Faculty Profile



Dr. R. Renugadevi , M.E., Ph.D
Associate Professor

HIGHLIGHTS:

- Number of Journal Publications:41
- H-Index:7
- Patents Published:19
- Patents Granted:1

PROFESSIONAL LINKS:

- Scopus ID: 58239648200
- Scopus Link: https://www.scopus.com/authid/detail.uri?authorId=58239648200
- Google Scholar ID: https://scholar.google.com/citations?hl=en&user=hUKjgTAAAAAJ&view_op=list_works&sortby=pubdate
- Anna University Faculty ID: 2682111981
- AICTE Faculty ID:1-30211144063
- Anna University Supervisor ID: 4140069
- LinkedIn: https://www.linkedin.com/in/renuga-devi-820380311/

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 18 years 6 months

AREA OF SPECIALIZATION:

- Machine Learning
- Wireless Sensor Networks
- Data Structures
- Object Oriented Programming
- Internet of Things.
- Operating Systems
- Computer Networks

Ph.Ds GUIDING:

- **Full Time Scholars: Nil**
- **Part Time Scholars: 6**

SPONSORED RESEARCH / FUNDING APPLIED / CONSULTANCY:

- Consultancy Project "Precision Accuracy prediction tool" for DJM Precision products.
- Consultancy Project "Website designing and maintenance" for DJM Precision products.
- Consultancy Project "Website designing and maintenance" for Sri Sairam Agencies.
- Consultancy Project "'Adding Design Customization and Online Shopping Features to the Website'" for Sri Sairam Agencies.

PATENTS PUBLISHED/GRANTED:

- An AI Based Neural Network System for Diagnosis of COVID based on ANN using Optimal Prediction Variables,202341026417, published on May 2023.
- Artificial Intelligence, Robotics and Advanced Technologies for Human Resource Management, 202341002106, published on Jan 2023.
- IoT enabled Respiratory sensing device in Intellectual property office with Design number: 6329015 Grant date: 13 December 2023.
- Air Quality forecasting through the Random Forest Machine Learning Algorithm, 202441063717 A on 30.8.2024.

- Bio-inspired neural network architecture for real-time power grid optimization and fault detection, 202441061914 A published on 23.8.2024.

- Collaborative optimization-driven clustering for improved wireless sensor network efficiency, 202441087077 A on 22.11.2024.

- Real-time voice-activated humanoid information assistant, 202441071360 A On 4.10.2024.

- IoT based smart home security analysis system, 202441087072 A on 22.11.2024.

- Energy efficient enhanced k-means clustering routing protocol for wireless sensor networks, 202441063679 A on 30.8.2024.

- Medwatch : Cutting -edge IoT patient monitoring using esp32, 202441071653 A on 4.10.2024.

- Affordable sensing solutions for extreme environments using wireless and satellite, 202441071644 A on 4.10.2024.

- Sign language detection using convolutional neural networks and long short-term memory networks, 202441076488 A on 18.10.2024.

- Machine learning techniques for enhanced crop selection and sustainability, 202441076475 A on 18.10.2024.

- Smart phone based indoor location tracking with particle optimization, 202441087075 A on 22.11.2024.

- An economical solution for easy and reliable water quality testing using support vector machine, 202441076477 A on 18.10.2024.

- Automated Report Generation in Manufacturing lines using digital twin technology, 202541012530 A on 21.2.2025.

- Plant leaf detection using multispectral sensor technology, 202541012533 A on 28.02.2025

- Nanomaterial based sensor system for enhanced environmental pollution detection and mitigation , 202541012546 A on 28.2.2025.

- Optical sensing of water pollution using one dimensional photonic crystal structures , 202541012547 A on 28.2.2025

COURSES CERTIFIED:

- Data Analytics Using Python (Elite) - NPTEL Certified
- Python for Data Science (Elite- Silver) – NPTEL Certified
- Introduction to Machine Learning (Elite-Silver) – NPTEL Certified

ACHIEVEMENTS AND AWARDS:

- Cleared UGC NET exam and got qualified score in DEC 2021 cycle, conducted by Ministry of Education, Government of India. (**One among top 6% toppers**).
- Received 'Academic Excellence award" from the Institution of Engineers (India), IEI.
- Received "Best Faculty Advisor award" from the Institution of Engineers (India), IEI.
- Editorial Board member for "International Journal of Science, Technology and Society "
- Session Chair for "International conference on Research Methodologies in Knowledge management, Artificial intelligence and telecommunication engineering (IC-RMKMATE'23)" November 2023.
- Session Chair for "International Conference on Natural Language Processing and Computer Vision (ICNPCV 2026) on 17th & 18th July 2026 at Global Academy of Technology, Bengaluru.

