JUNE 2024

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

S.No.	Title of the Events and Photographs	Details of the Event
1.	**FDP/WORKSHOP/CONFERENCE/HACKATHON** 	Mrs. SATHYA V, Mrs. NISHA A S and Mr. DURAIRAJI V, Assistant Professor from the Department of Artificial Intelligence and Data Science have successfully completed the Five day Virtual Faculty Development Program on "Exploring wearable Tech and AI Innovations for Personalized Healthcare" held from 3rd June to 7th June 2024, Organized by the Department of BME, Rajalakshmi Engineering College.

CERTIFICATE

OF PARTICIPATION

presented to :

Nisha A S

Faculty of **St.Joseph's College of Engineering** has successfully completed the five-day virtual Faculty Development Program on "**Exploring Wearable Tech and AI Innovations for personalized Healthcare**" held from 3rd June to 7th June 2024, organized by the Department of BME, Rajalakshmi Engineering College, Chennai.

DR. R. KALPANA
Professor and Dean

DR. S. RAJKUMAR
Professor and Head

CERTIFICATE

OF PARTICIPATION

presented to :

DURAIRAJI V

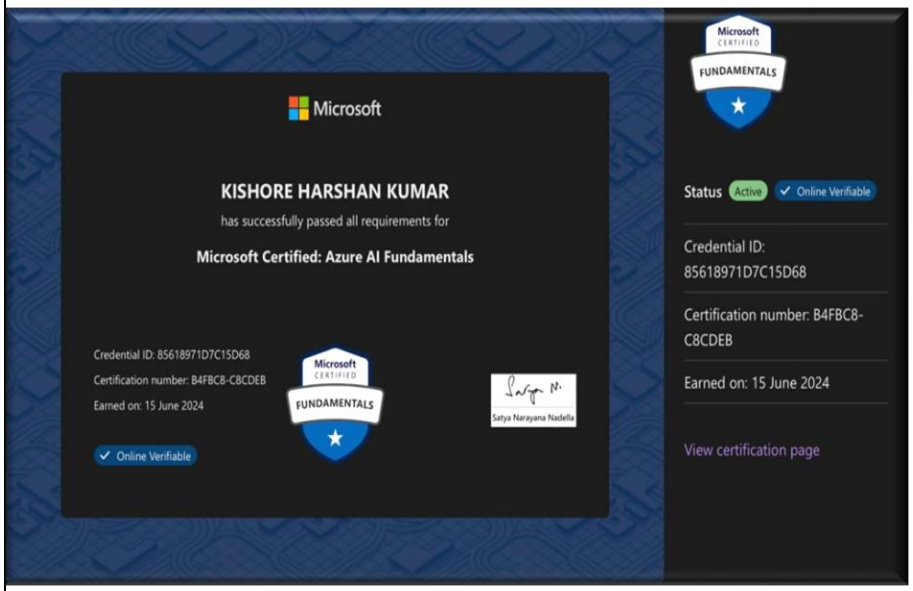
Faculty of **St. Joseph's College of Engineering** has successfully completed the five-day virtual Faculty Development Program on "**Exploring Wearable Tech and AI Innovations for personalized Healthcare**" held from 3rd June to 7th June 2024, organized by the Department of BME, Rajalakshmi Engineering College, Chennai.

DR. R. KALPANA
Professor and Dean

DR. S. RAJKUMAR
Professor and Head

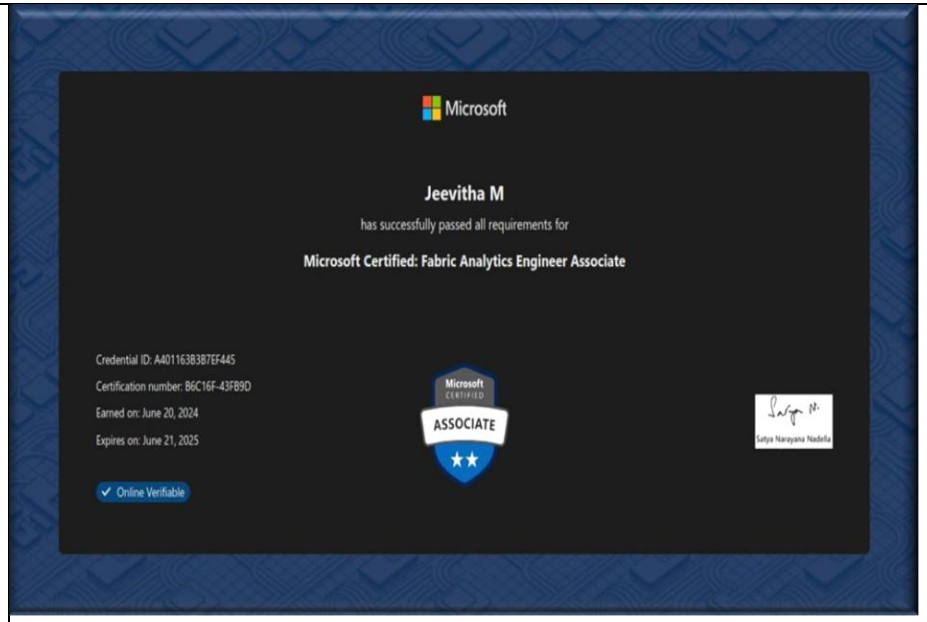
COMPETITIONS ATTENDED BY STUDENTS /STUDENTS NPTEL ONLINE CERTIFICATION

2.

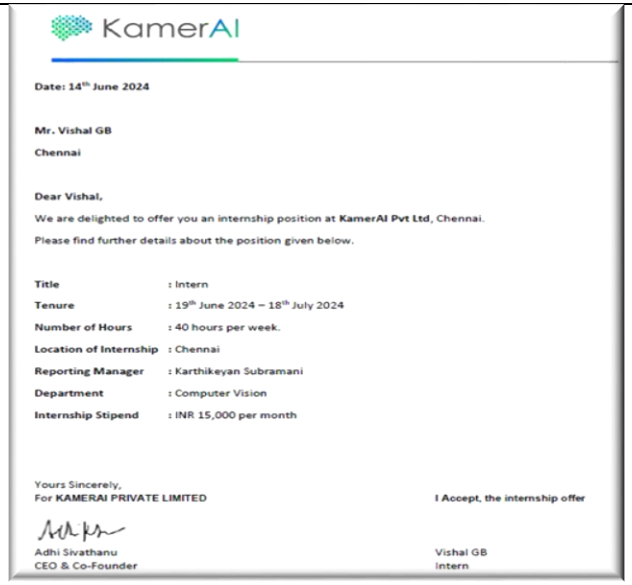


Final Year Student Mr. Kishore Harshan Kumar, has successfully passed all requirements for Microsoft Certified – Azure AI Fundamentals.

Final Year Student Ms. Jeevitha M, has successfully passed all the requirements for Microsoft Certified: Fabric Analytics Engineer Associate.

			Final Year Student Ms. Jenina Angelin D, has been recognized as NPTEL DISCIPLINE STAR - JAN - APR 2024

		
3.	**AWARDS/PRIZE WON BY STUDENTS**	-
4.	**INDUSTRIAL PROJECTS DONE BY STUDENTS/ INTERNSHIP WITH STIPEND**	

			Final Year Student Mr. Vishal G B, has got an Paid Internship (Stipend: INR 15,000 per Month) at KamerAI Pvt Ltd, Chennai. Final Year Student Mr.Kishore M.S, has got an Paid Internship (Stipend: INR 9000 Per Month) at Magellanix Technology Solution Final Year Student Mr. Harisudhan S, has got an Paid Internship (Stipend: $350) at VERCHOOL HOLDINGS LTD as DATA SCIENTIST.

KamerAI

Date: 14th June 2024

Mr. Vishal GB
Chennai

Dear Vishal,

We are delighted to offer you an internship position at **KamerAI Pvt Ltd**, Chennai.
Please find further details about the position given below.

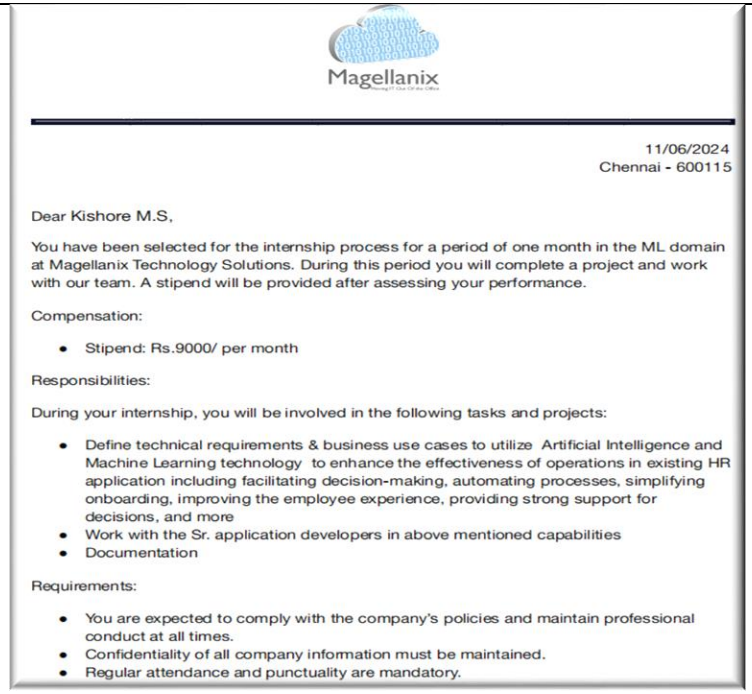
Title	: Intern
Tenure	: 19th June 2024 – 18th July 2024
Number of Hours	: 40 hours per week.
Location of Internship	: Chennai
Reporting Manager	: Karthikeyan Subramani
Department	: Computer Vision
Internship Stipend	: INR 15,000 per month

Yours Sincerely,
For **KAMERAI PRIVATE LIMITED**

Adhi Sivathanu
CEO & Co-Founder

I Accept, the internship offer

Vishal GB
Intern



Magellanix

11/06/2024
Chennai - 600115

Dear Kishore M.S,

You have been selected for the internship process for a period of one month in the ML domain at Magellanix Technology Solutions. During this period you will complete a project and work with our team. A stipend will be provided after assessing your performance.

Compensation:

- Stipend: Rs.9000/ per month

Responsibilities:

During your internship, you will be involved in the following tasks and projects:

- Define technical requirements & business use cases to utilize Artificial Intelligence and Machine Learning technology to enhance the effectiveness of operations in existing HR application including facilitating decision-making, automating processes, simplifying onboarding, improving the employee experience, providing strong support for decisions, and more
- Work with the Sr. application developers in above mentioned capabilities
- Documentation

Requirements:

- You are expected to comply with the company's policies and maintain professional conduct at all times.
- Confidentiality of all company information must be maintained.
- Regular attendance and punctuality are mandatory.

VERCHOOL

INTERNSHIP OFFER

June 10th, 2024

Dear Harisudhan,

Congratulations! We are pleased to offer you an internship position as a Data Scientist at Verchool Holdings Ltd. This internship aligns with the terms outlined in the Memorandum of Understanding (MOU) signed on June 10th, 2024.

Project Focus
You will play a leading role in designing, developing, and implementing the AI/ML-powered intelligent "data FIREWALL and data FILTER" layer for the Verchool Extended Reality (VER) platform.

