

# CURRICULUM VITAE

**Name: Dr. Kavitha N**

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## OBJECTIVE

To utilize my teaching skills towards a challenging career in growth-oriented and leading edge that provides mutual benefits and to gain exceptional career move ahead through long efforts and performance regularity.

## ACADEMIC DETAILS

Name of Institution	Name of the Course	Year	Rank/Result
SJBIT Bengaluru, V.T.U	Ph.D Video Processing	22 <sup>nd</sup> July 2022	Awarded
SJBIT Bengaluru, V.T.U	Master of Technology in Digital Communication and Networking	2012	78.41%
SJBIT Bengaluru, V.T.U	Bachelor of Engineering in Electronics and Communication	2009	72.45%

## WORK EXPERIENCE

**Working as Assistant Professor in RVITM from 01/10/2021, with a total of 13 years of experience.**

PERIOD	POSITION	ORGANISATION	YEARS
<b>25/7/2013 To 31/9/2021</b>	<b>Assistant Professor ( Electronics and Communication )</b>	<b>Dayananda Sagar Academy Of Technology and Management</b>	<b>8 Years 2 Months</b>

## KEY RESPONSIBILITIES

- Serving as IETE student chapter coordinator.
- Served as IEEE branch Counselor
- Serving as Nodal Officer in IIRS-ISRO Outreach Programme
- NBA coordinator for NBA Accreditation of the department, got accreditation for 3 years.
- NAAC coordinator from the department
- Test coordinator in the department
- Event coordinator during college fest

- Event coordinator for organizing various online and offline events
- Arranged various technical talks in the department
- Internal and external examiner in VTU
- Guided several 8<sup>th</sup>-semester projects
- Evaluator of VTU exam answer scripts
- External DCS examiner for VTU exams

## RESEARCH

### **Title: An Approach towards Development and Analysis of Video-Based Vehicular Traffic Data Collection for Intelligent Transportation System**

The main objective is to design and develop a real-time traffic surveillance system that is efficient in tracking the density of vehicles, identifying the vehicle type, and gauging every passing vehicle's speed under mixed traffic conditions. This is obtained by the following steps:

- To propose an efficient system for detecting vehicle objects accurately and to reduce the false acceptance rate.
- The response time of the system should be as short as possible.
- The system should be robust for occluded vehicle appearance and across various environmental changes.

## SUBJECTS TAUGHT

Cryptography

Control System

Computer Organization & Architecture

Computer Communication Network

Network Security

Information Theory and Coding

Analog Electronics Circuits

Microcontroller

Basic Electronics

Microprocessor

Digital image processing

Basic Electrical Engineering

## SKILLS

- Conversant with Communication and Networking.
- Having hands-on experience in Lab VIEW, MATLAB.
- Versatile in-circuit debugging
- Strong critical and analytical skills with reading, writing, and comprehension
- Managerial skills in handling various events
- Exceptional speaking skills without losing train of thought or direction
- Pleasant personality to connect with students and colleagues

## PUBLISHED PAPERS

### PEER REVIEWED JOURNALS

1. N. Kavitha and P. Madhumathy, “Real-Time Pill Identification and Classification using Deep Learning Framework for Medicine Inspection System,” *Discover Electronics*, vol. 1, pp. 1–16, October. (2025)2:80. <https://doi.org/10.1007/s44291-025-00122-6> (Open Access Springer Nature)
2. N. Kavitha, P. Madhumathy, R. M. Prasad, and D. N. Chandrappa, “Machine learning technique for breast cancer detection and classification,” *Machine Learning for Computational Science and Engineering*, vol. 1, pp. 1–16, Apr. 2025. <https://doi.org/10.1007/s44379-025-00018-y> (Springer Nature).
3. N. Kavitha and D. N. Chandrappa, “Performance analysis towards GUI-based vehicle detection and tracking using YOLOv3 and SORT algorithm,” *Int. J. Intelligent Systems Technologies and Applications*, Inderscience, vol. 20, no. 5, 2022.
4. N. Kavitha and D. N. Chandrappa, “Optimized Yolov2 based vehicle classification and tracking for intelligent transportation system,” *Results in Control and Optimization*, vol. 5, no. 2, 2021. [Online]. Available: <https://doi.org/10.1016/j.rico.2021.100008>
5. N. Kavitha and D. N. Chandrappa, “Vehicle Tracking and Speed Estimation using View-Independent Traffic Cameras,” *Int. J. of Applied Pattern Recognition*, Inderscience, vol. 6, no. 2, 2020. DOI: 10.1504/IJAPR.2020.111531

## SCOPUS INDEXED JOURNALS

1. C. Shankara, N. Kavitha, and K. S. Ashwini, “YOLOv5 Technique for Liver Tumor Detection,” *Staps Journal*, vol. 11, no. 2, Feb. 2025. DOI: 24.20089.STAPS.2025.V11.2.01591 B.

