Name   **:** **Dr. M. Rathi**

Designation   **:** Professor and Head

Department   **:** Computer Technology

Qualification : M.C.A., M. Phil., SET, Ph. D.

Experience   **:** Teaching - 18 years | Research - 5.5 years

Area of Specialization: Machine Learning, Information Security, Algorithms

Email   **:** rathi@drngpasc.ac.in

Academic Qualifications

Degree	Branch	Institution / University Name	Year
Ph.D	Computer Science	Hindusthan College of Arts and Science, Coimbatore	2021
SET	Computer Science	Mother Teresa University, Kodaikanal	2018
M.Phil	Computer Science	PSG College of Arts and Science, Coimbatore	2005
MCA	Computer Applications	Government Arts College, Coimbatore	2003
B.Sc	Computer Science & Applications	Avinashilingam College of Higher Education for Women, Coimbatore.	2000

Additional Qualifications

Dip./ Cert.	Area of Specialization	Institution / Agency Name	Year
Certificate	Recommender Systems	NPTEL	2025
Certificate	Object Oriented Programming using Python	Infosys Springboard	2025
Certificate	Javascript	Spoken Tutorial	2024
Certificate	Advanced CPP	Spoken Tutorial	2023
Certificate	Deep Learning for Developers	Infosys Springboard	2023
Certificate	Artificial Intelligence using Python	Great Learning	2022
Certificate	Python 3.4.3	Spoken Tutorial	2020
Certificate	Java	Spoken Tutorial	2020
Certificate	Data Mining	NPTEL	2019
Certificate	Programming in C++	NPTEL	2017

Research Publications (Indexed)

- Rathi, M., & Narasimhan, B. "Data Mining, Soft Computing, Machine Learning and Bio-Inspired Computing for Heart Disease Classification/Prediction–A Review", *International Journal of Advanced Research in Computer Science and Software Engineering*, 7(4), 2017, pp. 7-10, Apr 2017, ISSN: 2277 128X. (Google Scholar)

- M.Rathi and A.V. Senthil Kumar, "Biometric Authentication Techniques – A Review," *International Journal of Scientific Research in Computer Science Applications and Management Studies*, vol. 7, no. 5, Sep 2018, ISSN 2319 – 1953 (UGC)

- A.V. Senthil Kumar and M. Rathi, "Keystroke Dynamics – A Behavioral Biometric Model for User Authentication in Online Exams," in *Biometric Authentication in Online Learning Environments*, IGI Global, 2019, pp. 183–207, DOI: 10.4018/978-1-5225-7724-9.ch008. (Google Scholar)

- M. Rathi, Dr. A. V. Senthil Kumar, "Exploration of Keystroke Dynamics Based Authentication on Fixed-Text and on Free-Text", *International Journal of Computer Sciences and Engineering*, Vol.7 , Issue.1 , pp.807-812, Jan 2019. (UGC)

- M. Rathi, A. V. Senthil Kumar, "Euler Movement Firefly Algorithm and Fuzzy Kernel Support Vector Machine Classifier for Keystroke Authentication", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*", Vol. 8, Issue 11, September 2019, pp. 2267-2274. (Scopus)

- M. Rathi, A. V. Senthil Kumar, Ismail Musirin, "Adaptive Fuzzy Chaotic Genetic Clustering Based Continuous Keystroke Authentication", *International Journal of Scientific & Technology Research, Volume 9, Issue 02, February 2020*, pp. 6303-6308. (Scopus)

- M. Rathi, "MOOCs Dropout Prediction to Enhance Learning Experience", *Shodha Prabha*, Vol. 48(1), July 2023, pp. 17-23. (UGC CARE)

- Rathi M, Kalaiselvi. R, "MOBAA-OBCM: Multiobjective Biometric AuthenticationApproach and Optimized Beta Chaotic Map", *Tuijin Jishu/Journal of Propulsion Technology*,Vol. 45 No. 1 (2024), pp. 680-696 (Scopus)

- Dr. M. Aruna, Dr. M. Rathi, Dr. V. Srinivasan, "Comparative Analysis of Federated Learning Algorithms: FEDAVG Vs FEDSED on the MNIST Dataset", *IAPQR Transactions*, Vol. 49, Issue 02, No. 04 : 2024, ISSN 0970-0102 .(UGC Care)

- Kowsalya G, Enoch Arulprakash, Srilatha Y, Rathi M, Ramalingam M, Jayanthi R, Ali Bostani, "Energy-Aware Physical Synthesis of Deep Neural Networks for Edge-AI Applications in Robotics and VLSI Systems", Journal of VLSI Circuits and Systems, ISSN: 2582-1458 Vol. 7, No. 1, 2025. (pp. 219–227) (Scopus Indexed)