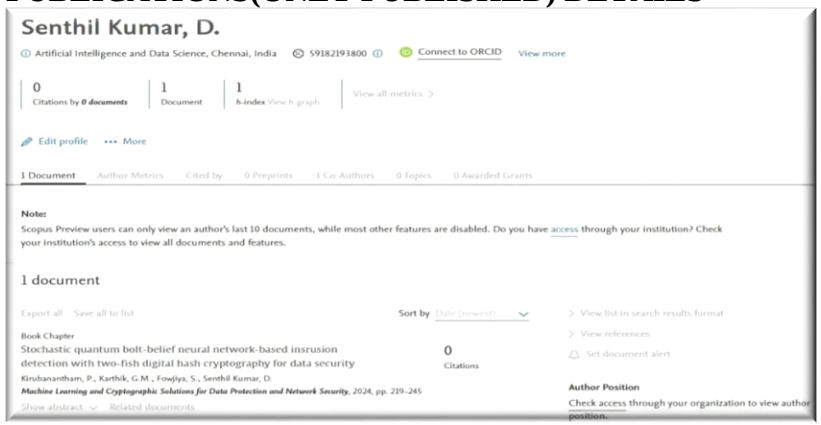
Responsibilities:

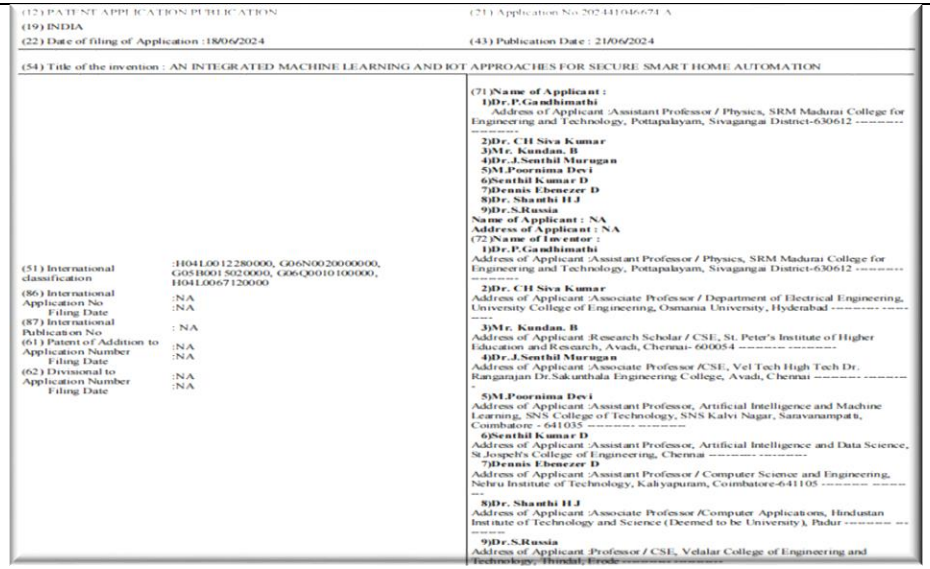
- Implementing data capture for comprehensive analytics and modeling.
- Developing ETL processes for data cleansing and integration.
- Integrating AI algorithms to automate and optimize operations.
- Enhancing data quality through enrichment and feature engineering.
- Building scalable data pipelines for reliable data handling.
- Creating and optimizing machine learning models for predictive insights.
- Embedding AI in applications for enhanced functionality and automation.
- Applying NLP and LLMs for advanced text analysis and content generation.
- Conducting training sessions to develop AI/ML knowledge among Verchool employees.

Compensation and Benefits:

- You will receive a fixed monthly compensation of $350 during the internship period.
- Following a successful three-month review, the compensation structure may be subject to adjustment based on mutually agreed-upon terms.
- Verchool values flexibility and does not mandate specific working hours. The focus is on timely and high-quality project completion.

Verchool Holdings Ltd
Gate Village, Dubai International Financial Centre, Building 10, Level 7, DIFC, Dubai, 359547, UAE Initial:

5.	**PUBLICATIONS(ONLY PUBLISHED) DETAILS** 	Mr. SENTHIL KUMAR D , Assistant Professor from the Department of Artificial Intelligence and Data Science has published a Book Chapter "STOCHASTIC QUANTUM BOLT-BELIEF NEURAL NETWORK BASED INTRUSION DETECTION WITH TWO-FISH DIGITAL HASH CRYPTOGRAPHY FOR DATA SECURITY" in IGI Global and his work has been Indexed in SCOPUS.
6.	**FUNDED PROJECTS**	-
7.	**STAFF CONFERENCE PRESENTATION /PATENT PUBLISHED/STAFF NPTEL ONLINE CERTIFICATION**	Mr. SENTHIL KUMAR D , Assistant Professor from the Department of Artificial Intelligence and Data Science has published a patent "AN INTEGRATED MACHINE LEARNING AND IOT APPROACHES FOR SECURE SMART HOME AUTOMATION "



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/06/2024

(21) Application No.202441046671 A
(43) Publication Date : 21/06/2024

(54) Title of the invention : AN INTEGRATED MACHINE LEARNING AND IOT APPROACHES FOR SECURE SMART HOME AUTOMATION

(51) International classification :H04L0012280000, G06N0020000000, G05B0015020000, G06Q0010100000, H04L0067120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)**Name of Applicant :**
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2)Dr. CH Siva Kumar
3)Mr. Kundan. B
4)Dr.J.Senthil Murugan
5)M.Poornima Devi
6)Senthil Kumar D
7)Dennis Ebenezer D
8)Dr. Shanthi H J
9)Dr.S.Russia
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Dr.P.Gandhimathi
Address of Applicant :Assistant Professor / Physics, SRM Madurai College for Engineering and Technology, Pottapalayam, Sivagangai District-630612 ---------
2)Dr. CH Siva Kumar
Address of Applicant :Associate Professor / Department of Electrical Engineering, University College of Engineering, Osmania University, Hyderabad --------- ---------
3)Mr. Kundan. B
Address of Applicant :Research Scholar / CSE, St. Peter's Institute of Higher Education and Research, Avadi, Chennai- 600054 --------- ---------
4)Dr.J.Senthil Murugan
Address of Applicant :Associate Professor /CSE, Vel Tech High Tech Dr. Rangarajan Dr.Sakunthala Engineering College, Avadi, Chennai --------- ---------
5)M.Poornima Devi
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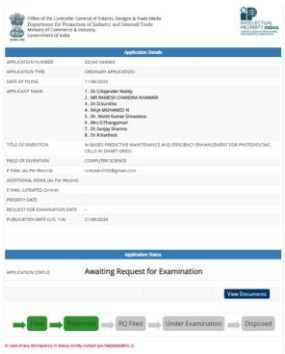
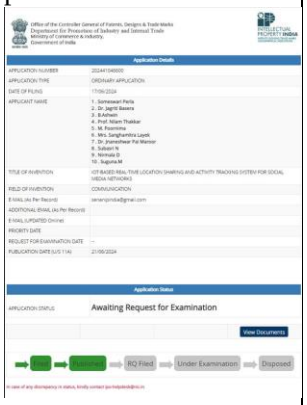
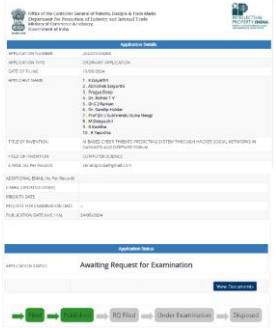
6)Senthil Kumar D
Address of Applicant :Assistant Professor, Artificial Intelligence and Data Science, St.Joseph's College of Engineering, Chennai --------- ---------
7)Dennis Ebenezer D
Address of Applicant :Assistant Professor / Computer Science and Engineering, Nehru Institute of Technology, Kaliyapuram, Coimbatore-641105 --------- ---------
8)Dr. Shanthi H J
Address of Applicant :Associate Professor /Computer Applications, Hindustan Institute of Technology and Science (Deemed to be University), Padur --------- ---------
9)Dr.S.Russia
Address of Applicant :Professor / CSE, Velalar College of Engineering and Technology, Thindal, Erode ---------

Copy of certificate SENTHIL KUMAR D

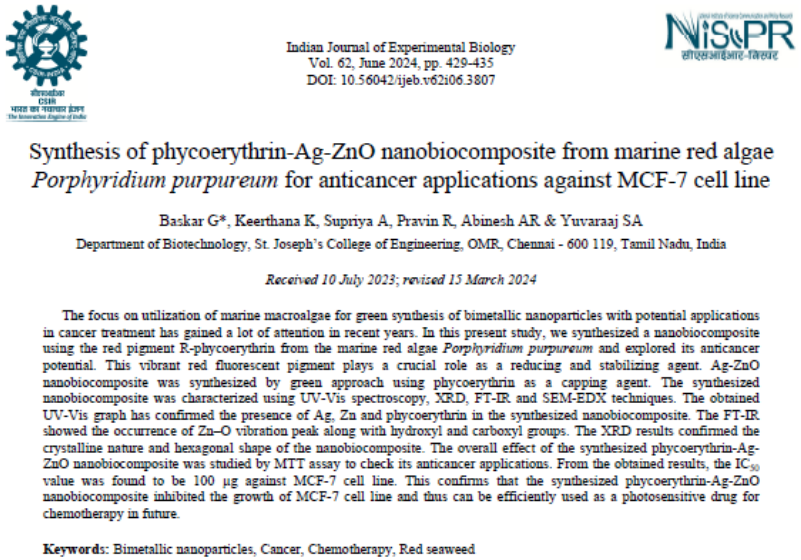
DEPARTMENT OF ARTIFICAL INTELLIGENCE AND MACHINE LEARNING

Sl. No.	Photographs Captured During Event	Corresponding remarks in regarding the status of activity execution
1	 **Dr. Lilly Raamesh** Published a paper in Scopus Indexed Paper.	N. Deepa, B. Arunsundar, **Lilly Raamesh**, Jhansi Rani Challapalli (2024, June) Genetically Optimized Cyber-Physical System (CPS) for Breast Cancer Identification using an LS-SVM Classifier, Springer Nature . **Abstract:** Worldwide, breast tumours are a hazardous and dangerous condition that affects women. Among all types of cancer in women, they rank as the second most common cause of death. To increase the percentage of women who survive, early diagnosis of them is essential. Mammography is a dependable screening method for identifying aberrant breast tissue severity early on. Radiologists use mammography to examine anomalies in the breast tissue. However, it could take a while for a radiologist to use computerised diagnostic procedures to find breast problems. As a result of the advancement of CAD systems, computerised analysis of digital mammography has become possible. For the purpose of detecting breast cancer, several CAD systems have been created. But getting CAD systems to perform well enough is a difficult undertaking. We suggest a CAD architecture that uses an LS-SVM classifier with a variety of kernels, including linear, quadratic, polynomial, MLP, and RBF kernels, to classify breast tissues as benign or cancerous. When compared to all other kernels, the experimental results demonstrate that the GA-based LS-SVM classifier with RBF kernel produces classification accuracy of 94.59% for normal/abnormal case classification. In comparison to earlier published research, it is also claimed that the GA-based LS-SVM classifier with RBF kernel yields a higher classification accuracy of 98.26% for the categorization of benign and malignant cases.
2	 **Dr. Manikandan G** Published a paper in Scopus Indexed Paper.	Mathumohan Swamidoss, Duraimurugan Samiayya, **Manikandan Gunasekar**(2024, June) Next-generation energy-efficient optical networking: DQ-RGK algorithm for dynamic quality of service and adaptive resource allocation, Wily: Concurrency and computation Practice and Experience . **Abstract:** In green optical networking, designing an adaptive energy-saving scheme plays a vital role, in optimizing energy consumption by dynamically adjusting resources based on network traffic and environmental conditions, to a more sustainable and efficient optical communication infrastructure. Traditional methods in optical networking face challenges such as static resource allocation, limited adaptability, inefficient power usage, environmental insensitivity, and scalability issues. Therefore this article proposed a novel method named Dynamic Quality of Service based Random update Genghis Khan (DQ-RGK) algorithm, the proposed model can tackle the abovementioned complexities. In this study, cluster head dynamic placement is utilized to optimize the network's performance by adapting the placement of cluster heads to the current topology, load distribution, and energy levels in the network nodes. Additionally, Dynamic Quality of Service (QoS) is employed to respond dynamically to changes in network conditions, adapting to varying traffic patterns and resource availability. In this work, the Genghis Khan Shark optimization with a random update strategy is implemented for hyperparameter optimization to enhance the performance of the DQ-RGK method. The DQ-RGK adjusts the parameters of QoS in real-time, and this ensures that network resources