2. N. Kavitha and P. Hemashree, “Advanced Breast Cancer Detection: Leveraging the Capabilities of Deep Learning Algorithms,” *J. of Xidian Univ.*, vol. 17, no. 9, 2023. [Online]. Available: <https://doi.org/10.37896/jxu17.9/110>
3. N. Kavitha and P. Madhumathy, “Semisupervised Convolutional Neural Network-Based Vehicle Type Classification,” *GIS Science Journal*, vol. 10, no. 1, Jan. 2023. DOI: 20.18001.GSJ.2022.V10I1.23.40637
4. N. Kavitha and T. Aishwarya, “Neural Network based ADN Network,” *GIS Science Journal*, vol. 9, no. 12, Dec. 2022.
5. N. Kavitha and D. N. Chandrappa, “Vision-based System for Vehicle Detection and Tracking System,” in *Intelligent Learning for Computer Vision*, Springer, 2021, pp. 307–318. DOI: 10.1007/978-981-33-4582-9\_27
6. N. Kavitha and P. Madhumathy, “Semisupervised Convolutional Neural Network-Based Vehicle Type Classification,” *GIS Science Journal*, vol. 10, no. 1, Jan. 2023. DOI: 20.18001.GSJ.2022.V10I1.23.40637
7. N. Kavitha and D. N. Chandrappa, “Analysis of SVM Technique for Vehicle Classification,” *Solid State Technology*, vol. 63, no. 6, 2020.
8. N. Kavitha and D. N. Chandrappa, “A Robust Multiple Moving Vehicle Tracking for Intelligent Transportation System,” in *Advances in Machine Learning and Computational Intelligence*, Springer, Singapore, 2020. DOI: 10.1007/978-981-15-5243-4\_9

#### **INTERNATIONAL / NATIONAL CONFERENCES**

1. N. Kavitha ,Shankar C, Hariprasad S A, Sujatha H, Ashwini K S, “ An Enhanced Machine Learning Framework for Lung Cancer Detection Using CT Scan Imaging”, ICDTE Springer Conference, 16<sup>th</sup> and 17<sup>th</sup> October 2025, RVITM.
2. Usha B, Rakshith G, Greeshma, Kunjana, N. Kavitha, “YOLOv8- Based Visual pill Verification in IoT- Integrated Wearable Health Monitoring and Medicine Dispensing System”, ICDTE Springer Conference, 16<sup>th</sup> and 17<sup>th</sup> October 2025, RVITM.
3. N. Kavitha, A. Stefi, P. M. Varsha, S. Sumana, and V. V. Simha, “Using Machine Learning Models to Detect and Identify Pills,” *2nd National Conference on Digital Technology & Engineering*, RVITM, May 2–3, 2024.

4. N. Kavitha et al., "IoT based Fruits and Vegetables Quality Assessment," *IEEE Int. Conf. on Robotics, Vision and Interdisciplinary Technology Management*, 2023. DOI: 10.1109/IC-RVITM60032.2023.10435245
5. N. Kavitha and D. N. Chandrappa, "Comparative Review on Video-Based Vehicular Traffic Data Collection for Intelligent Transport System," in *IEEE Xplore*, 2017. DOI: 10.1109/ICRAECT.2017.31
6. N. Kavitha, "No Reference and full Reference Image Quality Assessment for Neural Networks," *Natl. Conf. on Convergence of Science, Technology and Management*, 2018.
7. N. Kavitha, "Automated Object Counting Method for Silkworm Eggs using Image Processing," *Int. J. Trend in Research and Development*, vol. 5, no. 4, Aug. 2018.
8. N. Kavitha, "Microcontroller Based Electrical Devices using Remote Keyboard," *Natl. Conf., SJBIT*, May 2007.
9. N. Kavitha, "Values and Ethics in Technical Education," *ISTE Students Convention, SJCIT*, Nov. 2007.
10. N. Kavitha, "A Novel Approach for Emergency System Servicing based on Wireless Communication," *National Symposium, Shirdi Sai Engg. College*, Nov. 2007.
11. N. Kavitha, "A Wireless Approach Towards Ambulance System Servicing," *Natl. Conf., SJBIT*, Mar. 2008.
12. N. Kavitha, "Feature-Based Face Recognition and Localization on Mobile Devices," *State Conf., SJBIT*, Oct. 2008.
13. N. Kavitha, "PCA For Face Analysis And Representation Under Various Illumination Conditions," *Natl. Conf., SJBIT*, Apr. 2009.
14. N. Kavitha, "Eigenfaces For Face Recognition," *Electronica 09, DBIT*, May 2009.
15. N. Kavitha, "Eigenfaces For Face Recognition Under Various Illumination Conditions," *National Technical Symposium, Shirdi Sai Engineering College*, May 2009.
16. N. Kavitha, "Local SMQT Features and SNOW Classifier based Face Detection," *Student Tech Symposium, SJBIT*, 2009.