CONFERENCES ATTENDED :

- Vanithasri. K and R. Renugadevi, "A Systematic Review of Deep Learning Models for Plant Disease Detection," 2026 International Conference on Visual Analytics and Data Visualization (ICVADV), Tirunelveli, India, 2026, pp. 121-127, doi: 10.1109/ICVADV67766.2026.11469845. (Scopus- indexed)
- Berlin Magthalin. R, R. Renugadevi and Yashini. P, "Edge-AI Powered Transparent Diagnosis of Diabetic Retinopathy Using Deep Learning," 2025 International Conference on Computing, Intelligence, and Application (CIACON), Durgapur, India, 2025, pp. 1-6, doi: 10.1109/CIACON65473.2025.11189724 . (Scopus- indexed)
- Yashini. P, R. Renugadevi and Berlin Magthalin. R, "Attention-Directed Fusion of Swin Transformer and Radiomic Descriptors to Explainable Classification of Brain Tumor," 2025 IEEE 4th International Conference for Advancement in Technology (ICONAT), Goa, India, 2025, pp. 1-6, doi: 10.1109/ICONAT66879.2025.11362469. (Scopus-indexed)
- C. V. Josphine, R. Renugadevi, J. Jayalakshmi, E. N. Magarin Sophia and M. T. Kingslin, "A Novel Hybrid Ensemble Machine Learning Framework for Inference Score Prediction in Rheumatoid Arthritis," 2025 2nd International Conference on Artificial

Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF), Chennai, India, 2025, pp. 1-9, doi: 10.1109/ICECONF65644.2025.11379647. (Scopus- indexed)

- C. V. Josphine, R. Renugadevi, M. T. Kingslin and E. N. M. Sophia, "Multimodal Ai Framework for Early Detection and Precision Management of Rheumatoid Arthritis," 2025 3rd International Conference on Advances in Computation, Communication and Information Technology (ICAICCIT), Faridabad, India, 2025, pp. 95-100, doi: 10.1109/ICAICCIT68829.2025.11434467. (Scopus- indexed)
- Yashini. P, R.Renugadevi and Berlin Magthalin. R, "Deep Learning-Enhanced Edge-AI Architecture for Autonomous Drone-based Traffic Flow Prediction and Congestion Management," 2025 6th International Conference on Smart Electronics and Communication (ICOSEC), Trichy, India, 2025, pp. 127-134, doi: 10.1109/ICOSEC67334.2025.11459795. (Scopus- indexed)
- L. A. Isabella and R.Renugadevi, "An EV Charge Supported Smart Street Light with Low Power Consumption and SOS," 2025 6th International Conference on Inventive Research in Computing Applications (ICIRCA), Coimbatore, India, 2025, pp. 611-623, doi: 10.1109/ICIRCA65293.2025.11089696. (Scopus- indexed)
- **Renugadevi**, R. (2024) "Streamlined Lung Abnormality Identification with Explainable AI: A Unified Framework for Chest CT and X-Ray Analysis" in ICMLDE 2024. Scopus- indexed)
- Ganesan, K., Yashini, P., Magthalin, B., & **Renugadevi**, R. (2025). Humanoid info-bot using NLP technology in real time. AIP Conference Proceedings. Scopus- indexed)
- R.Renugadevi, A, B., Priya, K.V., P, D., Chowdary, B.J., & R, H. (2024). Deep Fake Image and Video Detection using Deep Learning. 2024 International Conference on Control, Computing, Communication and Materials (ICCCCM), 99-104. Scopus- indexed)

- **R. Renuga Devi**, P. Dharshini, R. Hemala and D. Swetha, "Heart Disease Prediction using Random Forest Classifier," 2023 International Conference on Data Science, Agents & Artificial Intelligence (ICDSAAI), Chennai, India, 2023, pp. 1-8, doi: 10.1109/ICDSAAI59313.2023.10452459. (Scopus- indexed)

- **R. Renugadevi**, M. Rajeswari, A. R, R. Rajalakshmi and G. Ramkumar, "A Distinctive Explainable Deep Learning Framework to Predict Pulmonary Function at Chest CT Scan," 2023 First International Conference on Advances in Electrical, Electronics and Computational Intelligence (ICAEECI), Tiruchengode, India, 2023, pp. 1-7, doi: 10.1109/ICAEECI58247.2023.10370935.(Scopus- indexed)