		based on the requirements changed and priorities of applications, which ultimately optimizes performance and enhances user experience. By dynamically assigning and reallocating resources based on the current demand the algorithm enhances overall network efficiency and reduces energy consumption. Then, this work analyzes the experimental results, where some evaluation measures estimate the DQ-RGK method's performance. Routing efficiency, latency, scalability, spectral efficiency, Packet Delivery Ratio, throughput, network lifetime, energy consumption, jitter, and energy consumption are the measures employed by the DQ-RGK model. In The results, other routing models that do not provide efficiency are utilized, a comparison of these other routing models is represented in results. The overall DQ-RGK model's effectiveness is represented in the experimental results and its effectiveness is greater among other methods.
3	**Mr. Raja Mohamed. N** Published a design patent 	**Title of the invention:** AI- based Predictive maintenance and Efficiency enhancement for PhotoVoltaic Cells in Smart Grids Dr. S. Rajender Reddy Mr. Ramesh Chandra Khamari Dr. D. Sunitha **Mr. Raja Mohamed N** Dr. Nishith Kumar Srivastava Mrs. D. Thangamari Dr. Sanjay Sharma Dr. R. Karthik **Patent Application Number:** 202441044964 **Date of filing of Application:** 11.06.2024 **Date of Issue:** 21.06.2024
4	**Ms. M. Poornima** Published a design patent 	**Title of the invention:** IOT-Based Real-Time location sharing and activity Tracking system for Social Media Networks Ms. Someswari Peria Dr. Jagriti Basera B. Ashwin Prof. Nilam Thakkar **Ms. M. Poornima** Mrs. Sanghamitra Layek Dr. Jnaneshwar Pal Maroor Ms. Subasri N Ms. Nirmala D Ms. Suguna. M **Patent Application Number:** 202441046600 **Date of filing of Application:** 17.06.2024 **Date of Issue:** 21.06.2024

5	**Dr. Ancy. S** Published a design patent 	**Title of the invention: AI and IOT based Parking Availability Prediction system for Sensor-Enabled Car Parks in Smart Cities using Machine Learning Algorithms.** Dr. Shantanu Shahi Dr. Vishalagoud Patil Dr. Sumathi Sidharth **Ancy. S** Tejeswararao Dharmana Dr. Aayush Shrivastva Kanchan Daulat Ugale Sagar Laxman Kute Deepak Prakash Kumbharde M. Supraja **Patent Application Number:** 202411040006 **Date of filing of Application:** 22.05.2024 **Date of Issue:** 07.06.2024

DEPARTMENT OF BIOTECHNOLOGY

S.No.	Title of the Events and Photographs	Details of the Event
1.	**PAPER PUBLICATIONS**  Indian Journal of Experimental Biology Vol. 62, June 2024, pp. 429-435 DOI: 10.56042/ijeb.v62i06.3807 Synthesis of phycoerythrin-Ag-ZnO nanobiocomposite from marine red algae *Porphyridium purpureum* for anticancer applications against MCF-7 cell line Baskar G*, Keerthana K, Supriya A, Pravin R, Abinesh AR & Yuvaraaj SA Department of Biotechnology, St. Joseph's College of Engineering, OMR, Chennai - 600 119, Tamil Nadu, India *Received 10 July 2023; revised 15 March 2024* The focus on utilization of marine macroalgae for green synthesis of bimetallic nanoparticles with potential applications in cancer treatment has gained a lot of attention in recent years. In this present study, we synthesized a nanobiocomposite using the red pigment R-phycoerythrin from the marine red algae *Porphyridium purpureum* and explored its anticancer potential. This vibrant red fluorescent pigment plays a crucial role as a reducing and stabilizing agent. Ag-ZnO nanobiocomposite was synthesized by green approach using phycoerythrin as a capping agent. The synthesized nanobiocomposite was characterized using UV-Vis spectroscopy, XRD, FT-IR and SEM-EDX techniques. The obtained UV-Vis graph has confirmed the presence of Ag, Zn and phycoerythrin in the synthesized nanobiocomposite. The FT-IR showed the occurrence of Zn–O vibration peak along with hydroxyl and carboxyl groups. The XRD results confirmed the crystalline nature and hexagonal shape of the nanobiocomposite. The overall effect of the synthesized phycoerythrin-Ag-ZnO nanobiocomposite was studied by MTT assay to check its anticancer applications. From the obtained results, the IC_{50} value was found to be 100 µg against MCF-7 cell line. This confirms that the synthesized phycoerythrin-Ag-ZnO nanobiocomposite inhibited the growth of MCF-7 cell line and thus can be efficiently used as a photosensitive drug for chemotherapy in future. **Keywords**: Bimetallic nanoparticles, Cancer, Chemotherapy, Red seaweed *Copy of paper published by Dr.G. Baskar*	1. **Dr. Baskar G**, published a paper on Synthesis of phycoerythrin-Ag-ZnO nanobiocomposite from marine red algae *Porphyridium purpureum* for anticancer applications against MCF-7 cell line, Indian Journal of Experimental Biology, 62 (2024) 429-435. 2. Dr. **G. Baskar**, published paper on Harnessing Fe_3O_4 nanoparticles for sustainable harvesting of astaxanthin-producing microalgae: Advancing industrial-scale biorefinery, **Separation and Purification Technology** 353 (2025) 128408. **(I.F: 8.6)** 3. **Dr. M. Chamundeeswari** received a **"Certificate of Reviewer"** from *Desalination and Water treatment* on June 2024, Elsevier Journal 4. **Dr. M. Chamundeeswari r**eceived a **"Certificate of Excellence in Reviewing"** from *Journal of engineering Research and Reports* on June 2024 5. **Dr. M. Chamundeeswari** received a **"Certificate of Excellence in Reviewing"** from *Asian Journal of Applied Chemistry and Research* on May 2024 6. **Dr. M. Chamundeeswari** received a **"Certificate of Reviewer"** from *Bioresource and Technology* on June 2024

Separation and Purification Technology 353 (2025) 128408

Contents lists available at ScienceDirect

Separation and Purification Technology

journal homepage: www.elsevier.com/locate/seppur

Harnessing Fe_3O_4 nanoparticles for sustainable harvesting of astaxanthin-producing microalgae: Advancing industrial-scale biorefinery

Yamini Sumathi [a,1], Prashant Kumar [a,1], Reeta Rani Singhania [a,c], Chiu-Wen Chen [a], Baskar Gurunathan [d], Cheng-Di Dong [a,b,*], Anil Kumar Patel [a,c,**]

[a] Institute of Aquatic Science and Technology, College of Hydrosphere, National Kaohsiung University of Science and Technology, Kaohsiung City 81157, Taiwan
[b] Department of Marine Environmental Engineering, National Kaohsiung University of Science and Technology, Kaohsiung City, Taiwan
[c] Centre for Energy and Environmental Sustainability, Lucknow 226 029, Uttar Pradesh, India
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ARTICLE INFO

Editor: M. Freire

Keywords:
Haematococcus pluvialis
Chlorella zofingiensis
Fe_3O_4 nanoparticles
Magnetite harvesting
Flocculation
Recycling

ABSTRACT

Microalgae are esteemed for their potential as sustainable sources of bioactive compounds, notably astaxanthin, a valuable antioxidant with diverse health applications. This study investigates Fe_3O_4 nanoparticle efficacy in harvesting astaxanthin-producing microalgae for sustainable applications. Parameters such as nanoparticle concentration, exposure time, and magnetic field strength were optimized for *Haematococcus pluvialis* and *Chlorella zofingiensis* biomass harvesting. Fe_3O_4 nanoparticles achieved >99% harvesting efficiency in *H. pluvialis* at 200 mg L^{-1} across all pH ranges, while *C. zofingiensis* showed peak efficiency at 800 mg L^{-1} and pH 4. The zeta analyzer revealed a maximum potential gap at pH 4, facilitating stable binding of microalgae with nanoparticles. This research underscores Fe_3O_4 nanoparticles' sustainable harvesting potential, aligning with Sustainable Development Goals SDGs such as Industry, Innovation, and Infrastructure (SDG 9) and Responsible Consumption and Production (SDG 12). It offers a promising pathway for industrial-scale microalgae production and astaxanthin exploitation, with implications for biorefinery development, and commercialization in pharmaceuticals, nutraceuticals, and cosmetics industries.

Copy of paper published by Dr.G. Baskar

ELSEVIER

Desalination and Water Treatment

Certificate of Reviewing

Awarded for 1 review in June 2024
presented to

CHAMUNDEESWARI M.

in recognition of the review contributed to the journal

The Editors of Desalination and Water Treatment

Elsevier Reviewer Recognition

Copy of certificate by Dr. M. Chamundeeswari

Certificate No: PRJERR117933M.

Journal of Engineering Research and Reports

Certificate of Excellence in Reviewing

awarded to

Dr. M. Chamundeeswari

Anna University, India

in recognition of an outstanding contribution to the quality of the journal.

Date: 21.06.2024
Validation Link:
https://dashboard.peerreviewcentral.com

Dr. M. B. Mondal
Chief Managing Editor

Reg.Offices

Copy of certificate by Dr. M. Chamundeeswari

Certificate No: PRAJACR116728M.

