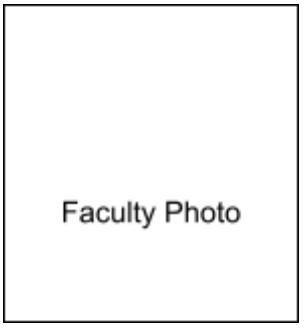
Faculty Profile



Dr.Mohana

Dr. Mohana working as Associate Professor with over 17 years of academic experience in the Department of Computer science and Engineering at RV College of Engineering, Bangalore. His areas of expertise include Deep Learning, AI, Quantum Computing, Computer Vision, and Image Processing. Dr. Mohana has an impressive academic record, having taught a wide range of undergraduate and postgraduate courses, guided numerous student projects, and published 120 + Research papers in international journals and conferences. His research contributions are reflected in his **high citation metrics,** including an **h-index of 25 on Scopus and 27 on Google Scholar,** with his work **cited in numerous patents.** Dr. Mohana has amassed a remarkable array of awards and recognitions throughout his career, underscoring his pioneering contributions across various domains. Highlights includes recent triumph in the **Unisys Innovation Program (UIP-16), 2025** where he clinched the top prize for ground breaking project on Quantum Neural Network for Brain Tumour MRI Classification, earned a prestigious cash prize of INR 3,50,000 and a Merit Certificate from Unisys India Pvt Ltd along with team. Also secured first prize in **The Bengaluru Mobility Challenge 2024 hackathon,** jointly organized by Bengaluru Traffic Police, Indian Institute of Science (IISC) in collaboration with IEEE, earned a cash prize of INR 2,50,000 with team, further reinforcing status as a front-runner in innovation. Dr. Mohana's guidance has been instrumental in guiding students to success in hackathons and project competitions, secured **Best paper awards in various national and IEEE sponsored International conferences.** He has been instrumental in fostering industry-academia collaboration and promoting research-driven education, Collaborated with various Industry (Unisys India Pvt Ltd, Dell, NVIDIA, Qualitas Technologies) for Academic and Research Projects. He is a professional member of IEEE and a lifetime member of ACCS, ISTE, and IAENG.

Personal Information

- **Name:** Dr. Mohana
- **Designation:** Associate Professor
- **Department:** Computer Science and Engineering
- **Email:** mohana@rvce.edu.in
- **Phone:** 9739866723

ORCID: https://orcid.org/0000-0002-6642-2949

Scopus: https://www.scopus.com/authid/detail.uri?authorId=57113679700

Web of Science (WOS): https://www.webofscience.com/wos/author/record/680998

Google Scholar: https://scholar.google.co.in/citations?user=6137ha4AAAAJ

Research Gate: https://www.researchgate.net/profile/Mohana/research

LinkedIn: https://www.linkedin.com/in/dr-mohana-a2532753/

Domain of Expertise

Computer Vision, Artificial Intelligence and Machine Learning, Image Processing

Research Focus

- **Primary Area:** Deep Learning, Quantum Computing, Computer Vision, Image Processing, AI
- **Allied Areas:** Autonomous Vehicles, Health Care Technology and Research

Academic Qualifications

- **Ph.D.**: [Electronics & Communication Engineering], [Visvesvaraya Technological University (VTU)], [2022]
- **M.Tech**: [Computer Science and Engineering], [Visvesvaraya Technological University (VTU)], [2012]
- **B.E**: [Electronics & Telecommunication Engineering], [Visvesvaraya Technological University (VTU)], [2008]

Professional Experience

Experience			
S.No	**Institute/College/Industry**	**Job Title**	**Duration (From- To)**
1.	RV College of Engineering	Associate Professor	17th Sep 2008 - Till date

Publications & Patents

Publication Level	Number of Publications
International Journals	10
Book Chapters	06
Ph.D. Forum presentations (at IISc - 01, at IIITB - 02)	03
International Conferences(IEEE)	90
National Conferences	10
Total (Scopus Publications-102, WOS Publications-30)	**119**
List of Publications: https://rvce.irins.org/profile/209935	

