully organized an online webinar titled **"BEYOND BRAVERY"** on **January 29, 2026**, from **5:00 PM to 6:00 PM IST** via **Google Meet**.

The session was led by **Capt. Phurbha Pachbhai**, Retired Army Officer, Psychological Counsellor, and Personality Development Coach. She delivered an insightful session on **"Managing Distractions: Building Mental Discipline for Everyday Life"**, focusing on the importance of self-discipline, focus, and emotional resilience in personal and professional development.

During the webinar, Capt. Phurbha shared defence-inspired techniques to manage distractions, strengthen mental discipline,

	 PIC: EVENT POSTER & PHOTO	and build confidence in everyday life. Drawing from her military and counselling experience, she emphasized how consistent mental training and self-awareness contribute to long-term success and self-empowerment. The session attracted active participation from students who were eager to enhance their mental strength and personal effectiveness. The webinar encouraged participants to cultivate focus, resilience, and disciplined habits, enabling them to navigate challenges with clarity and confidence in both academic and real-world settings.
9.	CLUB Activities	St. Joseph's College of Engineering, (Electrical & Electronics Engineering) CHOPPERS CLUB IN ASSOCIATION WITH IEEE POWER ELECTRONICS SOCIETY organized a technical event “REVERSE ENGINEERING” on 20/01/2026 at the 7th Block from 1:40 PM to 3:00 PM. The event focused on exploring the hidden technical talents of students by encouraging them to analyze and understand existing electrical and electronic systems. It enhanced participants’ analytical thinking, technical decision-making skills, and provided exposure to relevant



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engineering tools and workflows, making the session both engaging and insightful.

10

CLUB Activities

The **ELECTRICAL CLUB**, in collaboration with the **IEEE IAS SOCIETY**, at **St. Joseph's College of Engineering**, organized a technical event on January 6, 2026. The event was held from 1:40 pm to 3:00 pm and was attended by all club members. Power dynamics refers to the ways in which power is distributed and exercised within relationships, groups, or systems. It shapes how decisions are made, who influences outcomes, and how control is maintained or challenged. These dynamics can be visible, like formal authority in organizations, or subtle, like social influence in interpersonal interactions. Understanding power dynamics helps explain behavior, conflicts, and cooperation within any social or professional setting. The outcome of power dynamics determines how effectively relationships, organizations, or systems function. Positive power dynamics can lead to



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cooperation, fairness, and productive decision-making, while negative dynamics may result in conflict, inequality, or abuse of authority.

11

CLUB Activities

The **ENSAVE CLUB**, in collaboration with the **IEEE SPECIAL INTEREST GROUP ON HUMANITARIAN TECHNOLOGY**, at **St. Joseph's College of Engineering**, specializing in Electrical & Electronics Engineering, hosted a technical event on 07/01/2026. The event took place from 1:40 PM to 3:00 PM, with active participation from all club members.

The session highlights the contrast between shock and safe by explaining how careless human activities can lead to shocking environmental consequences such as climate change and pollution, while responsible actions ensure a safer and

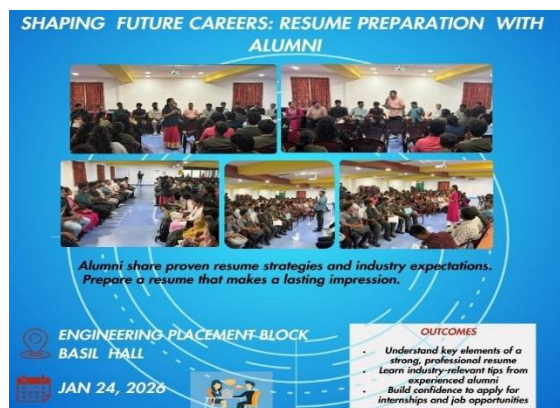


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sustainable future. It encourages students to recognize risky behaviors and adopt eco-friendly practices that protect nature, society, and future generations.

12

Alumni Interaction

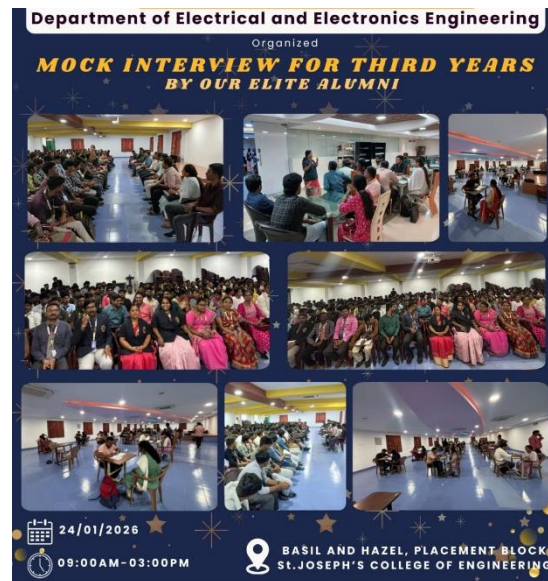


Department of EEE organised interaction with alumni for 2nd year students on 24/01/2026 from 9.30 to 10.30am as **“Shaping future careers: Resume preparation with Alumni”**. Alumni shared proven resume strategies and industry expectations to prepare resume that makes impression.