Asian Journal of Applied Chemistry Research

Certificate of Excellence in Reviewing

awarded to

Dr. M. Chamundeeswari

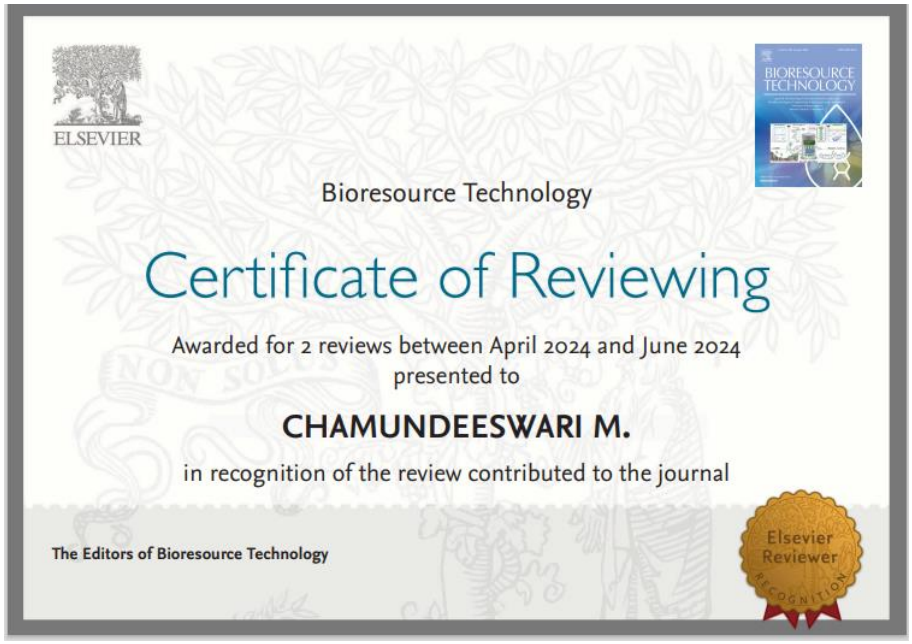
St. Joseph's College of Engineering, India

in recognition of an outstanding contribution to the quality of the journal.

Date: 22.05.2024
Validation Link:
https://dashboard.peerreviewcentral.com

Dr. M. B. Mondal
Chief Managing Editor

Copy of certificate by Dr. M. Chamundeeswari



ELSEVIER

Bioresource Technology

Certificate of Reviewing

Awarded for 2 reviews between April 2024 and June 2024
presented to

CHAMUNDEESWARI M.

in recognition of the review contributed to the journal

The Editors of Bioresource Technology

Elsevier Reviewer RECOGNITION

Copy of certificate by Dr. M. Chamundeeswari

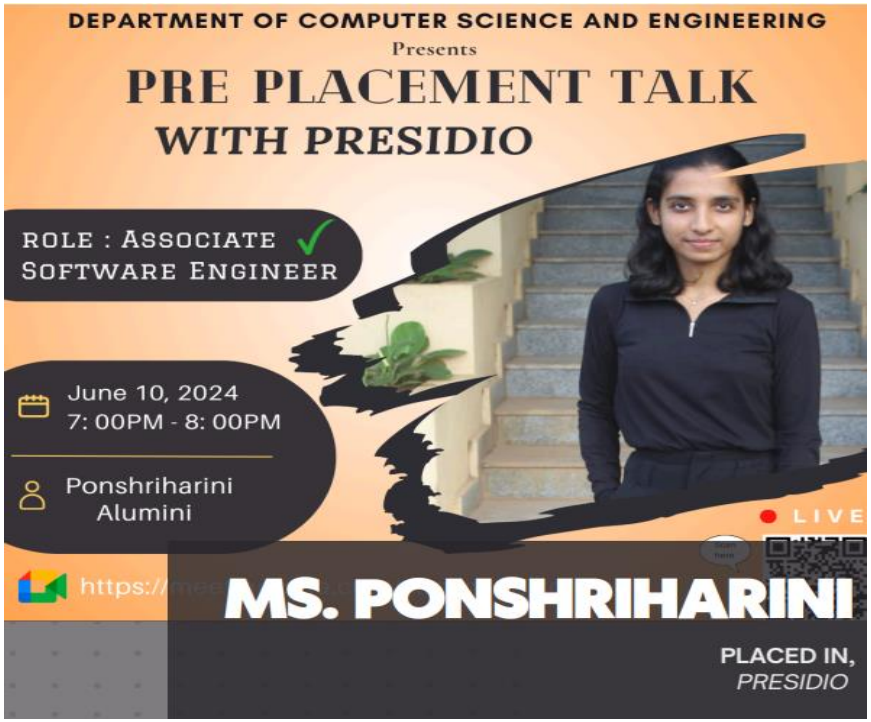
DEPARTMENT OF CHEMICAL ENGINEERING

S.No.	Title of the Events and Photographs	Details of the Event
2.	**INDUSTRIAL VISIT**	**Dr.S .V.Vinod Kumar, Associate Professor, Dr.P.Renuka, Professor** along with **Dr.Arun Kumar**,**Dean Industry Coordinator** had an industrial visit with **Mr. Sajid Hussain**, the Chief Operating Officer, Tamilnadu Water Investment Company Ltd.
3.	**FDP/WORKSHOP/CONFERENCE**	**Mrs . R.Lavanya**, Assistant Professor, Department of Chemical Engineering, St. Joseph's College of Engineering has attended a six day Short Term Training Program (STTP) on "Process Modeling Simulation and Control" Organized by SVCE College of Engineering during. **Dr.S .V.Vinod Kumar**, Associate Professor, and **Dr.N.Magesh,** Assistant Professor attended a two day training program for teaching fraternity (TOT) Association with BYST organized by MBA department, St.Josephs College of Engineering.
4.	**AWARDS/PRIZE WON BY STUDENTS**	Our NCC cadets, **Cdt. Krishna AAK** (II Chem) who have attended the TSC training I camp at VIT, Vellore, during 05.06.2024 to 14.06.2024, have successfully cleared and got selected for the next camp (CATC CUM GP IGC TSC Trg I) going to held from 21.06.2024 to 30.06.2024.
5.	**INDUSTRIAL PROJECTS DONE BY STUDENTS**	
6.	**PUBLICATIONS(ONLY PUBLISHED) DETAILS**	

		Mr.P Anand Kumar, Assistant Professor, Department of Chemical Engineering, St. Joseph's College of Engineering has published a patent in the title "Methods for the synthesis and characterization of high-performance metal organic framework for gas separation" assuring all the staffs from the department has contributed a patent in their name. **Dr. S. Sujatha**, Assistant Professor, Chemical Engineering, St. Joseph's College of Engineering, has published groundbreaking research titled "Sustainable Remediation of Pesticide Pollutants Using Covalent Organic Framework – A Review on Material Properties, Synthesis Methods and Application" in the high-impact journal Environmental Research (Impact factor 8.1). **Dr. S. Vinod Kumar**, Associate Professor, St. Joseph's College of Engineering, has published a paper titled "Modeling and Evaluation of the Permeate Volume in Membrane Desalination Processes Using Machine-Learning Techniques" in Digital Chemical Engineering, which has an impact factor of 3.1.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	Event with Photo	Description
1	Master Trainers Training Program "My Bharat"	
		**Date:** 29th &30th May 2024 **Venue: Library AV Hall** **Nature of Event:** Master Trainers Training Program Participants: Faculties & Students Organized by: Department of CSE Objective : • This training is to equip experienced trainers with advanced skills and methodologies, enabling them to effectively mentor and elevate the capabilities of other trainers within their organization or field. By achieving mastery, these trainers can drive higher standards of training delivery and ensure consistent quality across all training initiatives. Outcome: • Training includes highly skilled trainers capable of delivering advanced, impactful training sessions. • These trainers can effectively transfer knowledge, inspire others, and maintain high standards of training quality within their organization or professional domain.

2	**Alumni talk -Presidio**	
		**Date:** 10-6-2024 **Venue:** Virtual **Nature of Event:** Alumni talk Participant: IV-year Students Organized by: Department of CSE Objective: • Alumni talks often aim to provide current students with valuable insights into various career paths, industries, and professional experiences. • Alumni may share their career journeys, lessons learned and advice for navigating the job market. • Alumni talks can facilitate networking opportunities between current students and alumni. Outcome: • Alumni talks create opportunities for attendees to connect with alumni who may serve as valuable mentors, advisors, or contacts in their desired field. • Building relationships with alumni can lead to internships, job opportunities, and professional connections that can benefit attendees throughout their careers.

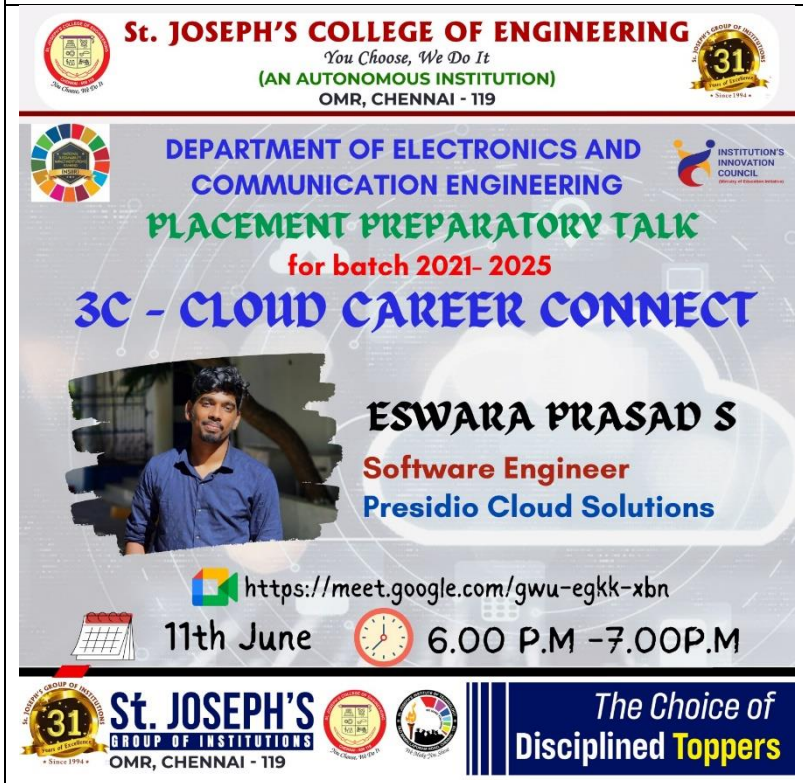
3	**Alumni talk – Zoho**	
		**Date:** 17.06.2024 **Venue:** Virtual **Nature of Event:** Alumni talk Participants: IV year Students Organized by: Department of CSE Objective: • Alumni talks often aim to provide current students with valuable insights into various career paths, industries, and professional experiences. • Alumni may share their career journeys, lessons learned and advice for navigating the job market. • Alumni talks can facilitate networking opportunities between current students and alumni. Outcome: • Alumni talks create opportunities for attendees to connect with alumni who may serve as valuable mentors, advisors, or contacts in their desired field. • Building relationships with alumni can lead to internships, job opportunities, and professional connections that can benefit attendees throughout their careers.

