Faculty Profile



Dr. V.UmaRani , M.E., Ph.D
Associate Professor ,CSE

HIGHLIGHTS:

- Number of Journal Publications:50 (Scopus)
- H-Index:5
- Patents Published: 7
- Patents Granted: NIL PROFESSIONAL LINKS:

- Scopus ID: 57201067545
- Scopus Link: https://www.scopus.com/authid/detail.uri?authorId=57201067545
- Google Scholar ID: H7OXDXoAAAAJ
- Anna University Faculty ID: 2611351981
- AICTE Faculty ID: 1-83524811
- Anna University Supervisor ID: NIL
- LinkedIn: https://www.linkedin.com/in/uma-rani-17364a177/

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 22 yrs 3 months
- Industrial Experience:NIL

INTERNATIONAL EXPOSURE:

- Currently serving as an Editor for Scientific Reports.
- Served as a reviewer for various international conferences organized by academic institutions.

AREA OF SPECIALIZATION:

- Wireless sensor networks
- Artificial Intelligence
- Machine Learning

Ph.Ds AWARDED WITH DETAILS: NIL

Ph.Ds GUIDING:

- Full Time Scholars: NIL
- Part Time Scholars : NIL

PATENTS PUBLISHED/GRANTED:

- Intelligent Wearable EEG Headband System for Early Cognitive Disorder Detection Using Case-Based Reasoning and Generative Artificial Intelligence (Application number: 202641084273 ,Published Date:07/08/2026)
- An integrated ai framework for dermatological image analysis and knowledge retrieval using rag-augmented language models (Application number:202541116614,Published Date: 23/01/2026)
- System for categorizing medications with different trade names and identical compositions(Application Number :2024410192159, Published Date: 06/12/2024)
- Ann Based Device for Reading Mood and Mind (Application number : 202341002412, Published Date: 17.02.2023)
- A System with Machine Learning to Diagnose Autism at an Earlier Stage (Application Number: 202241042291, Published Date: 29.07.2022)
- Plantain Tree Cultivation Utilizes a Deep Learning Model of Sequential Image Classifiers for Crop Disease Diagnosis(Application Number: 202241074035, Published Date: 13.01.2023)
- System for categorizing medications with different trade names and identical compositions (Application number: .202441092159,Published Date: 26/11/2024)

COURSES CERTIFIED:

- Completed 6 courses on Udemy, 8 courses on NPTEL, and 31 online courses on Coursera, including "Introduction to Unity and Basic C# Scripting," "Deep Learning," "Artificial Intelligence," "Internet History, Technologies, and Security," and "Python for Everybody," among others.
- Earned the AWS Academy Cloud Foundations Certificate through AWS Academy.

ACHIEVEMENTS AND AWARDS:

- Conducted a seminar on “Startup & Entrepreneurship: From Idea to Execution” on 23rd May 2026at Saveetha Engineering College
- Conducted a workshop on “Laptop Diagnostics Mastery” on 11th Oct 2025 at Saveetha Engineering College
- Participated as FacultyGuide in the NiralThiruvizha(Hackathon)competition (2024)
- Conducted a workshop on “Laptop Diagnostics Mastery” on 7th Nov2024 at Saveetha Engineering College
- Conducted a workshop on “The Ethical Implications and Responsible use of Artificial Intelligence”,2nd march 2024 at Saveetha Engineering College

  Act as a coordinator for AICTE Sponsored International Conference on Application of AI, ML, DL, Big Data on Recent Societal Issues (ICARSI’2023) on April 21 & April 22, 2023 at Saveetha Engineering College.

- Conducted a workshop on “PODMAN with Containerization” 21st Oct 2023 at Saveetha Engineering College.
- Conducted a Online Workshop on “GUI Programming & Database Connectivity Using PYTHON’” 14th Oct 2022 at Saveetha Engineering College.
- Conducted a Guest Lecture on “Machine learning techniques in AI ” 12th April 2022 at Saveetha Engineering College.
- Conducted a Guest Lecture on “Theory of Computation” 15th Dec 2021 at Saveetha Engineering College.
- Conducted one day PALS Virtual Lab training for staff on 18th September 2021.

