

## **Faculty Profile**



**Mrs. SUNITHA T, M.E., M.B.A., (Ph. D)**  
Assistant Professor/AI&DS

### **HIGHLIGHTS:**

- Number of Journal Publications: 3
- H-Index: 1
- Patents Published: 5

### **PROFESSIONAL LINKS:**

- Scopus ID: 57218909209
- Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=57218909209>
- Google Scholar ID: <https://scholar.google.com/citations?user=IOOLg6kAAAAJ>
- Anna University Faculty ID: 286019
- AICTE Faculty ID: 1- 2295730135
- Anna University Supervisor ID: NIL
- LinkedIn: <http://www.linkedin.com/in/sunitha-thangappan-2a50b6372>

### **PROFESSIONAL BACKGROUND:**

- Teaching Experience till date: 17 Years 1 Month

### **AREA OF SPECIALIZATION:**

- Python programming,
- Data Structures,
- Theory of computations,
- Compiler Design,
- Object oriented programming with java ,
- Programming in C,
- Web Essentials,
- Design and analysis of algorithms,
- Internet programming,
- Computer architecture,
- Graph theory and its applications

## **PATENTS:**

- A Patent titled “System And Method For Predicting Hyper Triglyceridemia Risk Using Machine Learning Models”, Indian Patent ,July 2025.
- A Patent titled “Iot-Enabled Smart Irrigation System With Ai-Based Water Usage Optimization” , Indian Patent ,June 2025.
- Hybrid Ai And Blockchain Architecture For Scalable And Secure IOT Applications”, Indian Patent, March 2025
- “Edge Computing Framework For Real-Time Ai Inference And Decision Making In Autonomous Vehicles”, Indian Patent, August 2024.
- “Bio-Inspired Neural Network Architecture For Real-Time Power Grid Optimization And Fault”, Indian Patent, August 2024

## **Publications:**

### **Book Chapter:**

- “Unveiling Alzheimer's:Exploring Biomarkers for Diagnosis and progression” on Source Title: Deep Generative Models for Integrative Analysis of Alzheimer's Biomarkers, Pages: 32, DOI: 10.4018/979-8-3693-6442-0.ch012.
- “AI- Enhanced Security Information and Event Management (SIEM) System” on Source Title: Deep Learning Innovations for Securing Critical Infrastructures Pages: 20, DOI: 10.4018/979-8-3373-0563-9.ch005.

## **International Journals:**

- ”Intelligent Neural Framework for Assisting Individuals with Visual Impairment”, J.of Neonatal Surgery, Vol: 14, Issue 7, ISSN(Online): 2226-0439, pg.No: 451-457 April 2025.
- ”A Novel Hybrid Neural Support Vector Algorithm for Lung Cancer Progression Prediction Using NN and SVM”, J.of Neonatal Surgery, Vol: 14, Issue 5, ISSN(Online): 2226-0439, April 2025, DOI: <https://doi.org/10.52783/jns.v14.2927>
- “Strengthening security in IoT-based smart cities utilizing cycle-consistent generative adversarial networks for attack detection and secure data transmission” , Peer to Peer Networking Application (SPRINGER) Vol. 18 , Issue 2, Article Number 79, ISSN:19366442, 25 January 2025, DOI: <https://doi.org/10.1007/s12083-024-01838-0> (SCI Annexure)
- “Smart forming solution for cost effective agriculture using IOT”, Int'l J. (IJAST) Vol. 28 Issue 11 ISSN: 2005-4238, pg: 364-369 November 19.

- “Unique Locomotive Wheelchair Robot Mechanism Using Gesture And Android”, Int'l J. (IJFRSCE) Vol. 4 Issue 11 ISSN: 2454-4248, pg: 59-61 November 18.
- “Prognostication Stereotype of Patients Morbidity and Mortality by Extraction of E-Health Records”, Int'l J. (IJERMT) Vol. 6 Issue 6 ISSN: 2278-9359, pg: 215-220 June 2017.
- “An Efficient Approach for Data Transmission Using Access Point in MSN”, Int'l J. (IJARCSSE), Vol.6 issue 11, ISSN: 2277 128X, pp:196 - 199 November 2016.
- “Translating Relational Queries into Spreadsheets”, Int'l J. ( IJCSWS) , Vol.3 issue 2, ISSN: 1122 - 4573, pp: 138 - 140 march/april 2016.
- “An Adaptive Algorithm for Computing Subspace Skyline Queries Over Distributed Uncertain Data”, Int'l J. ( IJARCSSE ) Vol .3 issue 7 , ISSN:2277 128X,pp: 1122-1125 July 2013.