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13

Alumni Interaction



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Department of EEE organised **Mock interview** for 3rd year students by **Elite Alumni** on 24/01/2026. Alumni provided the viewpoint from panel to the students. The alumni includes

- Mr Gopikanna (2009-13 batch)-Reliance Jio
- Mr Arun S (2009-23 batch), Tech Mahindra
- Mr Velayutham (2011-15 batch)- HCL Technologies
- Mr. David Gnanaraj J (2011-15 batch)- CEI India
- Mr.Prasanth R (2012-16 batch)- Accenture
- Mr.Amudhan S (2012-16 batch)- Infosys
- Ms.Jayasuriya T J (2015-19 batch)-Delta Electronics pvt. Ltd.
- Mr.Kaushik G (2016-20 batch)- Automotive Robotic India
- Ms.Sugasini T (2017-21 batch)- Coforge
- Mr.Swathish (2017-21 batch)- Vernure
- Mr.Srivarthan Kannan (2017-21 batch)- IBS Software
- Mr.Tharun V K (2017-21 batch)- Bosch
- Ms.Sivapriya B (2017-21 batch)- TCS

		Mr. Bavithrarajan (2018-22 batch)- Prodapt Solutions Mr.Nitishkumar T (2018- 22 batch)- LTImindtree Mr.Naveen R C (2018-22 batch)- Infodesk Mr.Rahul A (2018-22 batch)- LTImindtree Mr.Bathrinath S (2018-22 batch)- LTTS Mr. Kaarthikeyan (2018-22 batch)- American Megatrends Mr.Suriya Priyan (2018-22 batch)- Prodapt Solutions Mr.Sridharshan S (2019-23 batch)- Teccity Labs Mr.Dhiyanesh P (2019-23 batch)- Valeo India Mr.Mohamed Aashik S (2019-23 batch) HCL tech Mr.HarishKumar K (2019-23 batch)- Cavinkare Mr.Prasanthkumar A V (2019-13 batch) Tata Elxsi Mr.Kathir D (2021-25 batch)- Renault
14	Alumni Interaction	Department of EEE organized a Motivational talk for higher studies “From UG to Global opportunities and scholarships in the Netherland” for 2nd, 3rd & 4th year EEE Students on 31/01/2026. The session was handled by alumni Mr.Nikith Jude Serrao (batch 2021-25), pursuing master program on Embedded Systems awardee of ALSP and NL scholarship to study TU/e Eindhoven University of Technology, Netherland. He interacted with the students and provided opportunities available for higher studies.



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15

FACULTY PARTICIPATION



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1. Mr T Sri Ananda Ganesh, AP/EEE attended ATAL FDP on *Emerging Trends in Secure AI*, conducted by *Panimalar College of Engg Chennai*.
2. Ms R G Nirmala AP/EEE published a **patent** titled *AI Based Cyber Security Architecture for Cloud Based Communication Networks*.

16	Faculty Recognition	1. Dr Jayarama Pradeep, Professor and Head, was selected to attend for IEEE PES R10 ADVISORS Training 2026 and participated in the training program held at Hong Kong, China form 17th to 19th Jan 2026. A travel grant funding of \$800 was secured for this from IEEE. 2. Our IEEE Power and Energy Society received the Best IEEE Power and Energy Society Student Branch Chapter Award from IEEE PES Madras Section during the IEEE PES Madras Section Annual Meet, held at Hotel Park Elanza, Chennai on 20th December 2025.
17	Faculty Publications	1. Dr.Jayarma Pradeep, Dr.P.Velmurugan published “Optimized sensor based speed control of BLDC motor using Tunicate Swarm algorithm tuned PID controller for Electric Vehicle applications” in International Journal of Vehicle Structures and Systems 2. Mr. H. Umesh Prabhu, Dr.M. Ramesh Babu, Dr.C. Venkatesh Kumar published “Implementation of a Novel Converter for EV Charger for Improved Energy Storage” in International Journal of Vehicle Structures and Systems 3. Dr. T. V. Narmadha published “On attempting to improve the reliability in body-centric communications using fully flexible diversified quad-port MIMO antenna backed with FSS” in International Journal of Microwave and Wireless Technologies. & “An Isolated Diamas Multilevel Inverter Model Integrated with a Cutting-Edge Optimized Controlling Techniques for EV Applications” in Journal of Electrical Engineering & Technology 4. Dr. P.Velmurugan published “Time-domain performance of QBC with self-lift circuit” in International Journal of Power Electronics and Drive System (IJPEDS).