## UGC CARE AND OTHER JOURNALS

1. Praveen, P. Madhumathy, G. S. Prajwal, and N. Kavitha, “Terahertz Communication: The Frontier of High-Speed Data Transmission,” *Journal of Digital Circuitry Innovations in Electrical Devices*, vol. 1, no. 1, pp. 38–44, Apr. 2025.
2. A. R. Deepak, P. Madhumathy, A. Reddy, and N. Kavitha, “IoT Based Smart City Communication,” *Advancement and Research in Instrumentation Engineering*, vol. 8, no. 1, Mar. 2025. [Online]. Available: <https://doi.org/10.5281/zenodo.14800327>
3. S. Kumar, P. Madhumathy, and N. Kavitha, “AI Driven Optimization in WDM Systems,” vol. 7, no. 1, Mar. 2025. [Online]. Available: <https://doi.org/10.5281/zenodo.14799676>
4. N. Kavitha, A. Stefi, P. M. Varsha, S. Sumana, and V. V. Simha, “Using Machine Learning Models to Detect and Identify Pills,” *Indiana Journal of Multidisciplinary Research*, vol. 4, no. 3, Jul. 2024. [Online]. Available: <https://doi.org/10.5281/zenodo.12674988>
5. N. Kavitha, A. Stefi, V. Vandhana, and P. M. Varsha, “Identification and Detection of Pills Using Machine Learning Methods – A Survey,” *IRJMETS*, vol. 6, no. 1, Jan. 2024. [Online]. Available: <https://doi.org/10.56726/IRJMETS47985>
6. N. Kavitha and Niveditha, “Skin Lesion Classification using Raspberry Pi,” *IJRSEM*, vol. 7, no. 5, May 2023. DOI: 10.55041/IJSREM21505
7. N. Kavitha, “Automatic Vehicle Number Plate Detection System using CNN,” *IJCRT*, vol. 9, no. 3, Mar. 2021.
8. N. Kavitha, “Automatic Number Plate Recognition and License Plate Detection,” *IJCRT*, vol. 9, no. 3, Mar. 2021.

## WORKSHOPS ATTENDED:

1. Attended One day training program on the “Sexual Harassment (Prevention, Prohibition and Redressal) Act, 2013 (POSH Act)”, UGC and NMC Compliances on February 14, 2026 via online mode.
2. Attended One day “National Level Awareness Program on Institutional Development Plan (IDP) for Higher Education Institutions” held on 6th March, 2025 through Online, jointly conducted by Telangana Council of Higher Education (TGCHE), and Institute for Academic Excellence (IAE), Hyderabad.

3. Attended Two Days Online INTERNATIONAL WORKSHOP on “Research Methodology” organized by D Y Patil Institute of MCA and Management, Akurdi, Pune scheduled from 29th to 30th September 2022.
4. Workshop on LAB VIEW for 4 week.

#### **AWARDS/ RECOGNITION:**

1. Received award for commendable contribution to the IETE-ISF activities in the institution as ISF Faculty coordinator of the institution, issued on the occasion of International Women’s Day-2025 celebration on 8-3-2025.

#### **WEBINARS/SEMINARS ATTENDED:**

1. Attended the webinar on “Book Publishing for the Academic and Research Community: A Sustainable Model” organized by Information Systems Division and Library & Documentation Centre, KSCSTE held on 25-09-2024.
2. Attended webinar on “ Gen AI use in the research workflow” Organized by **ELSEVIER Research Academy** on September 23<sup>rd</sup> 2024.
3. Attended webinar on “Empowering Engineering Excellence through MATLAB And Simulink” organized by CoreEL Technologies on 4<sup>th</sup> August 2023.
4. Attended webinar on “How to prepare a proposal for a review article” Organized by **ELSEVIER Research Academy** on July 11<sup>th</sup> 2023.
5. Attended webinar on “Internet of Robotics and Futuristic Drone Technology“ Organized by **IEEE RAS AIT SBC** on September 23<sup>rd</sup> 2022.
6. Attended webinar on How to write an abstract and improve your article Organized by **ELSEVIER Research Academy** on November 7<sup>th</sup> 2022
7. Attended webinar on "Writing Publishable Article In Reputable Journals“ Organized by **QUVAE Research and Publications** on November 4<sup>th</sup> 2022.
8. Webinar on Advanced Embedded System Design for Emerging Technology
9. Webinar on Swift Programming Language.
10. Attended webinar on "Photonic Integrated Circuit" on 19/9/2020 at DSATM, Bangalore

#### **QUESTION PAPER SETTING:**

1. Appointed as a paper setter for the logic design and Computer Organisation course from SJB Institute of Technology, Bangalore during October 2025.
2. Appointed as a paper setter for the Computer Network course from REVA University, Bangalore during November 2025.
3. Appointed as a paper setter for the Principles of Communication course from DSATM, Bangalore during November 2025.

4. Appointed as a paper setter for the Control System course from MVJ College of Engineering, Bangalore January 2025.
5. Appointed as a paper setter for the Computer Organisation course from DSATM, Bangalore during December 2024.
6. Appointed as a paper setter for the logic design and Computer Organisation course from SJB Institute of Technology, Bangalore during November 2024.
7. Appointed as a paper setter for the Control System course from MVJ College of Engineering, Bangalore May 2024.