Other Publications: International / National Journals

- M. Rathi, A. V. Senthil Kumar, Adnan Alrabea, Abdelmalek Amine. (2020). "A Unified Neutrosophical Identification of Authenticated Users with Continuous Keystroke Dynamics", *International Journal of Advanced Science and Technology*, 29(3), pp. 14394–14406

- Rathi, M., Senthil Kumar, A.V., Dutta, A. (2022). "Butterfly Algorithm Boosted Deep Random Vector Functional Link Network for Keystroke Dynamics" In: Ranganathan, G., Fernando, X., Shi, F., El Allioui, Y. (eds) *Soft Computing for Security Applications. Advances in Intelligent Systems and Computing*, vol 1397. Springer, Singapore. https://doi.org/10.1007/978-981-16-5301-8_10

- B. Leelavathi, M. Rathi, "Enhancing Data Security: The Role of Autonomous AI Systems in Safeguarding Internet Users' Data", *Recent Technologies for sustainable development*, 2024, Ch. 11, pp.183-192.

- T.M. Saravanan, A. Muthusamy, M. Rathi, D. Maheshwari, G. Saravanan, Dr.K.S. Senthilkumar, "An Exploration of Sentiment Analysis Techniques Enhancing Customer Purchasing Behavior Prediction of Smartphone using Machine Learning Classifiers for Improved Performance", *Journal of Information Systems Engineering and Management*, 2025, Vol 10, issue 3, e-ISSN: 2468-4376, pp. 273-281.

Presentations in Conference

- A Study on Biometric Authentication Techniques – Applications, Challenges, International Conference on Recent Trends in Computing Technologies (ICRTCT '18), P.K.R.Arts College for Women (Autonomous), Gobichettipalayam, Aug 16, 2018.
- A Survey on Growth of E-Commerce Business in India, National Conference on Emerging Trends in Mathematics with Computer Applications (ETMCA- 19), Dr. NGP College of Arts and Science (Autonomous), Coimbatore, Sep 12-13 2019.
- Machine Learning in Healthcare, Intl Conf. on Research Trends in Computing Technologies (ICRTCT'20), Dr. NGP College of Arts and Science (Autonomous), Coimbatore, Feb 28-29

2020.

- A Study on Deep Learning Approach to Continuous Keystroke Dynamic Authentication, Proceedings of the International conference on signals, communication and embedded systems, Oct 2020, pp. 238-241

- Butterfly Algorithm Boosted Deep Random Vector Functional Link Network for Keystroke Dynamics, International Conference on Soft Computing for Security Applications, Dhirajlal College of Technology, Salem, 10-11 June 2021.

- Intelligent Solutions for Road Safety Through Artificial Intelligence, 2nd International Virtual conference on AI for sustainable development - Challenges and Opportunities, VET Institute of Arts and Science, Erode, 25th Nov 2022

- AI in Cyber Security, 2nd International Virtual conference on AI for sustainable development - Challenges and Opportunities, VET Institute of Arts and Science, Erode, 25th Nov 2022

- A Study on Voice Assisted Mobile Application for Campus Navigation, Proceedings of the International conference on computational intelligence and Communication technologies", ICCICT-2k24, Jan 2024.

- IoT integrated Hybrid Deep Learning Framework for Real-time Rose Leaf Detection, Proceedings of the International conference on computational intelligence and Communication technologies", ICCICT-2k25, Jan 2025.

Book Publication

- Introduction to Security Technologies, IOT Academy publishers, ISBN: 978-93-93622-91-4, Apr 2024.

- Security in Internet of Things, Priyam Publications, ISBN: 978-81-980635-7-1, 2024

Participation in Conference

International

- International Conference on Soft computing for security applications, Dhirajlal College of Technology, Salem, 10-11 June 2021.

- International Conference on Research Trends in Computing Technologies, Dr. N.G.P. Arts and Science College, Coimbatore, 9th and 10th Aug 2018.

- International Conference on Research Trends in Computing Technologies, Dr. N.G.P. Arts and Science College, Coimbatore, 28th and 29th Feb 2020.

Reviewer in Conference/Journal

- Asian Journal of Research in Computer Science – Mar 2025

- International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies – 17–19 Nov 2024

- Journal of Engineering Research and Reports – Sep 2024

- 10th International Conference on Communication and Signal Processing – 12–13 Apr 2024

- International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies – 20–21 Nov 2023

Participation in Workshop

- 3 days National Level Workshop (Online) on The Essential AI powered tools for researchers from 11th July to 13th July 2024 organized by ACTAcademy

- NEP 2020: Opportunities and challenges of HEIs in achieving Gross Enrolment Ratio in creating human resources to the paradigm industry requirements, Dr. NGP Arts and Science College on 16th Feb 2024.