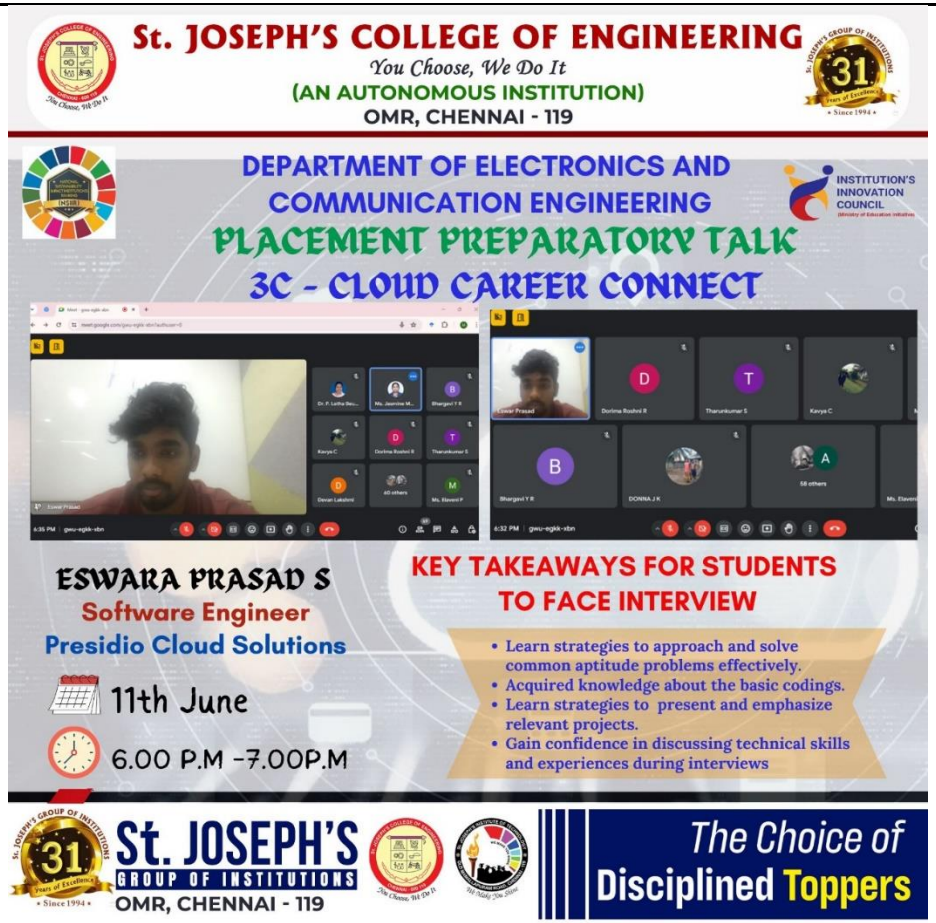
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

1. Events conducted:

The following events have been conducted during June 2024 at College Level

1. PLACEMENT ACTIVITIES

EVENT 1	Report
	ECE Alumni Mr. S. Eswara Prasad Shares Placement Insights with Juniors On June 11th, 2024, the ECE department welcomed back alumnus Mr. S. Eswara Prasad, a Software Engineer at Presidio Cloud Solutions. Mr. Prasad generously shared his valuable insights and experiences with current students, specifically focusing on preparation for placements. This session undoubtedly proved beneficial for the students as they navigate the job search process.

	
EVENT 2	**Report**

ECE Alumni Kavya M Inspires Juniors with Placement Talk

On June 15th, ECE department alumnus Kavya M, an App Developer at ZOHO Corporation, returned to share valuable insights and experiences with current students. This session focused on helping them prepare for successful placements.

Kavya's talk likely covered:
Industry knowledge: Insights into the app development field and current trends.

Placement preparation tips: Strategies for crafting resumes, excelling in interviews, and navigating the placement process.

ZOHO Corporation insights: Information about the company culture, work environment, and potential career paths for ECE graduates.

This session provided a valuable opportunity for current ECE students to learn from a successful alumnus and gain practical advice for their upcoming placements.

EVENT 3	**Report**
	On 19th June 2024, Andrew David, Alumni: Batch 2016, Member Leadership Staff, and Head of Data Privacy at Zoho, offered valuable insights into Zoho's hiring practices and career development opportunities. As a Zoho alumnus himself, Andrew provided a well-rounded perspective for both aspiring and experienced professionals. Key Takeaways from Andrew's Talk: • Understanding the Hiring Team and Process: • Attributes Zoho Values • Leveraging Expertise for Problem-Solving • Career Growth within Zoho This informative session by Andrew David provided a roadmap for navigating Zoho's hiring process and maximizing your potential for a successful career, both within Zoho and beyond.

2. INDUSTRIAL INTERACTION

Interaction- 1	Report
	Exciting News! ECE Department Announces Successful Industrial Visit and Future Collaborations The Department of Electronics and Communication Engineering (ECE) is thrilled to announce a fruitful industrial visit that has paved the way for exciting new collaborations! Our esteemed faculty members recently visited the Council for Scientific and Industrial Research (CSIR)-CEERI, a premier government research institute, and Edveon Technologies Private Limited, a leading company specializing in VLSI RTL design and verification. During the visit, productive discussions were held with key personnel, including Dr. C. Kumaravelu (Senior Principal Scientist, CSIR-CEERI), Mr. Mukesh

	Vaidyanathan (Chief Strategy Officer, Edveon), and Ms. Shri Ranjani (Tech Lead, Edveon).
Interaction- 2	**Report**
	We are delighted to share that these esteemed organizations have expressed a strong interest in collaborating with our department on a range of initiatives: Memorandum of Understanding (MoU): This will establish a formal framework for collaboration, fostering knowledge exchange and joint research projects. Internships and Placements: Students will gain valuable real-world experience through internship opportunities at these organizations and potentially secure placements upon graduation. Industry Bootcamp: Specialized training programs will provide students with industry-relevant skills and insights. Student Skill Development Program: Collaborative programs will equip students with the technical expertise demanded by the industry. Board of Study Membership: Industry experts will provide valuable guidance in shaping our curriculum to align with industry needs. Furthermore, CSIR-CEERI and Edveon have welcomed the submission of collaborative project proposals, opening doors for cutting-edge research endeavors.
Interaction- 3	**Report**

Collaboration between ECE Department and HTL Ltd.

ECE department has secured a valuable collaboration with HTL Ltd., a leading provider of integrated telecom products and solutions. This partnership offers exciting opportunities for both students and faculty. Here's a breakdown of the agreed-upon activities:

Internship Program:

Students will gain practical experience working on real-world projects in areas like telecommunication, automotive, and industrial applications. HTL Ltd. will benefit from fresh perspectives and potential innovations brought by interns.

Placement (CE):

- HTL Ltd. will potentially offer job opportunities to graduating students within the Core Engineering (CE) stream.
- This collaboration can provide students with a strong advantage in securing placements with a reputable company in their field.

Interaction -4

Report

Exciting New Collaboration with Deep Sense Digital Solutions Pvt. Ltd.

We are thrilled to announce a new collaborative partnership with Deep Sense Digital Solutions Pvt. Ltd., a leading Chennai-based company specializing in Search Engine Optimization (SEO), Mobile App Development, Software Development, and Creative Design powered by Artificial Intelligence (AI) and Machine Learning (ML).

3. Publications:

The following staff member have published the research papers in Journal/Conferences organized during the month of June at International/National Level.

S. No.	Name of the Author	Paper Title	Name of the Conference/Journal	Impact Factor
1.	Dr. S. Rajeshkannan	Cancer Detection using Multi-Layered Kretschmann Configuration-based Refractive Index Sensor	Plasmonics	3
2.	Dr. P. Ezhilarasi	Enhancing Cluster Node Forming Routing Protocol in Mobile Adhoc Network	International Journal of Engineering Trends and Technology	0.19
3.	Dr. R. Avudaiammal	Multi-Objective Spider Monkey Optimization for Energy Efficient Clustering and Routing in Wireless Sensor Networks	Ad-Hoc and Sensor Wireless Networks	0.92
4.	Mrs. G. Anitha, Dr. J. Martin Leo Manickam	A comprehensive ensemble pruning framework based on dual-objective maximization trade-off	Knowledge and Information Systems	2.531
5.	Mrs. M. Angelin Ponrani	Brain-Computer Interfaces Inspired Spiking Neural Network Model for Depression Stage Identification	Journal of Neuroscience Methods	3
6.	Dr. D. Lakshmi	Decision Trees for Secure and Transparent Equipment Failure Prediction in Cloud-Connected Manufacturing	2024 10th International Conference on Communication and Signal Processing (ICCSP)	-

		IoT and Cloud Solutions Waste-to-Energy in Hospitals for Energy Recovery from Medical Waste	IEEE Xplore, 2024	-
7.	Dr. Aghalya S	Revolutionizing Railway Disaster Management with Cutting-edge IoT Technologies and Decision Tree Algorithm	10th International Conference on Communication and Signal Processing, ICCSP 2024	-
		5G-Enabled V2X Communication with Cloud-Powered XG Boost Algorithm for Electric Transportation	10th International Conference on Communication and Signal Processing, ICCSP 2024	-
		Tele-Rheumatology-Advanced Neural Network Model for Remote Assessment and Management of Rheumatic Conditions	IEEE Explorer	-

4. Faculty Development Programme:

The following staff member have attended Faculty Development Programme during the month of June.

S. No	Name of the Faculty	Title	Date
1.	Dr. B. Victoria Jancee	R Programming for Budding Data Analysts	9-18th June 2024
1.	Dr. S. Aghalya	R Programming for Budding Data Analysts	9-18th June 2024

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Sl. No.	Photographs Captured During Events	Corresponding remarks (Minimum 300 words)	Criterion
1.	**IEEE activities**  *PIC: EVENT POSTER*	IEEE Spectrum of St. Joseph's College of Engineering conducted a Spectrum session. The speaker, Ms. P. Shakti spoke on "Sea turtle ears inspire a new heart monitor design" on 02nd June 2024. The speaker enlightened us with the idea that "Researchers in China have developed a heart-monitoring system inspired by sea turtles. Instead of traditional ears, sea turtles detect sound through their skin, which covers their auditory system. The researchers created a T-shaped heart-sound sensor that mimics the ear bones of sea turtles using a tiny MEMS cantilever beam sensor. This innovative design allows the sensor to effectively detect heartbeats by translating vibrations into electrical signals. Initial tests in humans suggest it could be a viable and cost-effective solution for monitoring heart health at home". The session was held between 6:00 p.m. and 7:00 p.m. A total of 25 participants participated and had an amazing experience during the meeting, thoroughly enjoying the entire session.	4
2.	**IEEE activities**	IEEE Power Electronics Society Student Branch Chapter SJCE SB (SBC60101C) Organized A Webinar Session titled "EV ELECTRIFICATION" on June 16, 2024. The topic for the session was "Role of Power Electronics in EV and it's Infrastructure", presented by Mr. Vishnu Sheshadri, Electric Drives R & D, MIT, Manipal, Power Electronics & Drives, Electrical & Electronics Engineer, EV Enthusiast. Students from the final year, pre-final year, and second year of the Department of Electrical and Electronics Engineering, as well as other college students and staff, participated. This session gives insights about various rectification topologies, component selection, and performance evaluation to optimize the design of front-end rectifiers for level 1 chargers, contributing to the advancement of EV charging infrastructure.	4