#### **CERTIFICATION COURSES:**

1. Completed course on “Data Science Essentials with Python” under CISCO Networking Academy on October 13<sup>th</sup> 2025 (40-hours course).
2. Completed course on “Introduction to Cyber Security” under CISCO Networking Academy on July 23<sup>rd</sup> 2024.
3. Completed course on “Introduction to Generative AI” under Google cloud.
4. Completed 3 week course on “What is Data Science” on behalf of IBM under Coursera. on August 8<sup>th</sup> 2023.
5. Completed course on “Introduction to Data Science” under CISCO Networking Academy on July 18<sup>th</sup> 2023.
6. Completed course on “Introduction to IoT and Digital Transformation” under CISCO Networking Academy on July 11th 2023.
7. Completed 7-week course on "Programming for Everybody (Getting Started with Python)", on behalf of the University of Michigan, under Coursera.
8. Completed 4week course on " Introduction to Artificial Intelligence" on behalf of IBM under Coursera.
9. Completed Design Thinking for Beginners under Simple learn.
10. Completed Python Libraries for Data Science under Skillup.
11. Completed certification course on “Build your own Chatbot”, cognitiveclass.ai Powered by IBM Developer Skills Network
12. Completed certification course on “Cyber Security” by Packet Hacks.
13. Completed certification course on “Artificial Intelligence crash course” by Cursa

## PROPOSALS:

1. VGST proposal was written as a Principal investigator for FDP on “Green Energy and Carbon Footprint: Engineering SDG Solutions” VGST Reference Number VRN/003363/25-26 under FDP Scheme.
2. **Anusandhan National Research Foundation (ANRF)** proposal was written as a Co-Principal investigator for project title on AI-Driven Deep Learning Model for Real-Time Rainfall Prediction, cloud Cover Estimation, and Flood Risk Assessment using enabled Weather Stations and High Resolution Sattelite imagery data.
3. VGST proposal was written as a Principal investigator for FDP on “Computational Tools on Engineering Research” VGST Reference Number VRN/002674/22-23 under FDP Scheme.
4. VGST proposal was written as a Co-Principal investigator for FDP on "\_Modern Simulation Tools for Electronics and Electrical Engineering” (2021-2022)".
5. VGST proposal was written as a Co-Principal investigator for FDP on "Machine Learning and Artificial Intelligence: Algorithms to Hardware Architectures” (2020-2021)
6. VGST Proposal for KFIST LEVEL 1 written as a Co-Principal investigator for project title: Establishment of Artificial Intelligent Sensor Networking Laboratory Design and Investigate the Research Issues in Health Care Applications.

## PATENT DETAILS:

1. Dr. C. Solaimuthu, Dr. Hema M S, Dr. Roopashree S, Dr. Prema Arokia Mary G, Mrs. Arpitha J, Mrs. Shridevi A Desai, Mr. Ashok G Gadavi & **Dr. Kavitha N**, Machine Learning–Based Glaucoma Screening Device, Application Number: 494492-001, **(Filed on 12.03.2026)**.
2. Dr. Vijaya Raghavan P, Dr. Paul Prasanna Kumar, Mr. P. Vikram, Dr. K. Ramesh, Mr. Mahendran J, Dr. C. Solaimuthu, Dr. Manjunatha Babu N S and **Dr. Kavitha N**, ML-Based Device for Fire Detection in Mines, **Application Number: (Submitted on 31.03.2026)**
3. Dr. Shanthala K, Dr. C. Solaimuthu, Dr. R. Manjunatha Prasad, Dr. Surbhi Agrawal, **Dr. Kavitha N**, Mrs. Nivedita Sudhanva Desai, Dr. D. Salangai Nayagi and Dr. Roopashree Shailendra, AI-Powered Industrial Process Monitoring Device with Cybersecurity Layer, Application Number: 473033-001 **(Examination Report has been Generated, Case is awaiting for Examination Report Reply (FER generated on 11/11/2025)**.
4. Dr. Nagashettappa Biradar, Dr. C. Solaimuthu, **Dr. Kavitha N**, Dr. Shanmukha Nagaraj, Dr. Lala Saha, Dr. Vikash Kumar, Dr. Rudresh B M and Dr. Sowmyashree M S, Smart Device for Environmental Monitoring, Application Number: 489064-001, **Filed on 30.01.2026, (Indian Design Patent Granted on 24.04.2026)**.