		5. Dr. M Ramesh Babu published “Enhancing smart grid resilience and prosumer profitability using a novel Hunter–Prey optimization-based inter-microgrid energy trading strategy” in Energy Exploration & Exploitation. 6. Dr.S. Sridharan, Dr.Jayarama Pradeep, Dr. P. Velmurugan published “Integrating heat and electricity with an energy hub framework for load flow analysis in district energy networks using SOA-QKSAN technique” in Electrical Engineering. 7. Mr.H. Umesh Prabhu published “Revolutionizing plug-in hybrid vehicles by energy storage system optimization: prolonging battery lifespan and minimizing degradation” in Electrical Engineering
18	PLACEMENT DETAILS FOR THE MONTH OF JANUARY 2026	2022-2026 Batch No of students placed = 106 Students Total No of Offers = 150 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) = $106/171 = 61.99\%$ No of students having single offers = 70 No of students having Double offers = 30 No of students having Triple offers = 4 No of students having 4 offers =2

DEPARTMENT OF SCIENCE

Sl. No.	Events	Remarks
1	Collabarative Quality initiatives with other institutions	Association Membership Dr. K. Dhanaraj received the Association Membership from Indian Society for Radiation Physics on 02-01-2026.
2	FDP/Workshop/Conference	Invited Talk 1. Dr. G. Senthil Murugan had delivered an invited talk at the “28th National Seminar on Crystal growth and applications”, held on 31-01-26, conducted by “VIT, Chennai”. 2. Dr. K. Jayamoorthy had delivered an invited talk at State-Level Seminar on “Chemistry of Materials and Natural Products, held on 21.01.26, conducted by “Government Arts College for Women, Salem”. 3. Dr. B. Subash had delivered an invited talk on the title of The Invisible Science: Chemistry in Everyday Life in a guest lecture event held on 27.01.26 conducted by Srinivasa Subbraya (Govt.) Polytechnic College, Puttur, Mayiladuthurai Session Chair Dr. P. Saravanan had acted as Session Chairperson at the 3rd International Conference on Advancement in Science, Engineering & Management , held from 30.01.26 to 31.01.26, conducted by “Vidya Vihar Institute of Technology, Bihar,

		and RSP Conference Hub, Coimbatore”. Attended: Dr. S. Suresh had attended workshop on “Preparation of NAAC in New Scenario ” held on 30.01.26, conducted by “Shri Dnyanesh Mahavidyalaya, Nawargaon in collaboration with Gondwana University, Gadchiroli. Maharashtra.”.
3	Awards/Prize won by students / Staff	Dr. P. Krishnan has been invited as Chief guest for the Diamond Jubilee Annual day celebration of Shri Krishnaswamy Matriculation Higher Secondary School, Nungambakkam on 10.01.26
4	Publications(only published) details	Journal Publications: 1. Dr. P. Saravanan published a research article titled “Construction of g- C₃N₄/ MoS₂/ NiO Ternary Heterojunction for Visible-Light Photocatalytic Degradation of Organic Dyes ” in the Journal “Topics in Catalysis”, https://doi.org/10.1007/s11244-025-02262-1 2. Dr. P. Saravanan published a research article titled “Development and Electronic Performance of L-Asparagine Lithium Nitrate Crystals for Nonlinear Optical and Photonic Electronics” in the journal “Journal of Materials Science: Materials in Electronics” 37 (2026) 198. https://doi.org/10.1007/s10854-025-16546-5 3. Dr. P. Saravanan published a research article titled “Biosynthesis of Silver Nanoparticles via Melaleuca alternifolia Leaf Extract for Antibacterial, Antifungal, Antioxidant and Anticancer Activity” in the journal “Scientific Reports” 16 (2026) 2574. Doi: https://doi.org/10.1038/s41598-025-32191-8