#### **Paper Presented / Published:**

#### **International Conferences:**

- “AI-Powered Personalized Deep Learning Framework for Early Detection of Glioblastoma Using Multi-Modal MRI Data”.In: Int’ t Conference on Data Science, Agents and Artificial Intelligence (ICDSAAI 2025), ISBN:979-8-3315-3755-5,March 2025. DOI: 10.1109/ ICDSAAI65575 .2025.11011835
- “Dynamic AI Collaboration Frameworks Using Real-Time Multimodal Feedback Loops for Complex Task Automation”.In: Int’ t Conference on Data Science, Agents and Artificial Intelligence (ICDSAAI 2025), ISBN: 979-8-3315-3755-5,March 2025. DOI: 10.1109/ICDSAAI65575.2025.11011694
- “Machine Learning for Real-Time Language Translation: A Server-Side Approach to Overcome Cross-Cultural Communication Challenges”.In: Int’ t Conference on Soft Computing for Security Applications (ICSCSA 2024), E- ISBN:979-8-3315-1572-0, ISBN:979-8-3315-1573-7, March 2025. DOI: 10.1109/ICSCSA64454.2024.00023
- ”3D E-commerce Using AI Depth Algorithm Augmented Reality” In: Int’ t Conference Proceeding on Signal Processing, Telecommunication and embedded systems with AI and ML Applications, pg-361-374, 9th Feb 2025 ,DOI: [https://doi.org/10.1007/978-981-97-8422-6\\_42](https://doi.org/10.1007/978-981-97-8422-6_42) (springer nature(Lecture Notes)
- “Machine Learning Based Textile Fabric Defect Detection Network”. In Int’ t conference on Sustainable Expert Systems. ISBN: 979-8-3315-4036-4, Oct-2024

- “Improving Solar Efficiency via CNN-LSTM and Cloud-Integrated IoT Prediction”. In Int’l Conference on Sentiment Analysis and Deep Learning, ICSADL 2024, pp. 329–334
- “Enhancing Security and Confidentiality using Trust Based Encryption (DHPKey) in Cloud Computing”. In Int’l Conference on Computing Communication and Networking Technologies, ICCCNT 2023, 2023.
- “Analysis on Semantic categorization technique of analogous label by using Deep Learning Technique”. In Int’l Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022, 2022
- “Hyper Triglycerides Prognosis using Machine Learning and Data Science ”.In: Int’l Conference on Data Science and Artificial Intelligence , ISBN: 979-8-3503-4891-0, Dec-2023.
- “Intelligent Road anomaly Detection and driver assistance system: Machine learning approach for enhanced road safety”.In: Int’l Conference on Smart electronics and communication , ISBN: 979-8-3503-0087-1, september-2023.
- “A Secured and Efficient Blockchain-based Multi Cloud Medical File Sharing”.In: Int’l Conference on Advances in Computing,Communication and Applied Informatics, May-2023.
- “Key Observation to prevent IP spoofing in DDOS attack on cloud environment”: In kumar .R., Verma.R.K.,Sharma. T.K.,Verma. O.P., Sharma .S(eds) soft computing: Theories and applications. Lecture notes in Networks and Systems. Vol. 627, Singapore. June 2023.( Springer Indexed)
- “An Efficient Security to Protect Data Sharing in Cloud by Using Signature Matching” In the international conference (ICICET'18) at Kings Engineering College Chennai, on April 7<sup>th</sup> 2018.
- “Unique Locomotive Wheelchair Robot Mechanism Using Gesture & Android” In the international conference (ICICA'18) at Loyola Institute of Technology Chennai, on February 28<sup>th</sup> 2018.
- “An Efficient Privacy Preservation Technology for Maintaining H-care Records ” In the international conference (ICIETET'17) at Panimalar Institute of Technology Chennai, on May 15<sup>th</sup> 2017
- “Evaluation of Communication and Computation Efficient Algorithms For Distributed Skyline Queries” pub. In Int'l Conf.(ICICES), IEEE Explorer, ISBN- 978-1-4673-5786-9, pp:201-206, Feb 2013.

- “Evaluation of Communication and Computation Efficient Algorithms For Distributed Skyline Queries” In the international conference(ICICES'13)at S.A Engineering college Chennai, on February 21<sup>st</sup> 2013
- “To Evaluate the efficiency and progressiveness of DSUD Algorithm” International conference(NCIICT 2013) At Eswari engineering College, on March 12<sup>th</sup> 2013.