- **R. Renugadevi**, T. Vyshnavi, T. P. Reddy and P. S. Lahari, "Air Quality Prediction using Random Forest algorithm," 2023 International Conference on Research Methodologies in Knowledge Management, Artificial Intelligence and Telecommunication Engineering (RMKMATE), Chennai, India, 2023, pp. 1-5, doi: 10.1109/RMKMATE59243.2023.10369180. (Scopus- indexed)

- S. Nagendiran, **R. Renugadevi**, R. P. A. Kumar, K. Sasirekha and R. Harini, "Secure Sensitive Information on IoT using Machine Learning," 2023 International Conference on Sustainable Communication Networks and Application (ICSCNA), Theni, India, 2023, pp. 360-366, doi: 10.1109/ICSCNA58489.2023.10370157. (Scopus- indexed)

- M. S. C, **R. Renugadevi**, E. Jothi, L. Balraj, K. Chidambarathanu and V. D. Vemuru, "Securing Children Based On IoT And Emotion Prediction," 2023 International Conference on Research Methodologies in Knowledge Management, Artificial Intelligence and Telecommunication Engineering (RMKMATE), Chennai, India, 2023, pp. 1-6, doi: 10.1109/RMKMATE59243.2023.10369553. (Scopus- indexed)

- R Deepa, S Gayathri, P Chitra, J Jeno Jasmine**, R Renuga Devi**, A Thilagavathy (2023), "An Enhanced Machine Learning Technique for Text Detection using Keras Sequential model", 2023 Second International Conference on Electronics and Renewable Systems (ICEARS), IEEE Conference, pp.1147-1151. (Scopus- indexed)

- M.Lakshmi Haritha, **R.RenugaDevi** and T.Sethukarasi (2023), "An Integrated Optimal Resource Management Scheduling for Dual Target in Remote MIMO Systems", 2023 International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE), IEEE Conference, pp.1040-1047. (Scopus- indexed)

- **R.RenugaDevi** and T.Sethukarasi (2023), "A Novel and Efficient Multi-Band Wireless Communication System for Healthcare Management System", 2023 International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE), IEEE Conference, pp. 791-797. (Scopus- indexed)

- ·M. Shyam, M. Amalasweena, S. S, K. Balasaranya, **R. Renugadevi** and K. P. Chandran, "Intellectual Design of Bomb Identification and Defusing Robot based on Logical Gesturing Mechanism," 2023 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2023, pp. 1-8, doi: 10.1109/ACCAI58221.2023.10201034. (Scopus- indexed)

- V. RamKumar, N. Padmavathi, I. Chandra, **R. Renugadevi**, C. Ananth and D. N. A, "An Intelligent Light Assisted Wireless Vehicle Communications using Visible Light Communication," 2023 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2023, pp. 1-7, doi: 10.1109/ACCAI58221.2023.10199320. (Scopus- indexed)

- **R.RenugaDevi** and T. Sethukarasi (2021)," Various Clustering Strategies to strengthen the performance of Wireless Sensor Networks", 9th International conference on 10th & 11th April 2021 in Prince Shri Venkateshwara College of Engineering, Chennai.

WORKSHOPS ATTENDED

- Completed "Microsoft Azure Data Fundamentals Master classes with FREE Access to Microsoft official Curriculum (DP-900) program" on 12.02.2022 by NetCom learning in association with Microsoft.

- Attended a faculty development program on "Recent Trends in Artificial intelligence and cyber security" from 01.09.2022 to 05.09.2022 at Shri Vishnu Engineering College for Women, Bhimavaram.

- Completed 30 days masterclass on" Advanced python programming" from 27.10.2022 to 27.11.2022 at Pantech e Learning pvt Ltd, Chennai.

- participated in the Seven-day Virtual National Level Faculty Development Program on “RESEARCH METHODOLOGY” organized by Department of Commerce, PPG College of Arts and Science, Coimbatore held during 12.12.2022 to 19.12.2022.

- Completed “The essentials of CCNA: Master the latest principles program” on 24.02.2023 by NetCom learning in association with Microsoft.

- Attended a faculty development program on “Societal Applications of Machine Learning” from 26.12 2022 to 30.12.2022 at Shri Vishnu Engineering College for Women, Bhimavaram.

- Participated in the Professional Development Program on “Educational Tools for Learning” conducted by NITTTR from 13.02.2023 to 17.02.2023.