- 9 days National Level Workshop (Online) on DEVOPS from 16th June 2023 to 24th June 2023

- Outcome Based Education, Dr. NGP Arts and Science College, 4th Mar 2023

- NPTEL E-awareness workshop, NPTEL, 6th Jan 2022.

- Research article writing and publishing with citation, PSGR Krishnammal College for Women, 15.12.2021

- Zero Coding: Data Analytics and Machine Learning for IoT Automation, Vellore Institute of Technology, 21st June to 25th June 2021.

- National workshop on Big Data Analytics in Clinical Research, Dr. NGP Arts and Science College, Coimbatore, 18th and 19th Mar 2021.

- Role of IoT in cloud computing in Hindusthan College of Arts and Science, Coimbatore, Aug 2019.

- MATLAB for solving research problems, Dr. N.G.P. Arts and Science College, Coimbatore, 31st July 2017.

- National Workshop on Statistical analysis using R, Bharathiar university, 6th and 7th September 2018.

- Infosys Campus Connect - Train the Trainer Workshop in Erode Sengunthar Engineering

College, Erode, 23.1.12 to 25.1.12.

Participation in Faculty Development Programme

- 10 days bootcamp on Big Data & Data Science organized by CDAC, Noida during 21.7.2025 to 1.8.2025
- One week national level FDP on "AI tools" during 17th to 21st Feb 2025 at KG college of Arts and Science
- Empowering Education for Innovation – A NEP Perspective, Dr. N.G.P. Arts and Science College, from 30th June 2023 to 4th July 2023.
- National Seminar on National Credit Framework: Credit Transfer Policy, HRDC, University of Hyderabad on 10th Feb 2023.
- Emotional Intelligence, ICT Academy at Dr. NGP Arts and Science College from 15th Dec 2022 to 17th Dec 2022
- Webinar on Journal Citation Reports, Clarivate on 10th Aug 2022
- Awareness talk on IPR, SHASUN Jain college for women on 24th Jan 2022.
- Intellectual property management strategies for start-ups, TNSCST on 12th Jan 2022
- Introduction to Mutual Fund, Dr. N.G.P. Arts and Science College on 27.12.2021.
- Research Methodology and Pedagogy for Tertiary Education, Dr. NGP Arts and Science College, 15th June to 21st June 2021.
- Research and Application perspectives of Artificial Intelligence, KPR Institute of Engineering and Technology and Saraswathi Thyagaraja College, 16th June to 21st June 2021.
- Impact of Education – Post Covid 19, Sri Ramakrishna College of Arts and Science, 11th May to 16th May 2020.
- Free Open-Source Software, Dr. NGP Arts and Science college, 4th May to 10th May 2020.
- Digital Teaching techniques, ICT Academy, Aug 3rd to Aug 8 2020.
- Digital Marketing, ICT Academy, 15th June to 20th June 2020.
- Quality initiatives in Higher Education, Dr. NGP Arts and Science College, Coimbatore, Apr 13-20, 2020.
- Fundamentals of Artificial Intelligence in Dr. NGP Institute of Technology, Coimbatore, Mar 12-14 2020.
- Teaching Learning Enhancement, Nov 2019, Dr. N.G.P. Arts and Science College, Coimbatore
- NAAC Revised Accreditation Framework and OBE Assessment Methodology, Dr. N.G.P.

Arts and Science College, Coimbatore, May 27-June 2 2019

- Quality Initiatives in Higher Education, Dr. N.G.P. Arts and Science College, Coimbatore, 3-Dec-18 to 9-Dec-18.

- Data Mining Techniques and Tools - Research Perspective in Coimbatore Institute of Technology, Coimbatore, 11.11.13 to 17.11.13

- Research issues of Data Mining in real world in Tamilnadu College of Engineering., Coimbatore on 4.1.12

- Research Promotion Programme, Coimbatore Institute of Technology, Coimbatore, 8.1.10 to 9.1.10.

Conference / Seminar / Workshop Organized

- Convenor of the International Conference on "Computational intelligence and Communication Technologies", Jan 3rd 2025

- Interdepartmental competition for poster designing, Mar 2024.

- Visiting faculty lecture on software testing, Mar 2024.

- Extension activties on Awareness on energy saving and awareness on hygiene, Feb 2024.

- Organizing Secretary for the International Conference on Computer Communication and Communication Technologies, Jan 2024

- Guest lectures on Android Application Development and How to design and build your start-up during July 2023 and Mar 2024

- Workshop on Azure Cloud Services, Sep 2023

- Alumni interactions on preparation for competitive exams and career opportunities in IT industry during Sep 2023 and Jan 2024

- Department association activities like Alumni interaction, guest lectures on augmented reality, Intra department competition, Interdepartmental competition.