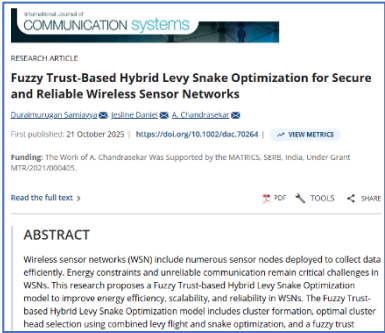
		4. Dr. P. Saravanan published a research article titled “Carbon Quantum Dots in Food and Environmental Safety: Advances in Sensing Technologies for Contaminant Detections” in the journal “Journal of Food Process Engineering” https://doi.org/10.1016/j.afres.2025.101255 5. Dr. S. Suresh published a research article titled “Magnetic, Thermodynamic and Optoelectronic Characterization of Fe-Doped CeO₂ Nanoparticles Synthesized by Co-Precipitation Method” in the journal “Journal of Superconductivity and Novel Magnetism” 39, (2026) 23. https://doi.org/10.1007/s10948-025-07127-y 6. Dr. N. Punitha published a research article titled “A Comprehensive Review of the Mechanisms of Action and Cardiotoxicity of Doxorubicin” in the journal “Oxidation Communications” doi: 10.3390/jcdd12060207 7. Dr. S. Manikandan published a research article titled “Growth, Characterization and Impact of Crystal Violet Dye on Benzotriazolium Oxalate Dihydrate Single Crystals” in the journal “Journal of Materials Science: Materials in Electronics” 37, (2026) 172. https://doi.org/10.1007/s10854-025-16562-5 8. Dr. K. Jayamoorthy published a research article titled “Febuxostat–Isoniazid Complex: Synthesis, Spectral Characterization, In Vitro Biological Evaluation and In Silico Studies” in the journal “Next Materials” 11 (2026) https://doi.org/10.1016/j.nxmte.2026.101633 9. Dr. K. Jayamoorthy published a research article titled “Imidazoles in Medicine:
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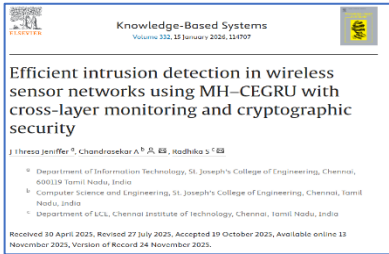
		A Review of Its Pharmacological and Therapeutic Applications” in the journal “Phosphorus, Sulfur, and Silicon and the Related Elements” DOI:10.1080/10426507.2025.2611018 10. Dr. K. Jayamoorthy published a research article titled “Next-generation Biodegradable Sensors: A Roadmap toward Zero-Waste Electronics” in the journal “Microchemical Journal” 222 (2026) https://doi.org/10.1016/j.microc.2026.117139 Conference Publications: 1. Dr. A. Mahalakshmi published an article titled “SVM-based Vibration Analysis for Early Fault Detection in Industrial Rotating Machines ” in the journal “Proceedings of the Third International Conference on Emerging Applications of Material Science and Technology. doi: 10.1109/ICEAMST67459.2025.11335779. 2. Dr. A. Mahalakshmi published an article titled “AI-Driven Autonomous Robots for Efficient Pest Detection and Management in Agriculture ” in the journal “Proceedings of the 2nd International Conference on Electronic Circuits and Signaling Technologies”. Doi: 10.1109/ICECST66106.2025.11307351. 3. Dr. N. Punitha published an article titled “AI-Driven Mobility-as-a-Service Platforms for Sustainable and Efficient Urban Transportation Networks ” in the journal “Proceedings of the 2nd International Conference on Electronic Circuits
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		and Signaling Technologies – IEEE explore”. doi: 10.1109/ICECST66106.2025.11307508. 4. Dr. N. Punitha published an article titled “A Cryptographic Revolution Using Quantum Networking for Secure Communication” in the journal “Proceedings of the International Conference on Data Analytics and Management Lecture Notes in Networks and Systems”. 1597 (2026) Doi: https://doi.org/10.1007/978-3-032-02831-0_1 Patents 1. Dr. N. Punitha published a patent titled “Advanced Nano patterning for Electrochemical Sensor Development” - in the “Patent Office Journal 01/2026” – Application Number 202541121429, dt 02.01.26 2. Dr. S. Rama published a patent titled “Wearable Sensor Network System for Real-Time Monitoring and Early Detection of Toxic Chemical Exposure” - in the “Patent Office Journal 02/2026” – Application Number 202511122422 , dt 09.01.26. 3. Dr. S. Rama published a patent titled “Biofilter System for Removal of VOCs in Industrial Emissions” - in the “Patent Office Journal 02/2026” – Application Number 202511122213, dt 09.01.26. 4. Dr. A. Arulmozhi published a patent titled “Nano Gold-Graphene Oxide Nano Composite Compositions” - in the “Patent Office Journal 04/2026” – Application Number 202641001915, dt 23.01.26.
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		5. Dr. G. Sasikumar published a patent titled “Nanogold colloid for responding heavy metal ion and preparation method thereof” - in the “Patent Office Journal 04/2026” – Application Number 202641001915, dt 23.01.26. Reviewers: 1. Dr. S. Suresh – Iranian Polymer Journal 2. Dr. N.R. Rajagoapalan – Indian Chemical Engineer Journal 3. Dr. N. Punitha – Journal of Nanotechnology 4. Dr. K. Jayamoorthy - Nanofabrication Journal, Mini-Reviews in Organic Chemistry, Materials Science in Semiconductor Processing, Environmental Chemical Engineering, Journal of Molecular Structure 5. Dr. S.M. Prakash – Discover Chemistry
12	Funded Projects	-
13	Other activities(if any)	The Department of Science has conducted the following activities. 1. Academic Review Meeting with parents of I year students – from 19.01.26 to 24.01.26. 2. Music & Instruments club activities – on 27.01.26 3. Science club activities – 29.01.26 4. II semester Opening department orientation program – from 28.01.26 to 29.01.26