Journal Publications

1. Sundarakrishnan Narayanan, Sohan Varier, Tarun Bhupathi, Manaswini Simhadri Kavali, Mohana, Ramakanth Kumar P, K. Sreelakshmi, "Vehicle Turn Pattern Counting and Short Term Forecasting Using Deep Learning for Urban Traffic Management System," IEEE Access, vol. 13, pp. 8585-8593, 2025, Doi: 10.1109/ACCESS.2025.3526880. **(Scopus and WOS – Q1)**
2. Hithaishi Surendra, Samudyata A, Bhuvana Shivashankar, Mohana, Minal Moharir "Lane Detection and Traffic Sign Detection using Deep Learning and Computer Vision for Autonomous Driving Research Using CARLA Simulator" International Journal on Recent and Innovation Trends in Computing and Communication, 11(10), 2062–2069, 2023. **(Scopus - Q4)**
3. Mohana, HV Ravish Aradhya, "Object Detection and Tracking using Deep Learning and Artificial Intelligence for Video Surveillance Applications" International Journal of Advanced Computer Science and Applications (IJACSA), 10 (12), pp.517-530, 2019. **(Scopus and web of science - Q3)**
4. Mohana, HV Ravish Aradhya, "Object Detection and Classification Algorithms using Deep Learning for Video Surveillance Applications" International Journal of Innovative Technology and Exploring Engineering (IJITEE), pp.386-395, ISSN: 2278-3075, Volume 8, Issue 8, June 2019. **(Scopus – Q4)**
5. Ishwarappa Kalbandi, Mohana, "Optimization and analysis of information using business intelligence techniques and reporting using dashboards" International Journal of Engineering & Technology (UAE), Research paper, Vol 7, No.4.5, pp. 596-600, 2018 **(Scopus - Q4).**

Books/Book Chapters

1. Anshula Aithal, Kruthi U Shetty, Rida Kutty Javed, Mohana, Ramakanth Kumar P, K. Sreelakshmi, Shankar T "Real Time Fire and Smoke Detection in Surveillance Videos using Deep Learning" CIPR: Computational Intelligence in Pattern Recognition, 2024, Springer LNNS Series. **(Scopus and WOS-Q4)**

2. Ishwarappa R Kalbandi and Mohana "Automation of Framework using DevOps Model to deliver DDE Software" in Computational Intelligence Applications for Software Engineering Problems, CRC press, Taylor & Francis Group, 2023. **(Scopus and WOS)**
3. Chawla, A., Praagna Prasad, M., Mohana (2022). Facemask Detection to Prevent COVID-19 Disease Using Computer Vision and Deep Learning: Algorithms, Frameworks, Research and Implementation Challenges. Advances in Intelligent Systems and Computing, vol 1415. Springer, Singapore (**Web of science).**
4. Biswas A., Jain A., Mohana (2021) Survey on Edge Computing–Key Technology in Retail Industry. Computer Networks and Inventive Communication Technologies. Lecture Notes on Data Engineering and Communications Technologies, vol 58. Springer, Singapore**. (Scopus and WOS-Q4)**
5. Arvind Kumar Gumtaj, Mohana, H V Ravish Aradhya (2016). Real Time Smart, Intelligent and Novel Embedded Vehicle Interceptor for Security Applications, Emerging Research in Computing, Information, Communication and Applications. Springer **(Web of science).**
6. Mohana, Chethan R, Shridhar R, H V Ravish Aradhya "Optical Character Recognition to Speech Conversion" Second International Conference on 'Emerging Research in Computing, Information, Communication and Applications', Elsevier Science and Technology,2014, ELSEVIER Publications 2014.

Conference Papers

1. Buchepalli Praneeth, Ashutosh Kumar Singh, Jyothika K Raju, Mohana "Natural Language Interface for Data Visualization: Harnessing the Power of Large Language Models," 2024 15th IEEE International Conference on Computing Communication and Networking Technologies (ICCCNT), IIT Mandi, 2024, pp. 1-6, Doi: 10.1109/ICCCNT61001.2024.10724113. **(Scopus and Web of science)**
2. Prabu Jayant, M Prathica Shetty, S Jeevan, Mohana, Minal Moharir, A R Ashok Kumar "Intrusion Detection in Network Traffic Using LSTM and Deep Learning," 2024 15th IEEE International Conference on Computing Communication and Networking Technologies (ICCCNT), IIT Mandi, 2024, pp. 1-6, Doi: 10.1109/ICCCNT61001.2024.10724486. **(Scopus and Web of science)**
3. Bandaru Jnyanadeep, Nikunj Mittal, Srivishnu P N, Varshith Y, Mohana, Minal Moharir, A R Ashok Kumar "Senspy: An Integrated Network Monitoring and Anomaly Detection System Using Machine Learning," 2024 IEEE Space, Aerospace and Defence Conference (SPACE), Bangalore, India, 2024, pp. 61-65, Doi: 10.1109/SPACE63117.2024.10668320. **(Scopus and Web of science)**
4. Jaikishan Jaikumar, Mohana, Pavankumar Suresh "Privacy-Preserving Personal Identifiable Information (PII) Label Detection Using Machine Learning," 2023 14th IEEE International Conference

on Computing Communication and Networking Technologies (ICCCNT), IIT Delhi, India, 2023, pp. 1-5, Doi: 10.1109/ICCCNT56998.2023.10307924**. (Scopus and Web of science)**