- Attended a faculty development program on “Recent Advances in Data Science, Data Analytics and Cyber security from 01.05 2023 to 05.03.2023th March 2023 at Shri Vishnu Engineering College for Women, Bhimavaram.

- Participated in the Professional Development Program on “Educational Tools for Learning” conducted by NITTTR from 6.3.23 to 10.3.23.

- Participated in the Professional Development Program on “Programming in C” conducted by NITTTR from 8.5.23 to 12.5.23.

- Participated in the Professional Development Program on “Latest Wireless Technologies” conducted by NITTTR from 7.08.2023 to 11.08.2023.

- Participated in DST-SERB sponsored seminar on “Recent Trends on smart Antennas in mm Wave Technology” in RMK College of Engineering and Technology on 22.9.23 & 23.9.23.

- Participated in “Microsoft Azure AI Engineer Associate” conducted by ICT Academy on 03 Oct 2023 to 07 Oct 2023 at R.M.K. Engineering College.

- Participated in the Professional Development Program on “Advanced Data Structures” conducted by NITTTR from 16.10.2023 to 20.10.2023.

- Participated in ATAL Faculty Development program on “Block Chain Technology and Digital Forensic Solutions for Medical IoT” from 11.12.2023 to 16.12.2023 in R.M.K Engineering College.

- Participated in ATAL Faculty Development program on “CYBER SECURITY IN AI at CMR UNIVERSITY from 02/12/2024 to 07/12/2024.

- Participated in ATAL Faculty Development program on AI-Driven Network Security: Advanced Techniques for Intrusion Detection at Rajalakshmi Engineering College from 09/12/2024 to 14/12/2024.

- Participated in the Professional Development Program on "Machine Learning for Beginners" conducted by NITTTR from 21.10.2024 to 25.10.2024.

- Participated in ATAL Faculty Development program on AI- Driven Technologies for Innovation, Research, Education, Healthcare and Business Applications at SANJEEVAN GROUP OF INSTITUTIONS from 06/10/2025 to 11/10/2025.

PROFESSIONAL MEMBERSHIPS:

- Life Member of ISTE since 2015. (LM 105465)

- IAENG since 2019, membership number: 229249

- Internet society since 2019, membership id: 2169218.

OTHER DETAILS (If any):

- Co-ordinated DST-SERB Sponsored International Conference on "Advances in Nanomaterial based Sensor impacting environmental pollution detection through Artificial Intelligence- ICANS'24" during December 2024.

- Reviewer for Journal of Engineering Research and Sciences (JENRS)

- Reviewer for book chapters "Real-Time Event Detection and Predictive Analytics Using IoT and Deep Learning" for IGI Global, Feb 2024.

- Reviewer for book chapters "Utilizing AI and Machine Learning for Natural Disaster Management." for IGI Global, Feb 2024.

- Reviewer for "International Conference on Evolutionary algorithms and soft computing techniques" EASCT 2023 by R V Institute of Technology and Management, Bengaluru.

- Reviewer for AICTE Sponsored IEEE International Conference on Networks, Multimedia and Information Technology (NMITCON) is organized at NITTE Meenakshi Institute of Technology, Bengaluru INDIA during 1st and 2nd September 2023 in association with IEEE Bangalore Section.

- Reviewer for “Second IEEE International Conference on Integrated Circuits and Communication Systems” (ICICACS - 2024) during 23rd & 24th February 2024” organized by H.K.E. Society's S.L.N. College of Engineering, Raichur, Karnataka.

- Reviewer for “Second International Conference on Data Science and Information System “(ICDSIS -2024) during May 17-18, 2024” in association with IEEE Bangalore Section. Malnad College of Engineering, Hassan.Karnataka

- Reviewer for “Second International Conference on Intelligent Algorithms for Computational Intelligent Systems” (IACIS 2025) during 22-23 August 2025 in association with IEEE Bangalore Section. Navkis College of Engineering, Hassan.Karnataka.

- Reviewer for “Third IEEE International Conference on Data Science and Network Security“, (ICDSNS 2025) during 25-26 July 2025, Kalpataru Institute of Technology, Tiptur, Bengaluru.

- Reviewer for “International Conference on Machine Learning and Data Engineering “ (ICMLDE 2025) during 6-8 Nov 2025, UPES, Dehradun.

- Reviewer for “IEEE Sponsored International Conference on Data Science and Business Systems”, during 17-18 April 2025, SRM University, Chennai.