DEPARTMENT OF INFORMATION TECHNOLOGY

	Photographs Captured During Event/Screenshot	Corresponding remarks in regarding the status of activity execution
1.	 Author Dr. Duraimurugan S, published a SCIE paper	<u>Staff Publication</u> Duraimurugan S, Jesline Daniel, A. Chandrasekar, “Fuzzy Trust-Based Hybrid Levy Snake Optimization for Secure and Reliable Wireless Sensor Networks”, Journal name: International Journal Of Communication Systems, Volume38, Issue17, 25 November 2025, e70264, wiley online library, https://doi.org/10.1002/dac.70264. (SCIE Paper) Abstract: Wireless sensor networks (WSN) include numerous sensor nodes deployed to collect data efficiently. Energy constraints and unreliable communication remain critical challenges in WSNs. This research proposes a Fuzzy Trust-based Hybrid Levy Snake Optimization model to improve energy efficiency, scalability, and reliability in WSNs. The Fuzzy Trust-based Hybrid Levy Snake Optimization model includes cluster formation, optimal cluster head selection using combined levy flight and snake optimization, and a fuzzy trust mechanism to enhance data security and minimize energy consumption. The algorithm identifies secure and energy-efficient routing paths by evaluating trust factors and optimizing cluster head selection based on parameters like energy and delay. Extensive experiments validate the Fuzzy Trust-based Hybrid Levy Snake Optimization model, demonstrating superior performance compared to traditional approaches. The Fuzzy Trust-based Hybrid Levy Snake Optimization model achieves a packet delivery ratio of 98.5%, throughput of 98.7%, and network lifetime of 9500 ms while reducing energy consumption to 83 J and end-to-end delay to 0.01 ms. These findings highlight the Fuzzy Trust-based Hybrid Levy Snake Optimization model's effectiveness in addressing energy and trust challenges in WSNs, offering a robust solution for secure and efficient data transmission.

2.	 Author Dr. J. Thresa Jeniffer, Published a SCIE paper	J. Thresa Jeniffer, Chandrasekar A Radhika S, “Efficient intrusion detection in wireless sensor networks using MH-CEGRU with cross-layer monitoring and cryptographic security”, Journal name: Knowledge-Based Systems, Volume 332, 2026, 114707, ISSN 0950-7051, https://doi.org/10.1016/j.knosys.2025.114707. (SCIE Paper) Abstract: Wireless Sensor Networks are increasingly vulnerable to sophisticated cyber-attacks such as black hole, gray hole, and flooding attacks, posing critical threats to their reliability and security. Existing intrusion detection systems often suffer from high computational overhead, poor adaptability to evolving threats, and inadequate detection of multi-layered attacks. To address these challenges, this research proposes a novel Multi-Head Concurrent Excitation Gated Recurrent Unit framework for efficient and adaptive intrusion detection in Wireless Sensor Networks. The approach integrates deep learning, cross-layer monitoring, and cryptographic techniques to deliver a comprehensive and lightweight intrusion detection system. Data sourced from real-world intrusion datasets is pre-processed through normalization, data cleaning, and class balancing using Synthetic Minority Oversampling Technique. Important features are selected using the Mirror Sculptor optimization algorithm, enhancing model efficiency by identifying the most relevant attributes. The proposed model leverages multi-head attention and excitation mechanisms to improve feature extraction and classification performance. Additionally, a cross-layer intrusion detection system monitors attacks across the network, Medium Access Control, and application layers, offering a holistic detection strategy. Communication security is strengthened using a hash-based message authentication code, and an automated response mechanism ensures real-time mitigation of detected threats. Experimental results demonstrate that the proposed system achieves a higher accuracy of 98.74 %, with a detection rate of 94 %, and a low error rate of 1.26 % to existing methods. The proposed system serves as an adaptive model for resource-constrained Wireless Sensor Networks environments. This research contributes a robust, energy-efficient, and adaptive intrusion detection systems framework.

3

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

Application Details

APPLICATION NUMBER	20251110767
INTERNET APPLICATION	13/11/2025
DATE OF FILING	13/11/2025
APPLICANT NAME	1. PRADEEP KUMAR TIWARI 2. DR SANDEEP DONGRE 3. DR HARMANPREET KAUR 4. ASHLIN JENITHA J R 5. MR. CH. KODANDA RAMU 6. PREETHAM PUNEETH MUNIPALLI 7. KALAIVANI. V 8. DONTHALA KUMARI KAVITHA 9. DR. KANCHAN KOUL 10. PAINDLA THIRUPATHI 11. SENBAGAVALLI M 12. T POORNACHANDAR
TITLE OF INVENTION	AI AND MACHINE LEARNING-BASED PREDICTIVE SYSTEM FOR EARLY DETECTION, CLASSIFICATION, AND GROWTH PREDICTION OF CANCER CELLS USING BIOMEDICAL IMAGING
FIELD OF INVENTION	FIELD OF INVENTION
E-MAIL (E-MAIL ADDRESS)	ashlin.jenitha@ashlin.com
ATTORNEY AT LAW (E-MAIL ADDRESS)	
E-MAIL, ADDRESS, CONTACT	
PRIORITY DATE	
PREVIOUSLY KNOWN OR NOT KNOWN	13/11/2025

Ashlin Jenitha J R
Published an Indian Patent

Patent Published

Title of the invention: AI and Machine Learning-Based Predictive System for Early Detection, Classification, and Growth Prediction of Cancer Cells Using Biomedical Imaging

Name of Inventor:

- 1 . Pradeep Kumar Tiwari
- 2 . Dr Sandeep Dongre
- 3 . Dr Harmanpreet Kaur
- 4 . **Ashlin Jenitha J R**
- 5 . Mr. Ch. Kodanda Ramu
- 6 . Preetham Puneeth Munipalli
- 7 . Kalaivani. V
- 8 . Donthala Kumari Kavitha
- 9 . Dr. Kanchan Koul
- 10 . Paindla Thirupathi
- 11 . Senbagavalli M
- 12 . T Poornachandar

Application Number: 202511110767

Date of filing of Application: 13/11/2025

Publication Date: 02/01/2026

[illegible]

Published an Indian Patent

Name of Inventor:

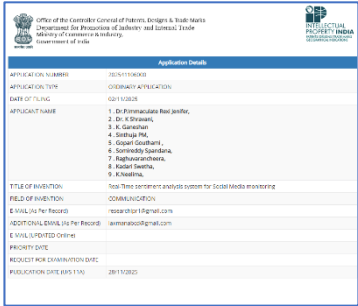
- 1 . Mrs.P.Prema
- 2 . Mohammad Anwarul Siddique
- 3 . Dr. Ratna Raju Mukiri
- 4 . Dr Shanmuga Rajathi D
- 5 . Dr. Pravin Gopalrao Sarpate
- 6 . Swathi Lenka
- 7 . Soumya Gudepu
- 8 . K Ashok Kumar**
- 9 . Reethu V
- 10 . J A Jevin

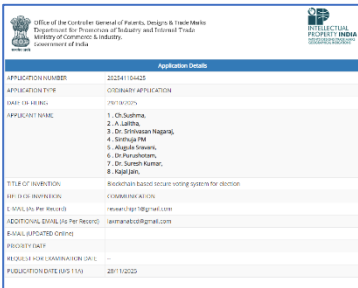
Application Number: 202541128190

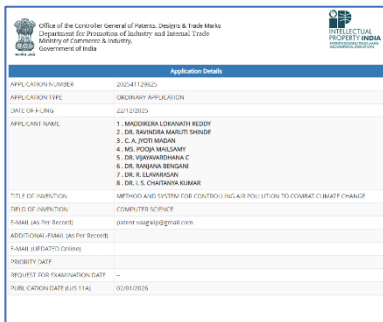
Date of filing of Application: 17/12/2025

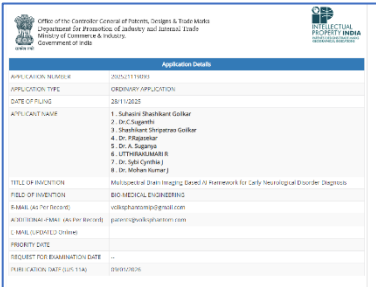
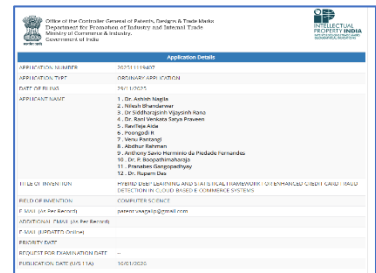
Publication Date: 02/01/2026

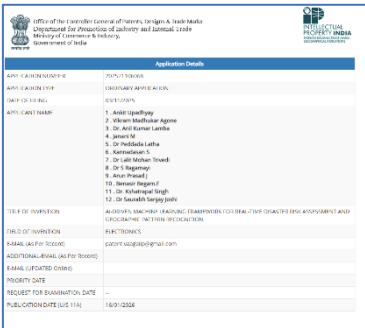
5	 Mrs.M.Reethiga Published an Indian Patent	Title of the invention: Numerical Method Based Real Time Load Balancing Controller for Electrical Distribution Networks with Embedded Electronics Name of Inventor: 1 . Rajeswari P 2 . Mariammal K 3 . Kedar H Badheka 4 . Dr. K.Lakshmi Khandan 5 . Mahendiran C R 6 . Reethiga M 7 . Dr.L Baranilingesan 8 . Dr.S.Prathap 9 . Dr.C.Kannan Application Number: 202541106664 Date of filing of Application: 04/11/2025 Publication Date: 19/12/2025
6	 Mrs.K.Subha Published an Indian Patent	Title of the invention: An Automated Faculty Stress Detection System Using Deep Learning-Based Speech and Facial Emotion Analysis with Workload Optimization in Higher Education Name of Inventor: 1 . Dr. R. Sundar 2 . Dr. Surekha Nagrath 3 . Archana Kollu 4 . Prof. Dr. P. Ravichandran 5 . Dr. Anima Bag 6 . Ms. K. Subha Application Number: 202541119277 Date of filing of Application: 29/11/2025 Publication Date: 19/12/2025