- Webinar on 'Industrial IoT', organized by Department of Computer Technology, 10th June 2021, Dr. N.G.P. Arts and Science College, Coimbatore

- Webinar on 'Be the Best version of yourself', organized by Department of Computer Technology, 9th June 2021, Dr. N.G.P. Arts and Science College, Coimbatore

- Finance Committee Coordinator, National Workshop on Big Data Analytics in Clinical Research, Dr. N.G.P. Arts and Science College, 18th and 19th March 2021.

- Organizing Secretary, CYBERTRON 2020, National level Technical Symposium, Dept. of Computer Technology, Mar 5 2020, Dr. N.G.P. Arts and Science College, Coimbatore.

- Food Committee Coordinator, International Conference on Research Trends in Computing Technologies, organized by Faculty of Computer Science, Feb 28-29 2020, Dr. N.G.P. Arts and Science College, Coimbatore
- Technical Committee Coordinator, National Conference on Emerging Trends in Mathematics and Computer Applications, organized by Departments of Mathematics, Computer Science and Computer Technology, Sep 2019, Dr. N.G.P. Arts and Science College, Coimbatore
- Finance Committee Coordinator, DBT sponsored National workshop on data analytics and its applications in Biotechnology, organized by Departments of Computer Technology and Biotechnology, Dr. N.G.P. Arts and Science College, Coimbatore
- Convener for Guest Refreshment Committee, International Conference on Computer Communication and Informatics, Sri Shakthi Institute of Engineering and Technology, Coimbatore, Jan 2014.
- Convener for Symposium organized by Dept. of MCA, Sri Shakthi Institute of Engineering and Technology, Coimbatore, 2013, 2014.
- Committee Member for FDP organized by Dept. of MCA, Sri Shakthi Institute of Engineering and Technology, Coimbatore,19.2.2010.
- Convener for Workshop organized by Dept. of MCA, Sri Shakthi Institute of Engineering and Technology, Coimbatore,19.2.15 to 21.2.15 and 10.12. 13 to 12.12.13

Membership in Professional Bodies

- Lifetime member of IAENG – International Association of Engineers
- Internet Society of India – Chennai Chapter

Invited Talk/Guest Speaker

- Contributed as **Presenter** in **IGEN Environthon 2025** (Sep 2025).
- Served as **Jury Member** for the **HACK'24 Hackathon** at Kanam 2025.
- Served as **Jury Member** for the **Project Expo** event at Kanam 2025.
- Delivered a **guest lecture** on **"Technological Tools for Innovative Teaching"** at Dr. N.G.P. Arts and Science College (17 Mar 2025).
- Served as **Moderator** for **IGEN Environthon 2024** (Sep 2024).
- Contributed as **Reviewer** for the Journal of Engineering Research and Reports (Sep 2024).
- Delivered a **guest lecture** on **"Rise of Generative AI: Understanding Its Evolution and Impact"** at Ramalinga Sowdambigai College (29 Aug 2024).

- Acted as **Session Chair** in the National Seminar on Integration of Traditional Indian Knowledge System into Modern Higher Education: NEP Perspective (ICSSRIKS2024) at Dr. N.G.P. Arts and Science College (4–5 July 2024).
- Contributed as **Reviewer** for the 3ICT2024 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (17–19 Nov 2024).
- Delivered a **guest lecture** in the One-Day Seminar on **"AI in Cloud Computing: Empowering the Future Technology"** at Padmavani Arts and Science College for Women (15 Feb 2024).
- Delivered a **guest lecture** on **"Python Web Framework Using Django"** at Dr. N.G.P. Arts and Science College (21 Aug 2023).
- Delivered a **guest lecture** in the Five-Day Online Faculty Development Program (FDP) on Emerging Technologies on the topic **"Python Web Framework Using Django"** at Dr. M.G.R. Educational and Research Institute, Chennai (7 Aug 2023).
- Served as **Infosys Campus Connect Trainer** at Sri Shakthi Institute of Engineering and Technology (2011).

Consultancy Work

- Completed the consultancy work carried out for Nikil Printers on Website development in Apr 2024 .
- Completed the consultancy work carried out for Lyra Corp Consultancy on Website Design and development in Mar 2025.

Subjects Handled

• Data Structures and Algorithms	• Operating Systems
• Machine Learning	• Software Engineering
• Programming in C, C++, Java	• Data Mining
• R Programming	• Open Source Software
• Mobile Computing	• Digital Computers

Personal Profile

- Father's Name : Mr. K. Mallajja Gounder
- Spouse Name : Dr. A. R. Ravikumar
- Date of Birth : 24-06-1980
- Languages known : English, Tamil
- Nationality and Religion : Indian, Hindu

Declaration

I hereby declare that all the information furnished above are true to the best of my knowledge.

Dr. M. Rathi