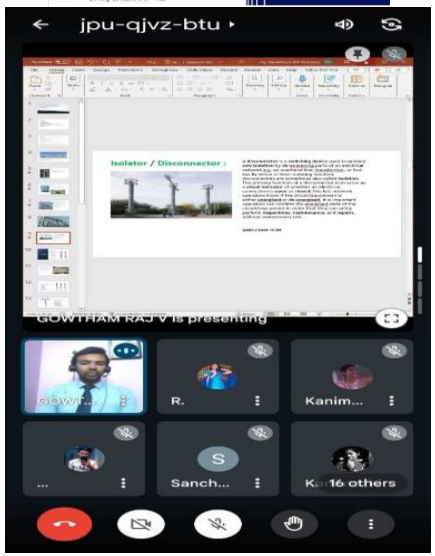
	 *PIC: EVENT PHOTO& POSTER*	Approximately 40+ participants joined this event on Gmeet. The participants were rewarded with E-certificates as a token of appreciation. A memento was presented to the speaker at the conclusion of the session.	
3.	**IEEE activities**  *PIC: EVENT PHOTO& POSTER*	On the Occasion of IEEE PELS Day Celebration 2024, The Department of Electrical and Electronics Engineering, in association with the IEEE Power Electronics Society SJCE SB (SBC60101C), hosted a power talk on power electronics by Mr. Elanthirayan R, EEE Faculty, St. Joseph's College of Engineering as part of the PELS Day Celebration 2024. The event, held on June 20th 2024, from 2:00 pm to 3:00 pm, attracted over 40 enthusiastic students from the EEE department at St. Joseph's College of Engineering. He discussed various applications, current research trends, and future prospects in the field, highlighting their importance in modern technology and engineering. The students greatly benefited from the session, gaining valuable knowledge and a deeper understanding of this critical field. They also had the opportunity to engage in an interactive Q&A session, where they clarified their doubts and explored the practical aspects of power electronics, further enhancing their learning experience. This event underscored the commitment of the department and the IEEE society to fostering academic growth and professional development among students.	4

4.	**IEEE activities**  ***PIC: EVENT PHOTO& POSTER***	On the **occasion of IEEE PELS Day Celebration 2024**, the Department of Electrical and Electronics Engineering, in association with the IEEE Power Electronics Society SJCE SB (SBC60101C), organized the PELS Expo - Project Exhibition. This event was held on **20th June 2024 from 12:00 PM to 1:30 PM** to showcase the innovative projects of students, both hardware and software, and to foster a spirit of creativity and technical expertise among participants. During the PELS Expo - Project Exhibition held as part of the PELS Day Celebration 2024, over 10 **innovative projects** were displayed by students from the Department of Electrical and Electronics Engineering. These projects, encompassing both hardware and software applications, were meticulously reviewed by **Dr Chidambararaj Natarajan a distinguished faculty member of the Electrical and Electronics Engineering department at St. Joseph's College of Engineering**. His expert evaluations and constructive feedback provided valuable insights to the participants, encouraging further development and refinement of their work.	4
5.	**IEEE activities**  ***PIC: EVENT PHOTO& POSTER***	On the Occasion of WIE Day 2024 ,IEEE Women in Engineering, in association with the IEEE St. Joseph's College of Engineering student chapter, Organized a webinar Breaking Barriers on the topic of "**Women leading the way in AI and Machine Learning**" on June 25, 2024 from 7:00 pm – 8:00pm. The session was presented by DR .Elakkiya ,AI RESEARCHER, YOUNG SCIENTIST -SRG (SERG) & DST (SYST), Dubai. Students from Department of EEE participated. In this session Students gain awareness about the significant contributions of women in AI and Machine Learning (ML), breaking stereotypes about gender roles in technology. She shared her Insights about the unique challenges and biases faced by women in the tech industry, including issues of representation, pay gaps, and workplace culture. Approximately 20 students took part in this event via google meeting. E-Memento was awarded to the speaker at the end of the session as a gesture of gratitude.	4

6.	**IEEE activities**  ***PIC: EVENT PHOTO& POSTER***	The **IEEE SJCE SB MAANAVAR MANDRAM** of St. Joseph's College of Engineering organized an engaging online photographic contest titled **"OLI OVIYAM"** exploring the rich tapestry of Tamil literature. The event, conducted with finesse in a virtual setting on the date from 27TH JUNE 2024 to 29TH JUNE 2024 with a total of 20 participants. **Malini A**, participant, framed **FIRST PRIZE** of the contest and **Kalaiarasi C M** is the **RUNNER**. The event's seamless execution was credited to the dedicated student coordinators, Jayavarshini M J, Oviya Varshini R, Nivetha B, Saniya Benzer E, Isha T, Hassan A, and Anas Javith A.	4
7.	**IEEE activities**	IEEE PES SJCE SB- in association with IEEE St. Joseph's College of Engineering Student chapter conducted a webinar session "**INNOVATION TOMORROW**" on 27/06/2024.the topic session was **"IEEE JOURNEY**" presented by **Lakshan Madhushanka** Lecturer, Electrical & Electronic Engineer, Certified Life Coach, IEEEian, AIESECer, Motion Graphic Designer and Photographer.from the pre-final year, and second year of the Department of Electrical and Electronics Engineering participated. From groundbreaking innovations in artificial intelligence and robotics to sustainable energy solutions and biomedical engineering, Our report underscores IEEE's commitment to fostering collaboration, knowledge exchange, and technological leadership, reflecting its impact on shaping the world's technological landscape. Through standards development, research facilitation, and knowledge exchange, IEEE shapes the future of technology, fostering collaboration and pushing the boundaries of what's possible in engineering and beyond Attendees engaged in a Q&A session, gaining insights into practical implementation and innovation opportunities. Overall, the webinar provided valuable insights into leveraging AI for industrial advancements. Approximately 25+ students took part in this event over meet. The participants were rewarded with E-certificate as a token of appreciation - Memento was awarded to the speaker by the end of the session.	4

PIC: EVENT PHOTO& POSTER

8.	**IEEE activities**  ***PIC: EVENT PHOTO& POSTER***	On the **occasion of IEEE PELS Day Celebration 2024**, The Department of Electrical and Electronics Engineering at SJCE, in collaboration with the IEEE Power Electronics Society SJCE SB (SBC60101C), hosted the the event, aptly themed "**PHOTO FEST**," on **June 27, 2024**, aimed to enhance knowledge sharing and engagement in power electronics, fostering innovation and collaboration within the field. The celebration began at **8:30 PM with a 10-minute presentation by EEE students**, who delivered insightful and well-researched content on a contemporary power electronics topic. This presentation highlighted the students' expertise and enthusiasm, providing a platform for sharing cutting-edge ideas and advancements in power electronics. Following the presentation, the event transitioned into an **online photo shoot**, where participants had the **opportunity to capture and share memorable moments** from the celebration. This interactive session not only added a fun and engaging element to the event but also allowed for a broader community connection, as attendees could share their experiences and foster a sense of camaraderie. The PELS Day Celebration 2024 successfully combined educational and interactive elements, making it a memorable and impactful event for all participants, and underscored the importance of continuous learning and innovation in power electronics.	4
9.	**IEEE activities**  ***PIC: EVENT POSTER***	"The IEEE SIGHT Affinity Group, in collaboration with IEEE SJCE Student Branch, hosted an enriching online webinar titled " **HUMAN RIGHTS** "on June 29, 2024. PhD Scholar, Bioastronautics, **Ms. V Sivasankari** shared invaluable insights on navigating life's challenges and extracting wisdom from personal experiences. Approximately 30 participants from diverse backgrounds joined the session, which emphasized the transformative power of technology in empowering positive change. Through engaging discussions and practical advice, attendees were inspired to embark on a journey of self-improvement and success. The webinar, conducted via Google Meet, provided a platform for meaningful interaction and learning.	4

10.	**ISTE activities**   ***PIC: EVENT POSTER & PHOTO***	The St. Joseph's ISTE Student Chapter, in conjunction with St. Joseph's College of Engineering specializing in Electrical and Electronics Engineering organized an eminent webinar TECHNICAL SPOT on TRANSITIONING BETWEEN GIS AND AIS - A COMPREHENSIVE EXPLORATION OF SUBSTATION TECHNOLOGIES AND EQUIPMENT on 30th May, 2024 between 6.00 pm and 7.00 pm under the auspices of Mr. Gowtham Raj, Secondary Design Engineer, Substation (Protection and Control). This impactful session delved into the multifaceted advantages of vision, emphasizing its significance across various domains. The session on transitioning between Gas-Insulated Substations (GIS) and Air-Insulated Substations (AIS) was a comprehensive exploration of substation technologies and equipment, successfully covering the critical aspects of both systems. Participants gained insights into the fundamental roles and components of substations, with detailed discussions on the advantages of GIS. Challenges and solutions in transitioning from AIS to GIS were addressed, supported by case studies and real-world applications that provided practical perspectives.	4

11.	**Club Activities**  *PIC: EVENT POSTER*	On May 28, 2024, "ROBOTICS CLUB" of department of Electrical and Electronics Engineering at St. Joseph's College of Engineering, conducted an event "ACADEMIC ARENA ON DESIGN DYNAMO: ROBOT STIDIO CHALLENGE," presented by Mr Lal Arjun, second year EEE. Between 6:00 and 7:00 p.m., about thirty-two students from each final and second year attended the G-meet event. The robotic studio challenge general quiz marked the conclusion of the event, with certificates being awarded to the victors. The event commends on the introduction to robot challenge with example by Mr Lal Arjun and ended with the quiz discussion.	4
12.	**Club Activities**  	On May29, 2024, "ELECTRICAL CLUB" of department of Electrical and Electronics Engineering at St. Joseph's College of Engineering, conducted an event " ACADEMIC ARENA ON CIRCUIT WIZARD WITH TINKERCAD ", presented by Ms Joshika, second year EEE. Between 6:00 and 7:00 p.m., almost a total of 27 students from both the final and second year participated the G-meet event. The general quiz on circuit-related techniques marked the conclusion of the event, with certificates being awarded to the winners. The event commends on the introduction to the techniques related to circuits with example by Joshika and ended with the quiz discussion.	4

	PIC: EVENT POSTER		
13.	**Alumni activities**  *PIC: EVENT POSTER*	On **June 9th, 2024**, our department conducted an event **"Effective Preparation and Strategic Approaches for ZOHO Placement,"** presented by **Mr Vishal and Thinoj D, 2023 batch alumni**. Approximately 34 Students from the final year attended the event on G-meet at 2.00 pm to 3.00 pm. The event ended with the clarifications and discussions based on Zoho placement.	4
14.	**Alumni activities**	On **June 9th 2024**, our department conducted an event **"Effective Preparation and Strategic Approaches for presidio Placement,"** presented by **Ms. Nirmitha A J, 2021 batch alumni**. Approximately 28 Students from the final year attended the event on G-meet at 7.00 pm to 8.00 pm. The event ended with clarifications and discussions based on presidio placement.	4

	 ***PIC: EVENT POSTER***		
15.	**Faculty awards and recognitions**	Our faculty **Mr.V.Balasubramanian** got Certificate of appreciation from **NPTEL Swayam** as "**NPTEL ENTHUSIAST & NPTEL BELIEVER"** for the exams conducted during the period of JAN – APR 2024 Our faculty **Dr.M.Ramesh Babu** acted as **a resource person in All India Seminar organised by Sathyabama University and took a Session** titled **"Overview of the Smart Grid for Green, Sustainable Solutions and its Challenges"** on 21st June 2024. Our faculty **Dr.M.Venmathi** acted as the **Chief Guest** for the event and delivered the Inaugural address & as the **Jury** for the **IDEATHON Event EEE in celebrating IEEE-PELS DAY** on 24th, June 2024 @ 09.00 AM. Our Faculty **Dr. Anbarasan. P** published a paper titled **"Modeling, Simulation, Time Response and Stability Analysis of Fuel Cell Based DC-DC Converter for EV Applications",** in *2024 Third International Conference on Intelligent Techniques in Control, Optimization and Signal Processing (INCOS)*, Krishnankoil, Virudhunagar district, Tamil Nadu. Our Faculty **Dr. Jayarama Pradeep** published a paper titled **" Minimization of total operational cost & voltage deviation in grid-connected unbalanced MGs using optimization approach"** in SPRINGER. Our Faculty **Mr.T.SriAnada Ganesh** published a paper titled **" Recent developments in surface-enhanced Raman spectroscopy in the field of chemical, biochemical and clinical application– a critical review"** in International Journal of Environmental Analytical Chemistry. **Dr.Jayarama Pradeep, Dr.T.Babu, Dr.V. Krishnakumar, Dr.S.Sridharan, Dr.P.Velmurugan, Dr.P.Anbarasan, Mr.R.Elanthirayan,**	**5**