7	 Mrs.Gnanasoundharam Published an Indian Patent	Title of the invention: A Hybrid Model for IOT - Enabled Health - Care System Using ML Algorithms Name of Inventor: 1 . Dr. G. Senthil Kumar 2 . Mr. Vallabh Shinde 3 . Dr. Rajesh Autee 4 . Dr. P. Valarmathi 5 . B. Christyjuliet 6 . Arun Prasath M M 7 . Uthayakumar Jayasankar 8 . Dr. R. Kalaivani 9 . Gnanasoundharam Jeyabaskatan 10 . S. Nithya Patent Application Number: 202541115775 Date of filing of Application: 23/11/2025 Publication Date: 12/12/2025
8	 Mrs. Sinthuja PM Published an Indian Patent	Title of the invention: Real-Time sentiment analysis system for Social Media monitoring Name of Inventor: 1 . Dr.P.Immaculate Rexi Jenifer 2 . Dr. K Shravani 3 . K. Ganeshan 4 . Sinthuja PM 5 . Gopari Gouthami 6 . Somireddy Spandana 7 . Raghuvarancheera 8 . Kadari Swetha 9 . K.Neelima Application Number: 202541106000 Date of filing of Application: 02/11/2025

		Publication Date: 28/11/2025
9	 Mrs. Sinthuja PM Published an Indian Patent	Title of the invention: Blockchain based secure voting system for election Name of Inventor: 1 . Ch.Sushma 2 . A .Lalitha 3 . Dr. Srinivasan Nagaraj 4 . Sinthuja PM 5 . Alugula Sravani 6 . Dr.Purushotam 7 . Dr. Suresh Kumar 8 . Kajal Jain Application Number: 202541104425 Date of filing of Application: 29/10/2025 Publication Date: 28/11/2025
11	 Mrs. E.Elakkiya Published an Indian Patent	Title of the invention: AI-Based Network Traffic Prediction and Intelligent Routing Framework for Optimizing Academic Campus Wi-Fi Performance and E-Learning Infrastructure Name of Inventor: 1 . Dr. Jagadeesha S 2 . Dr Senthil Kumar S 3 . Chanagoni Sai Vijaya 4 . Mahalakshmi P 5 . Iram Fatima 6 . Vanitha .T 7 . Dr. J. Mercy Geraldine 8 . Dr. Rajeshwar Goud Jangampally 9 . E.Elakkiya 10 . Dr. Kshatrapal Singh 11 . M.Bhuvaneswari

		12 . Dr.S.Dhivya Application Number: 202541128189 Date of filing of Application: 17/12/2025 Publication Date: 02/01/2026
12	 Dr. R. Elavarasan Published an Indian Patent	Title of the invention: Method and System for Controlling Air Pollution to Combat Climate Change Name of Inventor: 1 . Maddikera Lokanath Reddy 2 . Dr. Ravindra Maruti Shinde 3 . C. A. Jyoti Madan 4 . Ms. Pooja Mailsamy 5 . Dr. Vijayavardhana C 6 . Dr. Ranjana Bengani 7 . Dr. R. Elavarasan 8 . Dr. I. S. Chaitanya Kumar 9 . Dr.S.Dhivya Patent Application Number: 202541129825 Date of filing of Application: 22/12/2025 Publication Date: 02/01/2026
13	 Dr. Divya J	Title of the invention: IOT-Enabled Monitoring and Control System for Renewable Energy Utilization in Sustainable Communities Name of Inventor: 1 . Dr. Ritu Nagila 2 . Dr.Mannava Sreeramu 3 . Kingsley G 4 . Dr.Shanmugam C 5 . Dr. Divya J 6 . Ms Pooja B I 7 . Dayananda

	Published an Indian Patent	8 . Dilip Mishra 9 . S Nagoorkani 10 . Abhendra Pratap Singh Application Number: 202511112920 Date of filing of Application: 17/11/2025 Publication Date: 09/01/2026
14	 Mrs. Utthirakumari R Published an Indian Patent	Title of the invention: Multispectral Brain Imaging-Based AI Framework for Early Neurological Disorder Diagnosis Name of Inventor: 1 . Suhasini Shashikant Goilkar 2 . Dr.C.Suganthi 3 . Shashikant Shripatrao Goilkar 4 . Dr. P.Rajasekar 5 . Dr. A. Suganya 6 . Utthirakumari R 7 . Dr. Sybi Cynthia J 8 . Dr. Mohan Kumar J Patent Application Number: 202521119093 Date of filing of Application: 28/11/2025 Publication Date: 09/01/2026
15	 Mr. Abdhur Rahman Published an Indian Patent	Title of the invention: Hybrid Deep Learning and Statistical Framework for Enhanced Credit Card Fraud Detection in Cloud-Based E-Commerce Systems Name of Inventor: 1 . Dr. Ashish Nagila 2 . Nilesh Bhandarwar 3 . Dr Siddharajsinh Vijaysinh Rana 4 . Dr. Rani Venkata Satya Praveen 5 . RaviTeja Aida 6 . Poongodi R

		7 . Venu Pantangi 8 . Abdhur Rahman 9 . Anthony Savio Patent Application Number: 202511119407 Date of filing of Application: 29/11/2025 Publication Date: 16/01/2026
16	 Dr. Janani M Published an Indian Patent	Title of the invention: AI-Driven Machine Learning Framework for Real-Time Disaster Risk Assessment and Geographic Pattern Recognition Name of Inventor: 1 . Ankit Upadhyay 2 . Vikram Madhukar Agone 3 . Dr. Anil Kumar Lamba 4 . Janani M 5 . Dr Peddada Latha 6 . Kannadasan S 7 . Dr Lalit Mohan Trivedi 8 . Dr S Ragamayi 9 . Arun Prasad J 10 . Benasir Begam.F Application Number: 202521106068 Date of filing of Application: 03/11/2025 Publication Date: 16/01/2026