### **Faculty Development Programs / workshops / attended:**

- FDP on “Data Visualization- Research Insights and Future Directions” at Dr. Sivanthi Aditanar College of Engineering from 21<sup>st</sup> July to 25<sup>th</sup> July 2025.
- FDP on “Artificial Intelligence’s impact on Transforming Software, Robotics,Electrical, Electronics and Medchanical Fields” at Dhaanish Ahmed College of Engineering from 21<sup>st</sup> July to 26<sup>th</sup> July 2025
- FDP on “Recent Advancement in Artificial Intelligence(AI) & ML” at St Joseph College of Engineering from 30<sup>th</sup> June to 4<sup>th</sup> July 2025
- SEP on “QUANTUM COMPUTING: Concepts and Research Avenues” at RMK College of Engineering and Technology from 19<sup>th</sup> May to 24<sup>th</sup> May 2025.
- PDP on “Emerging Trends in Learning Technologies” organized by National Institute of Technical Teachers Training and Research (NITTTR) from 28<sup>th</sup> Apr to 2<sup>nd</sup> May 2025.
- FDP on “Future of Generative AI in Information Technology” at St Joseph College of Engineering from 3<sup>rd</sup> Feb to 7<sup>th</sup> Feb 2025
- ATAL FDP on “AI-driven Network Security: Advanced Techniques for Intrusion Detection”Organized by Rajalakshmi Engineering College from 9<sup>th</sup> Dec to 14<sup>th</sup> Dec 2024.
- ATAL FDP on “Cyber Security in AI” Organized by CMR University from 2<sup>nd</sup> Dec to 7<sup>th</sup> Dec 2024.
- Workshop on “Deep Learning Techniques for Seismic image Processing” organized by B S Abdur Rahman Crescent Institute of Science and Technology 19<sup>th</sup> Nov and 20<sup>th</sup> Nov 2024.
- Workshop on “Designing Effective Surveys” organized by Centre for Data Analytics and Research (CEDAAR) 8<sup>th</sup> Nov and 9<sup>th</sup> Nov 2024.

- PDP on “R Programming for Data Exploration” organized by National Institute of Technical Teachers Training and Research (NITTTR) from 4<sup>th</sup> Nov to 8<sup>th</sup> Nov 2024.
- “Security Trends in Artificial Intelligence” Organized by St Peters Engineering College from 1<sup>st</sup> July to 6<sup>th</sup> July 2024.
- “Intellectual Property Rights in the age of AI, ML, Cyber Security and Block Chain” Organized by Mangalmay Institute of Management and Technology from 24<sup>th</sup> June to 28<sup>th</sup> June 2024.
- “Medical Image Processing” Organized by St Joseph College of Engineering from 24<sup>th</sup> June to 28<sup>th</sup> June 2024.
- “Medical Image Processing” Organized by Alpha College of Engineering from 27<sup>th</sup> December to 29<sup>th</sup> December 2023.
- “Artificial Intelligence and Machine Learning for Medical Image Analysis using Python” Organized by CMR Institute of Technology, Bangalore from 21<sup>st</sup> august to 25<sup>th</sup> august 2023.
- “Cloud infrastructure(AWS)” Organized by Kings Engineering College, Chennai, in Collaboration with Brainovision solution India pvt.Ltd and AICTE, from 21<sup>st</sup> august to 25<sup>th</sup> august 2023.
- “ChatGPT for Research Writing Assistance” Organized by Nuhianwali Education Society from 6<sup>th</sup> august to 8<sup>th</sup> august 2023.
- “Generative AI and Cyber Security” Organised by School of Computer Science and Engineering, Reva University, from 24<sup>th</sup> july to 28<sup>th</sup> july 2023.
- “Current and Future Trends: A Digital Era” Organised by Department of Artificial Intelligence & Data Science, Kings Engineering College, from 26<sup>th</sup> july to 28<sup>th</sup> july 2023.
- “Emerging Technologies for Next Generation Networks” Organised by Department of Computer Science and Engineering, Kings Engineering College, from 17<sup>th</sup> july to 22<sup>nd</sup> july 2023.
- “Emerging Technologies” Organised by Department of Computer Science and Engineering, Jeppiaar Institute of Technology, from 28<sup>th</sup> feb to 5<sup>th</sup> March 2022.
- Workshop Designing & Modelling of IOT, AI & ML Systems, Organized by AICTE, ATAL Academy, ARM Education, STMicroelectronics from 1<sup>st</sup> to 5<sup>th</sup> august 2022.