		Mr.R.Siddhardhan, Mr.N.Jeyaprakash, Mr.S.Sivakumar, Mr.R.Sreekanth, Mr.T.Srianand Ganesh and Mr. S.Nishant Successfully Completed NPTEL course. Also 67 students completed NPTEL course during the Apr/May 2024 Session.	
16.	PLACEMENT DETAILS FOR THE MONTH OF JUNE 2024	**2020-2024 Batch** Total No of students placed = 100 Students Total No of Offers = 116 Offers Total No of Students (UG) = 150 Total No of Eligible Students (UG) = 128 (All Clear) % of students Placed (UG) = 100/150 = 66.67 % No of students having single offers = 85 No of students having Double offers = 14 No of students having Triple offers = 01 **2021-2025 Batch** Total No of students placed = 02 Students Total No of Offers = 02 Offers Total No of Students (UG) = 194 No of students having single offers = 02	**4**

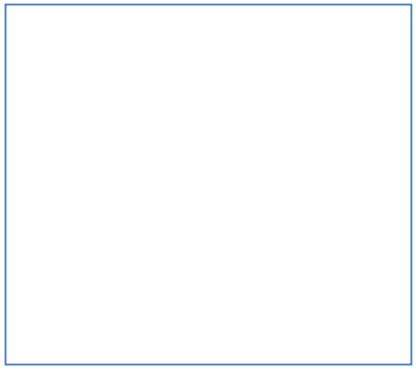
DEPARTMENT OF INFORMATION TECHNOLOGY

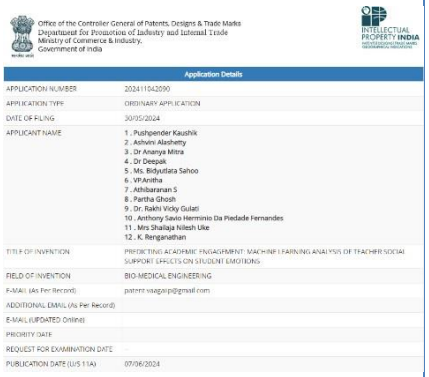
Sl. No.	Photographs Captured During Event/Screenshot	Corresponding remarks in regarding the status of activity execution
1	**Author** **Mr.J Manikandan** Published a paper in SCIE Journal	**Staff Paper Publication** **J, Manikandan**, K, Jayashree "Enhancing Lung Nodule Classification: A Novel CViEBi-CBGWO Approach with Integrated Image Preprocessing" Journal of Imaging Informatics in Medicine, 2024, ISSN: 2948-2925, EISSN: 2948-2933, https://doi.org/10.1007/s10278-024-01074-1 **(Indexed in SCIE, Impact factor: 2.9)** **Abstract:** Cancer detection and accurate classification pose significant challenges for medical professionals, as it is described as a lethal illness. Diagnosing the malignant lung nodules in its initial stage significantly enhances the recovery and survival rates. Therefore, a novel model named convolutional vision Elman bidirectional–based crossover boosted grey wolf optimization (CViEBi-CBGWO) has been proposed to enhance classification accuracy. CT images selected for further preprocessing are obtained from the LUNA16 dataset and LIDC-IDRI dataset. The data undergoes preprocessing phases involving normalization, data augmentation, and filtering to improve the generalization ability as well as image quality. And the combined form of CBGWO fine-tunes the parameters of the CViEBi model, eliminating the problem of local optima. Experimental validation is conducted using various evaluation measures to assess effectiveness. Comparative analysis demonstrates a superior classification accuracy of 98.72% in the proposed method compared to existing methods.

2	 **Author** **Mrs.M Janani** Published a paper in SCIE Journal	**M.Janani.,** Arumugam, C. Privacy BERT-LSTM: a novel NLP algorithm for sensitive information detection in textual documents. Neural Comput & Applic (2024), ISSN:0941-0643; EISSN:1433-3058, https://doi.org/10.1007/s00521-024-09707-w, **(Indexed in Scopus, Impact factor: 4.5)** **Abstract:** In this modern digital era, the increasing volume of textual data and the widespread adoption of natural language processing (NLP) techniques have presented a critical challenge in safeguarding sensitive privacy information., CASSED, PRIVAFRAME, CNN-LSTM, Conv-FFD, GCSA, TSIIP, and, C-PIIM. The experimental outcomes clearly illustrate that the Privacy BERT-LSTM algorithm demonstrates superior performance in identifying various types of sensitive information by achieving an accuracy of 92.50%, F1-score of 85.02%, and Precision of 89.36%. The proposed algorithm outperforms existing baseline models, providing valuable advancements in sensitive information detection using NLP. Therefore, this research contributes to the advancement of privacy protection in NLP applications and opens avenues for future investigations in the domain of sensitive information detection. Additionally, the proposed algorithm provides valuable insights for researchers and practitioners working on privacy-sensitive NLP tasks.

3	 **Co-Author** **Mrs.R. Shoba** and **Mrs. G. Lathaselvi** Published a paper in Scopus indexed Conference	Balaji P; Akash Selvin S;, **R. Shoba and G. Lathaselvi**, "Facial Pain Detection Using Deep Learning," 2023 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES), pp. 1-7, Electronic ISBN:979-8-3503-1920-0, Print ISBN:979-8-3503-1921-7, doi: 10.1109/ICSES60034.2023.10465512, E ISBN:979-8-3503-1920-0, Print ISBN:979-8-3503-1921-7, December 2023(Indexed in Scopus). **Abstract:** The method of recognizing and measuring pain endured by somebody through their facial movements is known as facial pain identification. Because they represent the person's behavioral and physiologic responses to pain, facial expressions are an important predictor of pain. Deep learning algorithms have demonstrated encouraging results in a variety of medical applications, including pain detection, in recent years. We present a deep learning-based pain in the visage monitoring system in this research that uses CNN to extract significant characteristics from face photos and categorize them as pain or non-pain. The suggested system will then be trained and tested using datasets that are widely accessible of photos of face discomfort. Evaluating and analyzing the usefulness of the different deep learning frameworks for this purpose.
4	 **Co-Author** **Dr.C. Heltin Genitha** Published a paper in Scopus indexed Conference	Angeline Valentina Sweety, A. Maria Delphiya, S. Rejoline Vincima, N. Kavya, J. M. Jeresha and **C. Heltin Genitha**, "Automatic Segmentation and Extraction of Skin Lesion in Dermoscopic images using Image Processing," 2023 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES), pp. 1-6, doi: 10.1109/ICSES60034.2023.10465429, Electronic ISBN:979-8-3503-1920-0, Print ISBN:979-8-3503-1921-7, December 2023**(Indexed in Scopus).** **Abstract:** Dermoscopy, an epiluminescence light microscope that magnifies lesions and enables investigation down to the dermo-epidermal interface, is a non-invasive method that doctors may use to help with the diagnosis of melanoma. The research on melanoma skin cancers and the many subtypes of each is included in our paper. The four steps of the approach are preprocessing, segmentation, extraction of features, and classification. The artifact-filled image is preprocessed during the preprocessing stage using noise filtering and contrast sharpening. The processed image (Fuzzy C-Means method) immediately initiates a segmentation method. K-means clustering outperforms fuzzy C-Means in terms of outcomes for overlapping data sets. Gabor then does feature extraction. The Gabor filter and Glcm perform feature extraction in the next stage. By computing the pair of pixels with defined values and appearing in a given spatial image in an image, Glcm is used to characterise the image. The picture is categorised according to the type of melanoma malignancies in the classification output.

5	 **Co-Author** **Mrs.J. Gnanasoundharam** Published a paper in Scopus indexed Conference	J. A. J. Singh, **J. Gnanasoundharam**, M. Birunda, G. Sudha, S. P. Maniraj and C. Srinivasan, "Wearable Sepsis Early Warning Using Cloud Computing and Logistic Regression Predictive Analytics," 2024 11th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO), Noida, India, 2024, pp. 1-6, Doi: 10.1109/ICRITO61523.2024.10522250, Electronic ISBN:979-8-3503-5035-7, Print ISBN:979-8-3503-5036-4, May 2024**(Indexed in Scopus).** **Abstract:** The significant morbidity and death rates associated with sepsis indicate that it is still an important health care concern. Wearable technologies, cloud computing, and logistic regression predictive analytics are proposed as unique techniques to identify sepsis early on in this research. Wearable sensors continuously monitor physiological parameters, collecting real-time data and sending it to the cloud for analysis. This system could enhance patient outcomes by facilitating early interventions and individualized healthcare recommendations. The cloud-based solution's scalability and flexibility also open the door to more widespread use in predictive analytics for a wide range of medical disorders.
6	 **Authors** **Sai Sharvesh R,** **Suresh Kumar K,** **D Dinesh Kumar,** **Sabthagiri P** Published a paper in Scopus indexed Conference	**Student and Staff Paper Publication** Sai Sharvesh R, Suresh Kumar K, **D Dinesh Kumar,** Sabthagiri, P "Course recommendation system using Python and Streamlit" December 2023, DOI: 10.1109/ICRTAC59277.2023.10480866, 6th International Conference on Recent Trends in Advance Computing (ICRTAC), DOI: 10.1109/ICRTAC59277.2023.10480866, Electronic ISBN:979-8-3503-9470-2, Print ISBN:979-8-3503-9471-9, December 2023**(Indexed in Scopus).** **Abstract:** Machine learning (ML) recommendation systems have ushered in a transformative era in education, providing students with highly personalized learning experiences. These systems employ complex algorithms to analyze user preferences and behaviors, enabling them to offer tailored course recommendations that align with each student's unique interests and learning needs. This individualized approach empowers students, granting them greater autonomy in their educational journey and fueling their motivation and engagement. Simultaneously, ML recommendation systems deliver invaluable insights for educators, helping identify students who may be struggling academically and offering guidance on where additional support is required. By understanding the specific preferences and learning styles of their students, educators can customize teaching methods and content, creating a more engaging and effective learning environment while helping students efficiently reach their academic objectives. In essence, ML recommendation systems have the potential to revolutionize education, making it more student-centric and data-driven, benefiting both learners and educators alike.