5. Shravya Dasu, Mohana, "Prediction of Consumer Price Index (CPI) in Urban India using Statistical Methods," 2023 14th IEEE International Conference on Computing Communication and Networking Technologies (ICCCNT), IIT Delhi, India, 2023, pp. 1-6, Doi: 10.1109/ICCCNT56998.2023.10306631. **(Scopus and Web of science)**
6. Mohana, HV Ravish Aradhya, "Design of Efficient Algorithms for Video

Surveillance Applications using Artificial Intelligence," ACCS 25th Annual International Conference on Advanced Computing and Communications (ADCOM 2019), pp.42-45, at International Institute of Information Technology (IIIT-B), Organized by Advanced Computing and Communication Society (ACCS), Indian Institute of Science (IISc), Ph.D. Forum presentation.

7. Mohana, HV Ravish Aradhya, "Design and Implementation of Object Detection,

Tracking, Counting and Classification Algorithms using Artificial Intelligence for Automated Video Surveillance Applications", ACCS 24th Annual International Conference on Advanced Computing and Communications (ADCOM 2018), pp. 119-122, International Institute of Information Technology (IIIT-B), Organized by Advanced Computing and Communication Society (ACCS), Indian Institute of Science (IISc), Ph.D. Forum presentation.

8. Mohana, HV Ravish Aradhya, "Elegant and Efficient Algorithms for Real Time Implementation of Object Detection, Classification, Tracking and Counting using FPGA Zynq XC7Z020 for Automated Video Surveillance Applications" 10th IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS-2016), 2016, Ph.D. Forum presentation, Organized by Indian Institute of Science (IISc), Bangalore.
9. Shreekant Sajjanar, Suraj K. Mankani, Prasad R. Dongrekar, Naman S. Kumar, Mohana, HV Ravish Aradhya "Implementation of real time moving object detection and tracking on FPGA for video surveillance applications," 2016 IEEE Distributed Computing, VLSI, Electrical Circuits and Robotics (DISCOVER), 2016, pp. 289-295, DOI: 10.1109/DISCOVER.2016.7806248. Organized by National Institute of Technology Karnataka (NITK), Surathkal **(Scopus and Web of science)**

Patents [Filed / Published / Granted]

Nil

R & Grants & Consultancy Projects

Ongoing & Completed Research Projects

- Reduction of Mutual Coupling of Closely Spaced Microstrip MIMO Antennas for WLAN Application, TEQIP phase-II, 2015, Co-PI. Status: Completed.
- Analysis and Design of Low Cost Multi Resonant Antenna for Wireless Communications using FR4/ RTDuriod /TMM10i, TEQIP phase-II, 2015, Co-PI. Status: Completed.

Ongoing & Completed Consultancy Projects

Nil

Professional Memberships

1. IEEE – Professional Membership: Member ID: 95188416.
2. ACCS - *Advanced Computing and Communications Society* (*ACCS*) – Indian institute of science (IISC) Bangalore – Lifetime Member, Member ID: L1792A1823683.
3. ISTE – Indian Society for Technical Education (ISTE): Lifetime Member, Member ID: LM 105896.
4. IAENG – International Association of Engineers (IAENG) - Society of Artificial Intelligence, Lifetime Member, Member ID: 204053.

Awards & Recognitions

- **Unisys Innovation Program(UIP-16), 2025:** Winner (1st Prize) of All India Level Project competition, **Project Title:** Quantum Neural Network for Brain Tumour MRI Classification, **Rewards and Recognition:** Cash Prize of INR 3,50,000 + Merit Certificate. Organized by Unisys India Pvt Ltd.
  https://www.unisys.com/news-release/unisys-innovation-program-announces-the-winners-of-its-16th-annual-competition/

- **The Bengaluru Mobility Challenge, 2024:** Winner (1st Prize) of The Bengaluru Mobility Challenge, 2024 hackathon organized by Bengaluru Traffic Police and Indian Institute of Science (IISC) in association with IEEE, **Rewards and Recognition:** Cash Prize of INR 2,50,000 + Merit Certificate. https://ieee-dataport.org/competitions/bengaluru-mobility-challenge-2024
- Guided students to secure prizes in hackathons and Project Competitions
- Recipient of "**Best Paper Award**" from 2021 IEEE International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT 2021) for the paper titled **"Quantum Convolutional Neural Networks (QCNN) Using Deep Learning for Computer**

Vision Applications" organized by Sri Venkateshwara College of Engineering (SVCE), Bengaluru sponsored by IEEE Bengaluru section, 27-28 August 2021.