- Train- the-Trainer Programme on “Python Skills” as part of RUSA 2.0 ,Organised by Centre for University-Industry Collaboration(CUIC), Anna University in Association with TCS & GUVI from 18<sup>th</sup> June 2020 to 19<sup>th</sup> June 2020.
- “Machine Learning and Cloud Infrastructure” Organised by Department of Computer Science and Engineering, Jeppiar Engineering College, Chennai in Association with INCEPTEZ Technologies Pvt. Ltd, Hyderabad from 6<sup>th</sup> July 2020 to 10<sup>th</sup> July 2020
- “Effective Teaching Pedagogy” Organised by Inderprastha Engineering College, Ghaziabad from 20<sup>th</sup> to 22<sup>th</sup> July 2020
- “Recent Trends in Information Technology” Organised by Department of Computer Science and Engineering, St. Joseph’s Institute of Technology, OMR Chennai from 13<sup>th</sup> to 18<sup>th</sup> July 2020
- “Big Data Engineering” Organised by Department of Computer Science and Engineering, Kings Engineering College, Chennai from 1<sup>st</sup> to 5<sup>th</sup> June 2020
- Skill Development Programme on “Developing Leadership and Interpersonal Skills” Organised by Department of Information Technology, Panimalar Institute of Technology, Chennai held on June 2020
- “Perl Scripting” Organised by Department of Computer Science and Engineering, Lords Institute of Engineering and Technology, Hyderabad in Association with Spoken Tutorial, IIT Bombay from 10<sup>th</sup> to 14<sup>th</sup> June 2020.
- “PHP and MYSQL” by Department of Computer Science and Engineering, BMS College for Women, in Association with Spoken Tutorial, IIT Bombay (NMEICT,MHRD,Government of India) from 17<sup>th</sup> to 21<sup>st</sup> June 2020.
- “Python for Data Science” Organised by Department of Computer Science and Engineering, (MITS) Madanapalle Institute of Technology & Science ,Andrapradesh from 24<sup>th</sup> to 28<sup>th</sup> June 2020.
- “Image Processing and Data Science” Organised by Department of Computer Science and Engineering, Canara Engineering College, Mangaluru held on 29<sup>th</sup> June 2020 .
- “Trends in Artificial Intelligence & Data Science” Organised by Department of Information Technology, Easwari Engineering College, Chennai held on June 2020.
- “Recent Trends in Science: Context of AI, Cognitive Computing and Block Chain” Organised by Department of Computer Science and Engineering, School of Arts & Science & Vinayaga Mission’s Research Foundation, AUIT Campus, Paiyanoor, Chennai held on June 2020.

- “Municipal Solid Waste Management during COVID-19 Pandemic” Organised by Anurag Group of Institutions, Ghatkesar, Telangana held during 28<sup>th</sup> May to 30<sup>th</sup> May 2020 ·
- “Biomedical Application and Communication Networks” Organised by GMR Institute of Technology, Andhra Pradesh held on July 2020·
- “Insights into Quality Research and Innovation” Organised by Research and Development Cell and Institutions Innovation Council of Vivekananda College for Women from 13<sup>th</sup> May to 20<sup>th</sup> May 2020·
- “Graph Theory And Its Applications” From 13th to 15th June 2016.
- Workshop on “Finite State Automata, Regular Languages & Their Applications” on 3rd march 2010.
- “Industrial Robotics-Technology, Programming And Applications” from 13th to 27th Dec 2010.

#### **Courses Certified:**

- Completed “Theory of Computation” at NPTEL during jul-Sept 2024.
- Completed “Joy of Computing Python” at NPTEL during jul-Oct 2024.

#### **Awards/Achievements:**

- Published Book “Problem Solving and Python Programming” for 1<sup>st</sup> Semester B.E/B.Tech Course (R-2021), Anna University, Chennai. Sruthi Publishers-ISBN-13:978-81-958745-9-0
- Published Book “Cloud Computing” for 7<sup>th</sup> Semester Computer Science and Engineering & Information Technology (R-2017), Anna University, Chennai. Charulatha Publications-ISBN-13:978-93-89970-84-5
- “Best Teacher of the Department” award for the Academic Year 2010 – 2011 at Gojan School of Business and Technology, Redhills.
- Received 2 times cash award for producing good results at Sri Venkateswara Institute of Science and Technology and Gojan School of Business and Technology.