17	 Dr. Janani M Published an Indian Patent	Title of the invention: System and Method for AI-Based Physiological Stress Monitoring Name of Inventor: 1 . Dr. Soumya Devasia 2 . Dr. Ratna Raju Mukiri 3 . Aruna Thota 4 . Dr S Subha 5 . Dr. Janani M 6 . Prof. (Dr.) Pintu Pal 7 . Dr. Rajib Mandal 8 . Dr. A. Ajmal Khaan 9 . Sathiya.S 10 . Dr. Mohammed Zubairuddin Patent Application Number: 202641000591 Date of filing of Application: 03/01/2026 Publication Date: 16/01/2026
18	 Mr K. Ashok Kumar Published an Indian Patent	Title of the invention: Predictive MI System for English Communication Competency and Employability Analysis in Higher Education Name of Inventor: 1 . Sanjeev Bhardwaj 2 . Dr Sandeep Kumar 3 . Dr Naga Madhuri J 4 . Dr. A. Ajmal Khaan 5 . Dr Devender Singh 6 . Dr. Karpagham C 7 . Dr. G. Prabhakaran 8 . K. Ashok Kumar 9 . Dr. Shubhra Tiwari 10 . G. M. Prem Kumar Patent Application Number: 202511125576 Date of filing of Application: 12/12/2025

		Publication Date: 23/01/2026										
19	 Sample FDP Certificate	Seminar/ FDP Attended by Faculty <table><tr><th>S.No</th><th>Title of the topic</th><th>Name of the Staff</th><th>Conducted By</th><th>Date</th></tr><tr><td>1</td><td>Emerging paradigms in AI: AI concepts and challenges for Educators</td><td>1. Abdhur Rahman A</td><td>Sengunthar Engineering College, Thiruchengode</td><td>5-1-2026 to 9-1-2026</td></tr></table>	S.No	Title of the topic	Name of the Staff	Conducted By	Date	1	Emerging paradigms in AI: AI concepts and challenges for Educators	1. Abdhur Rahman A	Sengunthar Engineering College, Thiruchengode	5-1-2026 to 9-1-2026
S.No	Title of the topic	Name of the Staff	Conducted By	Date								
1	Emerging paradigms in AI: AI concepts and challenges for Educators	1. Abdhur Rahman A	Sengunthar Engineering College, Thiruchengode	5-1-2026 to 9-1-2026								

DEPARTMENT OF MATHEMATICS AND ENGLISH

Events	Remarks				
FDP/Workshop/Conference					
					
	S.No	Staff Name	NPTEL Course Name	Organized by	Duration
	1	Dr.G.Venkat Narayanan	Accreditation and Outcome Based Learning	IIT Kharagpur	July – Oct 2025
	2	Dr. P. Agilan			
	3.	Dr. S. Aruna			
Awards/Prize won by staff	1. Mrs. A. Sathiya Jothi, Assistant Professor in the Department of Mathematics &English, has successfully presented an invited talk titled “Cross-Culture Communication in Aviation”, held Chennai Amirta International Institution of Aviation on 8 January 2026.				
Awards/Prize won by students	1. Ashok M from St. Joseph’s College of Engineering for securing 1st place in the “Prompt Wars” event at Quintessence 2026, organized by the Student Society of Electronics and Communication Engineers, Easwari Engineering College.				
Publications(only published) details	1. Agilan K. , Parthiban V., Nasreen Kausar & Mohammed Abdullah Salman Existence and uniqueness of solutions for fuzzy fractional integro-differential equations with boundary conditions. Sci Rep 16, 2082 (2026). https://doi.org/10.1038/s41598-025-31808-2 2. Agilan, K. , Parthiban, V. Modified Laplace Adomian decomposition method for Caputo derivative fuzzy fractional Volterra integro-differential equations with initial conditions. J. Appl. Math. Comput. 72, 75 (2026). https://doi.org/10.1007/s12190-025-02716-5				

3. Gerbeti, D; Dinesh, K ; Zoto, **Shoba, B** , Ibnouf, HIO , Fixed Point Results in b-Fuzzy Metric Spaces with Applications to Nonlinear Fuzzy Integral Equations. (2025). *European Journal of Pure and Applied Mathematics*, 18(4), 7013. <https://doi.org/10.29020/nybg.ejpam.v18i4.7013>

4. **Poorani, B.**, Baskaran, P., Gobinth, E., SenthilKannan, K. (2026). Electrical Efficiency Optimization of Photovoltaic Electrical (PVE) Systems Using Fe3O4 Nanofluids. Innovation and Sustainability for Automation, Aerospace, and Robotics. STAAAR 2024. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-96-9374-0_37