5. Dr. C. Solaimuthu, Dr. P. J. A. Alphonse, Dr. Selvakumar K, Dr. Seshu Babu Pulagara, Mr. Siddesh Kumar T L, Dr. Rudresh B M, **Dr. Kavitha N** and Mrs. Nivedita Sudhanva Desai, AI based Device for Monthly Expenses Prediction and Spending Control, Application Number: 482941-001 (**Filed on 06.12.2025**).
6. **Dr. Kavitha N**, Mrs. Latha D U, Dr. P. J. A. Alphonse, Dr. Seshu Babu Pulagara, Dr. Y. Venkatramana Reddy, Dr. C. Solaimuthu, Dr. Sowmyashree M S and Dr. Rudresh B M, ML Based Device for Road Accident Detection and Prevention, Application Number: 492035-001, **Filed on 23.02.2026, (Indian Design Patent Granted on 15.04.2026)**
7. Dr. Shanthala K, Dr. Premkumar Naik, Dr. C. Solaimuthu, Mrs. Bhavya Narayana Javagal, Mrs. Sneha Karamadi, Mrs. K. Padma Priya, **Dr. Kavitha N** and Dr. Akilandeswari P, AI based Household Appliance Safety Monitoring Device, Application Number: 486144-001, Filed on 29.08.2025, (**Indian Design Patent Granted on 23.02.2026**).
8. Dr. C. Solaimuthu, Dr. Nandita Bangera, Mrs. Nivedita S Desai, Dr. Laxmikant Ramachandra Patil, Mr. Nagesh Kumar Doddashettikere Narayanappa, Mrs. Pallavi K V, Dr. D. Salangai Nayagi and **Dr. Kavitha N**, AI-Powered Portable Solar Charging Pad, Application Number: 470338-001 (**Indian Design Patent Granted on 13.01.2026**).
9. **Dr. Kavitha N**, Dr. C. Solaimuthu, Dr. E. Kavitha, Mrs. Divyamani M K, Dr. Kiran Kumar N, Dr. T. N. Sreenivasa, Dr. Saravanan R and Dr. Shirabadagi Sarala Somanath, IoT based controller for electric vehicle, Application Number: 453035-001, 18.03.2025 (**Indian Design Patent Granted on 03.07.2025**).
10. Dr. Solaimuthu Chandrakasan, Dr. Chethan Venkatesh, Dr. Marlakunta Mrunalini, Dr. Mokashi Bhargavi Desai, Dr. Nagaraju Shamanth, **Dr. Nanjundaiah Kavitha**, Dr. Shailendra Roopashree and Dr. Sunil Bhat, An Intelligent Anomaly Detection System for IoT Networks Using Edge Computing and Deep Learning, German Utility Model Patent File Number: 20 2025 102 503.5, Filed on 07.05.2025, (**German Utility Model Patent Granted on 05.06.2025**).
11. Dr. C. Solaimuthu, Dr. R. Saravanan, Dr Sujai Paneerselvam, Prof. M. Kanimozhi, Dr. V. Subramaniaswamy, Dr. D. Salangai Nayagi, **Dr. Kavitha N** & Dr. A. P. Sathiyagnanam, Sleek Shape for Next-Generation 5G Communication Devices, Application Number: 448987-001, 22.02.2025 (**Indian Design Patent Granted on 16.05.2025**).
12. Dr. Solaimuthu Chandrakasan, Dr. Sunil Bhat, Dr. Kiran Kumar Narasimhe Gowda, Dr. Rajendran Saravanan, Dr. Dharuman Salangai Nayagi, **Dr. Kavitha Nanjundaiah**, Dr. Nagaraj Shanmukha and Dr. Shankara Chikkalingaiah, Integrated Solar Panel System for Electric Vehicle Charging Station, UK Design Patent Application Number: 6437968, 15.04.2025 (**UK Patent Granted on 24.04.2025**).

13. Dr. S. Muthulakshmi, Putchakayala Yanna Reddy, Dr. C. Solaimuthu, Kasirajan G, Dr. K. Umadevi, Rahul Senthil Kumar, Sarathi R, Dr. J. Immanuel Durai Raj, **Dr. Kavitha N** and Dr. K. Dhayalini, Electric Vehicle Power Converter for Enhanced Efficiency and Performance, Application Number: 202441083966, Dated on 04.11.2024 (**Indian Design Patent Published on 19.11.2024**).

#### **COPYRIGHT DETAILS:**

1. Dr. C. Solaimuthu, Dr. Nagashettappa Biradar, Dr. R. Manjunatha Prasad, Dr. Meena Deshpande, Dr. Shanthala K, **Dr. Kavitha N**, Dr. D. Salangai Nayagi and Dr. Roopashree Shailendra “ AI-Driven Framework for Natural Language Understanding in Multilingual Chatbots”, Canada Copyright published with Registration No. 1236758.

#### **FUNDED PROJECTS:**

1. **Project Title:** Automatic Traffic rule Violation and Number Plate Detection using CNN  
**Funding Agency:** Karnataka State Council for Science and Technology  
**Amount:** Rs: 4000/-  
**Year:** Feb – July 2021.

#### **INVITED TALKS:**

1. Invited as a resource person for a 2day workshop on "AI- Driven Smart Surveillance & Intelligent Video System", on 21<sup>st</sup> and 22<sup>nd</sup> Apr 2026 in RVITM, Bangalore.
2. Invited as a session speaker for a Boot Camp on “**AI in Electronics**” on 15<sup>th</sup> September 2025 in RVITM, Bangalore.
3. Invited as a session speaker for a Seminar on “**Writing and Inspiring Undergraduate Research**” on 18<sup>th</sup> January 2025 in DMI College of Engineering (Autonomous Institution), Chennai.
4. Invited as a session speaker for value added courses on “**Overview of Deep learning and Machine Learning**” on 22<sup>nd</sup> August 2022 in Muthayammal Engineering College (Autonomous Institution), Chennai.
5. Invited as a session speaker for AICTE Sponsored 6-day Short Term Training Programme (STTP) on "Modern Optimization Tools in Engineering Field-IV" from 16<sup>th</sup> to 21<sup>st</sup> November 2020 in SRM VALLIAMMAI ENGINEERING COLLEGE (Autonomous Institution), Chennai.
6. Invited as a session speaker for a 5-day FDP on "Electronic Devices, Microprocessor and Image Processing" from 11<sup>th</sup> to 15<sup>th</sup> May 2020 in SRM VALLIAMMAI ENGINEERING COLLEGE (Autonomous Institution), Chennai.
7. Invited as a resource person for a 2day workshop on "Graphical programming, Data Acquisition and Hardware Programming using NI LabVIEW", on 4<sup>th</sup> and 5<sup>th</sup> Nov 2019 in Dayananda Sagar Academy of Technology and Management.