7	 **Authors** **R. Sharmila,** **S. Agalya and** **A. S. Hepsi Ajibah** Published a paper in Scopus indexed Conference	R. Sharmila, S. Agalya and **A. S. Hepsi Ajibah**, "Figuring Out Interstellar Objects Using Memory Based Learning Approaches," 2024 2nd International Conference on Networking and Communications (ICNWC), Chennai, India, 2024, pp. 1-5, Electronic ISBN:979-8-3503-6526-9, Print ISBN:979-8-3503-6527-6, doi: 10.1109/ICNWC60771.2024.10537489, May 2024 **(Indexed in Scopus).** **Abstract:** The classification and cataloging of interstellar objects and phenomena constitute a fundamental task in the fields of astronomy and astrophysics. Traditionally, these types of classifications have been based on expert knowledge and manual analysis of observational data, which can be time consuming and prone to biases. Our study presents a new approach to classify interstellar objects using memory-based learning techniques This method involves building a comprehensive database, where each entry corresponds to a unique interstellar object, enriched with relevant observational features. This work advances the field of interstellar object classification by putting forth a memory-based learning strategy that increases process efficiency and automates the task.
8	 **Mrs.G.Supraja** Published an India Patent	**<u>Patent Published</u>** **Title of the invention:** EARLY DETECTION AND CLASSIFICATION OF LUNG CANCER IN CT IMAGES USING MACHINE LEARNING **Name of Inventor:** 1. Ashish Nagila 2. S. Saratha 3. Dr.M.Chitra 4. Dr.N.Divya 5. Dr. S. Alagendran 6. GBSR Naidu **7. G.Supraja** 8. Srikanth Nalluri 9. Dr. Manisha Bhatia 10. T.Kalai Selvi 11. Mr. Praneta Ravindra Desale 12. Isha Chawla **Patent Application Number:** 202441005521 **Date of filing of Application:** 15/05/2024 **Publication Date:** 31/05/2024

9	 Office of the Controller General of Patents, Designs & Trade Marks Department for Promotion of Industry and Internal Trade Ministry of Commerce & Industry, Government of India INTELLECTUAL PROPERTY INDIA **Application Details** APPLICATION NUMBER: 202411042090 APPLICATION TYPE: ORDINARY APPLICATION DATE OF FILING: 30/05/2024 APPLICANT NAME: 1 . Pushpender Kaushik; 2 . Ashvini Alashetty; 3 . Dr Ananya Mitra; 4 . Dr Deepak; 5 . Ms. Bidyutlata Sahoo; 6 . VP.Anitha; 7 . Athibaranan S; 8 . Partha Ghosh; 9 . Dr. Rakhi Vicky Gulati; 10 . Anthony Savio Herminio Da Piedade Fernandes; 11 . Mrs Shailaja Nilesh Uke; 12 . K. Renganathan TITLE OF INVENTION: PREDICTING ACADEMIC ENGAGEMENT: MACHINE LEARNING ANALYSIS OF TEACHER SOCIAL SUPPORT EFFECTS ON STUDENT EMOTIONS FIELD OF INVENTION: BIO-MEDICAL ENGINEERING E-MAIL (As Per Record): patent.vaagai@gmail.com ADDITIONAL E-MAIL (As Per Record): E-MAIL (UPDATED Online): PRIORITY DATE: REQUEST FOR EXAMINATION DATE: PUBLICATION DATE (U/S 11A): 07/06/2024 **Mrs. VP.Anitha** Published an India Patent	**Title of the invention:** PREDICTING ACADEMIC ENGAGEMENT: MACHINE LEARNING ANALYSIS OF TEACHER SOCIAL SUPPORT EFFECTS ON STUDENTEMOTIONS **Name of Inventor:** 1. Pushpender Kaushik 2. Ashvini Alashetty 3. Dr Ananya Mitra 4. Dr Deepak 5. Ms. Bidyutlata Sahoo **6. VP.Anitha** 7. Athibaranan S 8. Partha Ghosh 9. Dr. Rakhi Vicky Gulati 10. Anthony Savio Herminio Da Piedade Fernandes 11. Mrs Shailaja Nilesh Uke 12. K. Renganathan **Patent Application Number:** 202411042090 **Date of filing of Application:** 30/05/2024 **Publication Date:** 07/06/24
10	 cipam TISC CENTRE FOR INTELLECTUAL PROPERTY RIGHTS (CIPR) COLLEGE OF ENGINEERING GUINDY ANNA UNIVERSITY, CHENNAI- 600 025 Certificate This is to certify that M. NANDHINI, Assistant Professor, has participated in the Certificate Course on "Idea to Market – Confiscating National & International Patents" held from 18th June 2024 to 22nd June 2024, organized by Centre for Intellectual Property Rights (CIPR), Anna University, Chennai – 600 025. Dr. C. Geetha, Deputy Director, CIPR Dr. M.A. Bhagyaveni, Director, CIPR **Sample FDP Certificate**	**Seminar/ FDP Attended by Faculty** **S.No** | **Title of the FDP** | **Name of the Staff** | **Conducted By** | **Date** 1. Idea to Market-to 22- Confiscating National & International Patents | Mrs. Nandhini M, Mrs. Sinthuja | Center for Intellectual Property Rights, Anna University | 18-6-2024 to 6-2024

DEPARTMENT OF MATHEMATICS AND ENGLISH

Events	Remarks
Publications(only published) details	1. S. Muruganandam, M. Mary Jaculine, R. Epshiba, M. Jayavel, **K. Suresh**, P. Krishnan, G. Murugadoss, "Electrochemical, magnetic and heterostructure of Y-SnO2-CdO nanocomposite for multi-functional applications, ", Journal of Alloys and Compounds, Volume 1002,2024,175180,ISSN 0925-8388,,

DEPARTMENT OF MBA

FACULTY PUBLICATION:	Dr.S.P.Karuppiah has published a paper on "Advancing security and efficiency in MANET using dynamic algorithm switching" in Peer-to-Peer Networking and Applications, https://doi.org/10.1007/s12083-024-01697-9. June 2024
FACULTY CERTIFICATION COURSES:	Dr.K.Sampath, Dr.R.Karthick and Ms. Jebakerupa Roslin A have successfully completed the ZOHO Sales and Marketing application course through the ZOHO Spark Education Program. Dr.R. Monisha, Dr. Bharath Vajan and Dr. Joel Jebadurai have successfully completed ZOHO HRM Application course through the ZOHO Spark Education Programme.
INDUSTRIAL VISIT: 	The industrial visit for the IV & V year 20 MBA Integrated students was to Vembedu Village, Chengalpattu District on 24.07.2024. This was a part of Awareness Training Program on Agricultural Technologies conducted by Agricultural Engineering Department, Chennai.
FDP / STTP / WORKSHOP ATTENDED: 	Dr.L. Rajeshkumar has participated in the Five Days International Online workshop on "Research Methodology from 12 to 16 June 2024. Mr.S.Aravinth has attended the Five Days Online FDP on "Mastering research" from 24 to 28 June 2024.

DEPARTMENT OF MECHANICAL ENGINEERING

Sl No	Name of the Activity	Remarks
1	**Alumni talk**	➢ Mr.D Hariharan a distinguished alumnus from the batch of 2015 19 and currently employed at Zoho Corporation gave an alumni talk on “An Overview of Zoho Interviews” for our department IV year students on 15th June 2024. ➢ Mr. G J Akshay Kumar Head of Performance Marketing at COOKD a distinguished alumnus from the batch of 2014 18 who gave an alumni talk on “Interview Mastery, Strategies for Startups and landing dream companies for our department IV year students on 29th June 2024
2	**Industry Interaction**	➢ On 29 th June, 2024 the Department of Mechanical Engineering invited Mr Arun Nehru Subramani to our campus for an interaction He is an Aerospace Critical Process Auditor in NADCAP ””(National Aerospace and Defense Contractors Accreditation Program) administered by PRI (Performance Review Institute), USA constituted by Aerospace OEMs He is the only auditor in India, one among the two auditors in Asia and one among the 20 auditors across the Globe in his specialization

3	**Studdent Chapter activities**	A ➢ Indian Institute of Welding IIW) student chapter of Department of Mechanical Engineering Conducted a Online Welding Quiz Knowledge Knockout on 29 th June, 2024 for our mechanical IIW student members as a monthly event 30 students participated in the quiz program and the answers were circulated to the participated students with necessary explanation
4	Patents Published	➢ Dr G M Lionous Leo Associate Professor Mr G Ashwin Prabhu Assistant Professor Mechanical Department P u b l i s h e d a p a t e n t T i t l e d Development of Low cost Parallel and counter Flow heat Exchanger Application no 202441044179 ➢ Mr G Ashwin Prabhu Assistant Professor, Mechanical Department P u b l i s h e d a p a t e n t T i t l e d Development of Low Cost Solar Fertilizer Sprayer Application no 202441040919 ➢ Mr G Ashwin Prabhu A ss i s t a n t P r o fe ss o r M e c h a n i c a l Department Published a patent Titled Development of Low Cost Floor Cleaner Machine A pp l i c a t i o n n o 202441041557
5	Faculty Acheivement	➢ Mr D Sakthivel Assistant Professor, Mechanical Department attended aTwo weeks training program on Drone Aerodynamics, Assembly and Testing of Drones organized by National skill Training Institute (NSTI Guindy from18 06 2024 to 28 06 2024.

		➢ Dr R Selvam A ss o c i a t e P r o f e ss o r of Mechanical Department has been provided with Certificate of Appreciation for being Recognized as NPTEL Disciple Star Jan Apr 2024 ➢ Mr N Sathishkumar Assistant Professor Mechanical Department has been honored with the prestigious IOP (Institute o Physics) Trusted Reviewer status, recognizing his exceptionally high level of peer review competency

DEPARTMENT OF SCIENCE

Sl. No.	Events	Remarks
1	**FDP/Workshop/Conference**	1. Dr. K. Sathesh Kumar and Dr. S. Manikandan had attended two days training program for teaching fraternity (TOT) on "Mentoring India" organized by "St. Joseph's College of Engineering, Chennai-119" conducted between 20.06.24 and 21.06.24. 2. Mr. S. Kaleel Mohamed Ibrahim attended online Faculty Development Program titled "AI tools for teaching" organized by "Star International Foundation for Research and Education, Namakkal" conducted on 22.06.24.
2	**Publications(only published) details**	**Journals:** 1. Dr. P. Saravanan published an article titled "Zirconium supported on mesoporous KIT-6 by the catalytic activity of ethanol to 1,3- butadiene" in the Journal of "Advanced Powder Technology" 35(6) , (2024) 104495, {https://doi.org/10.1016/j.apt.2024.104495} 2. Dr. A. Arulmozhi has published an article titled "Effect of doping concentration of Dy3+ ions on Ba3Ca2Ti2O9-synthesis, structural and optical characteristics." In the "Journal of Optics (2024), pages 1-8, {https://doi.org/10.1007/s12596-024-01923-w} 3. Dr. S. Manikandan has published an article titled "Investigation on Hirshfeld surface analysis, Molecular Geometry, DFT, MEP, and Molecular Docking analysis on Benzotriazole oxalate against SARS-CoV-2 virus." In the "Journal of Molecular Structure" (2024) Vol. 1316, p 138961. { https://doi.org/10.1016/j.molstruc.2024.138961} **Reviewer:** Dr. N.R. Rajagopalan acted as reviewer for the Journal of Peptides - June 2024.
3	**Other activities(if any)**	Department of Science organised an alumni talk program titled "Fundamental building blocks of an IC" by Mr. Dinesh Vijayaraghavan (ECE batch 2008-2012), Customer Project Manager, Suss Microtec SE, Germany, on 08.06.2024.