SPECIAL SESSIONS DELIVERED:

- Deliver a Guest lecture on topic “ Mathematical modelling for game development” in 15 – Days International Faculty Development Program on "RESEARCH FRONTIERS IN THEORICAL AND APPLIED MATHEMATICS (RFITAAM)" held on 16 – 30 September 2026, organized by the Department of Mathematics, School of Applied Sciences, Faculty of LiberalArts and Business Studies, SRM Institute of Science and Technology, Ramapuram, Chennai, India.
- Deliver a Guest lecture on topic “Artificial intelligence :A new Synthesis” at SRMIST on 23/01/2024
- Deliver a Guest lecture on topic “Machine Learning Projects” at SRMIST on 07/03/2024
- Act as a resource person and deliver a session on the topic “Evolutionary Computation” on 23.02.2024 in faculty development program of “Advances in Computational Intelligence” at Coimbatore Institute of Technology, Coimbatore

RECENT CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

- Attended FDP on “Reimagining Teaching Excellence: AI Competencies and Industry 5.0 Skills for Modern Educators” held during 16.02.2026 to 21.02.2026 organized by Finolex Academy of Management &Technology, Ratnagiri, Maharashtra.
- Participated in the IBM & Conversight-sponsored Five-Day Workshop on “Generative AI and Multi-Agent Systems,” organised by the Centre for Continuing Education, Department of Applied Mathematics and Computational Science, Thiagarajar College of Engineering,conducted from January 19 to 23, 2026.
- Attended FDP on “Advanced Cyber Security Domains:Next-Generation Threats and Defenses: From 15 December to 20 December 2025 at Rajalakshmi Institute of Technology.
- Attended 2 weeks faculty development Programme on “Mastering Research Paper and Proposal Writing” from 19-08-2024 to 30-08-24 organized by the SRMIST.
- Attended 1 week faculty development Programme on “AWS Cloud practitioner”from 3 June 2024 to 07 june 2024 at Alpha Arts and Science College
- Attended 8 days faculty development Programme on “Block Chain Technology and Applications” from 15 June 2023 to 24 June 2023 organized by Asi@Connect ,PDPM IIITDM,Jabalpur

- Attended 8 days faculty development Programme on “Cyber Security and hacking” from 16 June 2023 to 24 June 2023 organized by SRM institute of technology,Ramapuram Campus.
- Attended ten days short term traning programme on “Cyber Security: Global Hackathon,Defense mechanism and Digital Forensics from 1st February to 11th February 2023.
- Attended two weeks international FDP on “DataScience Tools” from 7th October to 20th October 2022.
- Attended National intellectual property awareness mission on October 11,2022.
- Attended one week FDP on “Amazon Web Services” from 22nd August 2022 to 27th Auguest 2022 organized by M.kumarasamy College of Engineering.
- Attended AICTE training and Learning Academy online elementary FDP on “Bio inspired Computing for Data Analytics” from 8th February to 12th February 2022 at NIT Delhi.
- Attended IP Awareness or Training program under national intellectual property awareness mission on 29th January 2022.
- Attended online FDP on Virtual Labs from 23rd August 2021 to 27th August 2021.
- Attended faculty orientation program organized by Saveetha Teaching Learning Center on 18th August 2021.
- Attended two days international level workshop on “Internet of Robotic Things” organized by Nallamuthu Gounder Mahalingam College, 31st and 2nd August 2021.
- Attended AICTE training and Learning Academy online elementary FDP on “Nature Inspired Optimization Technique” from 19th July to 23rd July 2021 at NIT Delhi.