### **BOOK CHAPTERS:**

1. Kavitha N, "**Development of an IoT-Based Atmospheric Fine Dust Monitoring System**" for book Internet of Things, Smart Computing and Technology: A Roadmap Ahead (**Springer**) Chapter12,(ISBN:978-3-030-39047-1), February 2020.
2. Kavitha N, "**Brain Tumor Image Segmentation and Classification using SVM, CLAHE AND ARKFCM**" for Intelligent decision support systems, applications in signal processing, (**Springer**) Chapter 3,978-3-11-062110-5, Page 53-70, October 2019, DOI:10.1515/9783110621105.
3. Kavitha N, "**IOT Based Health Monitoring and Tracking System for Soldiers**" in the book Intelligent IoT for Advanced Healthcare Systems, 29 January 2022, Wiley Online Library <https://doi.org/10.1002/9781119769293.ch9>
4. Kavitha N, "**A Wireless Sensor Architecture for Efficient Water Quality Measurement and Monitoring Using the IoT**" in the book IoT and WSN based Smart Cities: A Machine Learning Perspective (pp.163-181), (**Springer**) January 2022, DOI:[10.1007/978-3-030-84182-9\\_10](https://doi.org/10.1007/978-3-030-84182-9_10).

### **PUBLISHED TEXTBOOKS:**

1. Published **textbook on "Advanced Data Science & Intelligent Analytics"**, under Technical Press Publication, Bengaluru April 2026, ISBN: **978-81-69069-35-9**.
2. Published **textbook on "Digital Image Processing"**, HSRA Publication, Bengaluru March 2026, ISBN: **978-93-6850-280-7**
3. Published **textbook on "Introduction To Mechatronics"** under Technical Press Publication, Bhopal on September 2025, ISBN: **978-81-987126-0-8**.
4. Published **textbook on "Computer Communication Network"** under Book Doula Publication on April 2019, ISBN: **978-81-937245-1-4**.

### **INDUSTRY PROJECTS:**

A project titled "Real-time Iris Pupil Ratio detection" for an Sensesemi Technologies using computer vision and machine learning algorithms, Status: Completed on 10/6/2025.

### **FACULTY DEVELOPMENT PROGRAMS ATTENDED:**

- Attended 2-Day Faculty Development Program on "EMERGING TRENDS IN MECHANICAL ENGINEERING: BRIDGING THE GAP WITH INTERDISCIPLINARY TECHNOLOGIES" organized by the Department of Mechanical Engineering on 25<sup>th</sup> Sep and 26<sup>th</sup> Sep 2025 at RV Institute of Technology and Management, Bengaluru.

- Completed 1 week AICTE Training And Learning (ATAL) Academy Faculty Development Program on Optimizing Next-Gen Computing for Smart System Development at National Institute of Technology Warangal from 13/10/2025 to 18/10/2025.
- Attended one-week Faculty Development Programme on “AI-Driven Image Intelligence: Advances in Processing and Learning” organized by E&ICT Academy IIT Guwahati in association with RV Institute of Management and Technology from 08th-12th September, 2025.
- Attended 5-Day Faculty Development Program on “Emerging Technologies-Shaping the Future” organized by AI &ML Department from 12<sup>th</sup> May – 16<sup>th</sup> May 2025 at BIT, Bangalore.
- Attended 5-Day Faculty Development Program on “Interdisciplinary Approaches in Scientific Research and Teaching” organized by the Science Department from 1<sup>st</sup> Apr – 5<sup>th</sup> Apr 2025 at St Joseph University, Nagaland.
- Attended 5-Day Faculty Development Program on “SPARC-AI” organized by the Department of Electronics and Communication Engineering from 10<sup>th</sup> Feb – 14<sup>th</sup> Feb 2025 at RV Institute of Technology and Management, Bengaluru.
- Attended 1 week faculty development programme on "**Django Development BootCamp**" Organized by **Department of Computer Science and Engineering, Pragati Engineering College** from July 15<sup>th</sup> , 2024, to July 20th, 2024.
- Attended 3 week faculty development programme on "**IOT Embedded system and AI**" sponsored by **NSTEDB, DST, and GoI** from March 4<sup>th</sup> , 2024, to March 29th, 2024
- Attended two-week faculty development programme on "**Opportunities and Challenges in Entrepreneurship,**" sponsored by **NSTEDB, DST, and GoI** from January 3rd, 2024, to January 19th, 2024
- Attended Five-day FDP on “Outcome Based Education (OBE)” Organized by RV Institute of Technology & Management, Bangalore from 25<sup>th</sup> September to 4<sup>th</sup> October 2023
- Attended Five-day FDP on “Cloud Infrastructure (AWS)” Organized by RV Institute of Technology & Management, Bangalore in collaboration with BRAINOVISION SOLUTIONS INDIA PVT.LTD & ALL INDIA COUNCIL FOR TECHNICAL EDUCATION – AICTE from 21<sup>st</sup> August to 25<sup>th</sup> August 2023
- Attended 5-Day Faculty Development Program on “VLSI Design and avenues of Interdisciplinary Research" organized by the Department of Electronics and Communication Engineering from 27<sup>th</sup> Feb – 3<sup>rd</sup> Mar 2023 at RV Institute of Technology and Management, Bengaluru.