- Recipient of "**Best Project Award"** in 2nd State Level Telecommunication Project Model Competition (TELEUSTAV-2018) for the project titled "**Real Time Object Detection and Tracking Using Deep Learning and OpenCV"** on 21st April 2018, organized by Department of Telecommunication Engineering, GSSS Institute of engineering and technology for Women, Mysuru, Karnataka, India.
- Recipient of "**Best Paper Award**" from 2017 IEEE International Conference on Innovative Mechanisms for Industry Applications (ICIMIA-2017), for the paper titled **"Implementation of Highly Efficient Sorting Algorithm for Median Filtering using FPGA Spartan 6**" organized by Dayananda Sagar College of Engineering, Bengaluru sponsored by IEEE Bengaluru section, 21-23 February 2017.
- Recipient of "**Best Paper Award**" from IEEE-International Conference on Engineering and Technology (ICETECH-2015), March-2015, for the paper titled "**Design of Square Spiral Nano-Antenna in infra-red region for Solar Energy Harvesting**" organized by Rathinam Institute of Technology, Coimbatore, Tamilnadu, India, 20th March 2015.
- Recipient of "**Best Paper Award**" from National conference on Emerging Trends in Engineering Technologies (ETET-2014), for the paper titled "**Acoustic Echo Cancellation using Transform Domain LMS Adaptive Algorithm"** Organized by Jyothy Institute of Technology, Bengaluru-560062, 21-22 February 2014.
- Recipient of **"Young Investigator and Best Paper Award"** from Interscience Research Network (IRNet) at international conference on Software Technology and Computer Engineering (ICSTACE) for the paper titled **"A New Highly Secure and Efficient Routing Algorithm for Wireless Sensor Networks"** held at Vijayawada, Andhra Pradesh, 22nd July 2012.
- Felicitated from RSST Trust for the award of the PhD Degree.
- Felicitated from ISTE RVCE chapter for the award of the PhD Degree.
- Felicitated from RSST Trust for ***"Academic Excellence"*** from RSST Bengaluru on 26-01-2019.

Student Supervision

- **Ph.D. Candidates:** Nil
- **M.Tech/M.Sc. Students:** 6
- **Undergraduate Research Mentees:** 50

Professional Roles

Reviewer of Journal, Conferences, Hackathons:

- Reviewer for RV Journal of Science Technology Engineering Arts and Management
- Reviewer for Journals (Science direct / ELSEVIER) Pattern Recognition, Computer Vision and Image Understanding, Image and Vision Computing, Journal of Visual Communication and Image Representation, Engineering Applications of Artificial Intelligence, Signal, Image and Video Processing.
- Evaluator for ***"TOYCATHON – 2021"*** organized by AICTE and Ministry of MSME
- Reviewer for various IEEE sponsored International Conferences.

Teaching

Core Courses: [Current semester]

- [CS344AI] [IoT & Embedded Computing]
- [CY365TDA] [Advanced Malware Analysis]

Advanced/Lab Courses:

- IoT & Embedded Computing Lab

Courses & Certifications:

- Completed Swayam-NPTEL certification course (12 Weeks) on "Digital Forensics" with Elite + Silver, July – October 2023.
- Completed Swayam-NPTEL certification course (12 Weeks) on "Introduction to Cyber Security" with Elite + Silver, July – October 2023.
- Completed Swayam-NPTEL certification course (12 Weeks) on "Cyber Security, Tools, Techniques and Counter Measures" with Elite + Silver, January – April 2023.
- Completed Swayam-NPTEL certification course (4 Weeks) on "ICT in Teaching and Learning" with Elite + Silver, January – April 2022.
- Completed Swayam-NPTEL certification course (12 Weeks) on "NBA Accreditation and Teaching and learning in Engineering (NATE)" with Elite, January – April 2022.
- Completed Swayam-NPTEL certification course (12 Weeks) on "The Joy of Computing using Python" with Elite + Silver, January – April 2022.
- Completed Udemy online course "Deep Learning with Keras" during May 2020.

Workshops / Seminars / Conference / Events partcipated:

Participation Level	Numbers
Two weeks (sponsored by AICTE, DST)	05
One week (sponsored by AICTE, ATAL, TEQIP, MHRD)	29
Less than one Week	28
Total	**62**

Professional Roles

Responsibilities

- **Academic:** Interdisciplinary Project Coordinator
- **Administrative:** Placement Coordinator, Alumni Coordinator

External Connect

- Industry collaborations for Academic and Research Projects: Unisys India Pvt Ltd, Dell, NVIDIA, Qualitas Technologies, SLN Innovate Technologies.
- SPOC: Unisys Campus connect and Innovation Program
- Question paper setting, M. Tech Examination, Valuation at various autonomous and VTU affiliated institutions.