PROFESSIONAL MEMBERSHIPS:

- Life Member of the Indian Society of Technical Education (No: LM 11348)
- Member of The Society of Digital Information and Wireless Communications(ID: 13779)
- Member of CSTA
- NDLI Club Member

OTHER DETAILS (If any):

Recent Journal Publications:

- Karthika, R. N., Valliyammai, C., UmaRani, V., & Karthi, G. (2026). A blockchain-enabled scalable and secure architecture for cloud big data storage using sharding and swarming. Scientific Reports.(SCI)

- UmaRani, V, Kaladevi, R., Hariharan, S., & Ramalingam, D. (2026). Enhancing transparent diagnosis of cognitive impairments through advanced electroencephalography classification and explainable artificial intelligence techniques. Engineering Applications of Artificial Intelligence, 173, 114432.(SCI)

- Kaladevi Ramar, Modafar Ati, UmaRani V, Shanmugasundaram Hariharan, and Vinay Kukreja. "AI-driven blockchain lending for sustainable development: a machine learning framework for loan risk and eligibility classification." PeerJ Computer Science 12 (2026): e3686. (SCI)

- Deepa J and Hemavathy P Uma Rani V, Jebamalar Tamilselvi J , Karthika RN(2026), “Power grid stability prediction using stacked machine learning based classification and regression

models”International Journal of Advanced Technology and Engineering Exploration,13,Issue,134. (Scopus)

Dilli Babu M Velumani A, Ganesan K*, Uma Rani V, Kaladevi R, Assessing the Impact of Partial Double Glazing and Energy Storage on Solar Still Efficiency”in International Research Journal of Multidisciplinary Scope,6(4),1036-1048, 2025(Scopus)

- Uma Rani V*, Velumani A, Selvi S,Vidhya R and Ramya D,”Enhancing groundwater quality assessment with explainable machine learning” in International Journal of Advanced Technology and Engineering Exploration.(Scopus)

- UmaRani, V., S. Vidhya, M. Kumaran, and J. Deepa. "Prediction of gestational diabetes mellitus using hybrid sampling and slime mould bio inspired algorithm." Multimedia Tools and Applications 84, no. 34 (2025): 43305-43330. (Scopus)

- V. UmaRani, V. Saravanan, and J. Jebamalar Tamilselvi. "A Hybrid Grey Wolf-Meta Heuristic Optimization and Random Forest Classifier for Handling Imbalanced Credit Card Fraud Data." International Journal of Intelligent Systems and Applications in Engineering 11, no. 9s (2023): 718-734.(Scopus)

- V.UmaRani,Kaldevi Ramar, J.JebamalarTamilselvi, P.Sarasu, V.Charles Prabu,”Analysis of multiclass imbalance handling in red wine quality dataset using oversampling and machine learning techniques” Journal of Theoretical and Applied Information Technology,Vol. 101. No. 19,2023. .(Scopus)

- Manju, A., A. Revathi, M. Arivukarasi, S. Hariharan, V. Umarani, Shih-Yu Chen, and Jin Wang. "Fuzzy Rule-Based Model to Train Videos in Video Surveillance System." Intelligent Automation & Soft Computing 37, no. 1 (2023). .(SCI)

- R Sudharsanan, PV Gopirajan, V UmaRani, M Kanchana,” Secure Multi-Authentication using BlockchainTechnology in Cloud based Internet of Things”,2022 in Telematique,pp. 6640-6650.(Web of science)

- V.UmaRani, J. JebamalarTamilselvi, Rajan John,Classification of Twitter COVID Tweets Using Deep CNN-SLSTM Technique, in Journal of PERIODICO di MINERALOGIA,2022,91(4),1182-1197.(Web of science)

- Dr J. JebamalarTamilselvi , Dr V.UmaRani,”Context Pseudo Relevance Feedback using Machine Learning Technique” in international journal of creative research thoughts,Vol10, Issue1(2022),ISSN 2320-2882. (Web of science)

- V.UmaRani, AnithaJulian, J.Deepa,” Sentiment Analysis using various Machine Learning and Deep Learning Techniques. Journal of the Nigerian Society of Physical Sciences, pp.385-394.(Scopus)

- D.Ramya, S.K Manigandan,J.Deepa,V.UmaRani, Click prediction for Advertisement in websites using Linear Regression” in Turkish Journal of Computer and Mathematics Education,Vol12,No4(2021),271-276. (Scopus)