- Attended 5-Day Online Faculty Development Program on “Artificial Intelligence” under TechSaksham Program organized by Microsoft India & SAP India from “16th Jan. 2023 – 20th Jan. 2023”.
- Attended 5-Day Online Faculty Development Program on “IMPORTANCE OF DATA SCIENCE IN MACHINE LEARNING AND ITS APPLICATIONS” organized by the Department of Computer Science and Engineering & Department of Information Science and Engineering from 6th - 10th Feb 2023 at RV Institute of Technology and Management, Bengaluru.
- Attended 5 day FDP on “Disruptive Technology for Next Gen Computing” organized by ECE department of Shri Krishna college of Technology, Coimbatore from 14.12.2022 to 16.12.2022.
- Attended 5 day FDP on Electronic Devices and communication for Embedded System in association with ISTE student chapter of SRM college of Engineering from 17<sup>th</sup> to 21<sup>st</sup> October 2022.
- Attended one-week FDP on “Amazon Web Services” Organized by RV Institute of Technology & Management, Bangalore in collaboration with BRAINOVISION SOLUTIONS INDIA PVT.LTD & ALL INDIA COUNCIL FOR TECHNICAL EDUCATION – AICTE from 22<sup>nd</sup> August to 27<sup>th</sup> August 2022.
- Attended 5 day FDP on "Natural Language Processing" organized by ECE department of Shri Madhwa Vadiraj Institute of Technology and Management, Bantakal in association with Karnataka Science and Technology Academy from 25 July to 29 July 2022.
- Attended 6-days AICTE-VTU FDP on “An Overview of Teaching Techniques in Data Science and Analytics” from 25/04/2022 to 29/04/2022.
- Attended 40 hours online FDP on “Application of Artificial intelligence on Communication and Signal Processing” Sponsered by NIT Warangal.
- Attended 2-day workshop on Nanomaterials for clean energy and Space astronomy on 22<sup>nd</sup> and 23<sup>rd</sup> February in Ethiraj college for women
- Attended 5-day FDP on NBA Accreditation and Teaching Learning in Engineering held from 21/2/2022 to 25/2/2022 at Narsu Sarathy Institute of Technology, Salem.
- Attended 5-day ATAL Academy FDP on “Recent Trends in Artificial Intelligence from 29/11/2021 to 3/12/2021 at Lakshmi Narain College of Technology.
- Attended 5-day AICTE-VTU FDP on “An Overview of Teaching Techniques in Basics of Electronics and Communication Engineering” from 13/12/2021 to 17/12/2021.

- Attended 5-day workshop on Skills and Opportunities in VLSI from 27<sup>th</sup> July to 31<sup>st</sup> July 2020 at DSATM, Bangalore
- Attended 3-day workshop on latex from 29<sup>th</sup> June to 1<sup>st</sup> July 2020 at AMC Engineering College
- FDP on Machine Learning and Artificial Intelligence for 5 days
- FDP on ARM CORTEX embedded controller for 3 days
- FDP on IOT Industrial Applications- Frontend and Backend CO-design for 2 days
- FDP on Outcome Based Education for 3 days

#### **SESSION CHAIR:**

1. Acted as a session chair for the ICDTE Springer Conference, organized by RV Institute of Technology and Management, Bengaluru on 16<sup>th</sup> and 17<sup>th</sup> October 2025.
2. Acted as a session chair for the International Conference On Evolutionary Algorithms and Soft Computing Techniques (EASCT-2023) organized by RV Institute of Technology and Management, Bengaluru on 20<sup>th</sup> and 21<sup>st</sup> October 2023.
3. Acted as a session chair for the IEEE International Conference on The Confluence of Advancements in Robotics, Vision and Interdisciplinary Technology Management: IC-RVITM'23 organized by RV Institute of Technology and Management, Bengaluru on 28<sup>th</sup> and 29<sup>th</sup> November 2023.

#### **EVENTS ORGANIZED:**

1. Organized 2day workshop on "AI- Driven Smart Surveillance & Intelligent Video System", on 21<sup>st</sup> and 22<sup>nd</sup> Apr 2026 in RVITM, Bangalore.
2. Organized one day Educational Visit to the Centre of Excellence in Design (CED), IISc, held on 2nd April 2026 for 4th Semester students under the IETE student chapter.
3. Organized Two day hands-on Workshop on “Applied Signal Processing and FPGA Deployment with Deep Learning in MATLAB” on March 12<sup>th</sup> and 13<sup>th</sup> 2026 in RVITM under the IETE student chapter.
4. Organized “Alumni Talk- Pathway to Placement: Preparing for Professional Success” event for students” on November 5<sup>th</sup>, 2025 in RVITM under the IETE student chapter
5. Organized “Startup LaunchPad: Nurturing Innovative Minds” competition event for students” on September 11<sup>th</sup>, 2025 in RVITM under the IETE student chapter.
6. Organized ECE Project Expo on June 13<sup>th</sup> 2025 in RVITM

7. Organized Workshop on “Leading the Net Zero Journey” on March 7<sup>th</sup> 2025 in RVITM
8. Organized “IETE Student chapter inauguration” on November 6<sup>th</sup> 2024 in RVITM
9. Organized Alumni Talk on “Gearing up for placement season” on September 30<sup>th</sup> 2024 in RVITM
10. Organized Talk on Interpersonal Skills: Unlocking Your Inner Potential” on February 21<sup>st</sup> 2024 in RVITM under NDLI Club
11. Conducted Inter-College IEEE poster design and debate competition event for students” on September 1<sup>st</sup>, 2023 in RVITM under the IEEE student chapter in collaboration with MUNSOC, RVITM.
12. Conducted inter-department Talk on Being Industry Ready: Journey from campus to corporate world” on December 14<sup>th</sup> 2022 in RVITM under NDLI Club.
13. Conducted Inter-Department IEEE poster design contest event for students” on November 10<sup>th</sup> 2022 in RVITM under the IEEE student chapter, RVITM.
14. Conducted inter-department non-technical quiz competition event for students named “Mind Fest” on May 26<sup>th</sup> 2022 in RVITM under NDLI Club.
15. Conducted two days technical event for students named “E-Technophilia” on February 2<sup>nd</sup>, 2022 in RVITM.
16. Conducted an online technical event for students named “Techno-Cult” on March 6<sup>th</sup> 2020 under the IETE Student chapter in DSATM.
17. Conducted a two-day technical event for students named “Electroblast” on October 23<sup>rd</sup>, 2019 under the IETE Student chapter in DSATM.

#### **JOURNAL REVIEWER:**

1. Reviewed 1 paper for the Discover Applied Science Journal on 8<sup>th</sup> December 2025, Springer Nature.
2. Reviewed 5 papers for IEEE International Conference on Communication, Computer, and Information Technology (IC3IT-2025) organized at Mysuru Royal Institute of Technology, Mandya, India on 24<sup>th</sup> and 25<sup>th</sup> October 2025 in association with IEEE Mysore Subsection and IEEE Bangalore Section.
3. Reviewed 1 paper for Scientific Reports Journal on 10<sup>th</sup> November 2025, Springer Nature.
4. Reviewed 1 paper for Discover Computing Journal on 24<sup>th</sup> August 2025, Springer Nature.
5. Reviewed 5 papers for IEEE-NMITCON, Bengaluru.

6. Reviewed 10 papers for IEEE International Conference on Networks, Multimedia and Information Technology during Aug 1st and 2nd , 2025, Organised by NITTE Meenakshi Institute of Technology.
7. Reviewed 1 paper for Discover Computing Journal on 24<sup>th</sup> May 2025, Springer Nature.
8. Reviewed 6 papers for IEEE International Conference on Distributed System, Computer Network on Cyber Security during Sep 20th and 21st 2024, Organised by Sri Krishna Institute of Technology.
9. Reviewed 2 papers for WSEAS Transactions on Computer Research Journal.
10. Reviewer in the IEEE International Conference on The Confluence of Advancements in Robotics, Vision and Interdisciplinary Technology Management: IC-RVITM'23
11. Reviewer in the 1<sup>st</sup> **IEEE International Conference on Datascience and Network Security (ICDSNS-2023)** organized by Kalpataru Institute of Technology and Management, Tiptur India on 28-29<sup>th</sup> July 2023.
12. Reviewer in the AICTE Sponsored **IEEE International Conference on Networks, Multimedia and Information Technology (NMITCON)** organized at Nitte Meenakshi Institute of Technology, Bengaluru INDIA during 1st and 2nd September 2023 in association with IEEE Bangalore Section.
13. Reviewer in the 2<sup>nd</sup> **IEEE International Conference on Distributed Computing and Electrical Circuits and Electronics (ICDCECE-2023)** organized by Ballari Institute of Technology and Management, Ballari India in association with IEEE Bangalore section on 29-30<sup>th</sup> April 2023.
14. Reviewed Journal paper of **Web of Science Journal** named “Applied Artificial Intelligence” on 17<sup>th</sup> October 2022.

## PERSONAL INFORMATION

Name : Dr. Kavitha N  
Father Name : Mr. Nanjundaiah D  
Spouse Name : Mr. Prashanth C B  
Date of Birth : 27-06-1987  
Languages Known : English, Kannada and Hindi.  
Gender : Female  
Hobbies : Cricket, Badminton.

I hereby declare that all the statements mentioned above are true and correct to the best of my

Knowledge

Place: Bengaluru

(Dr. Kavitha . N)