

Dr. Afshan Kaleem

Sr. Assistant Professor, Muffakham Jah College of Engineering and Technology

Email: Afshan.kaleem@mjcollege.ac.in

| Phone: 9666662217

Professional Summary

An accomplished professor and researcher with 22 years of expertise in Embedded Systems, IoT, Data Communication, and Speech Signal Processing. Demonstrated success in leading research initiatives, mentoring students, and driving technological advancements through innovative research. Dedicated to fostering academic excellence and contributing to the growth and development of future engineers.

Education

- **Doctor of Philosophy (Ph.D.) in Electrical, Electronic, and Communications Engineering**
Jawaharlal Nehru Technological University Kakinada (JNTUK) | May 2014 – May 2024
 - **Master of Technology (M.Tech) in Electrical and Electronics Engineering**
JNTUH College of Engineering, Hyderabad | 2008 – 2010
 - **Bachelor of Technology (B.Tech) in Electrical, Electronic, and Communications Engineering**
Jawaharlal Nehru Technological University Hyderabad (JNTUH) | 1998 – 2002
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Core Competencies

- Embedded Systems and IoT
 - Data Communication Networks
 - Speech Signal processing
 - Bioinformatics & Machine Learning
 - Academic Leadership & Research Supervision
 - Project Management & Innovation in Engineering Education
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Academic Experience

Senior Assistant Professor

Muffakham Jah College of Engineering and Technology | 2007 – Present

- Taught advanced courses in Embedded Systems, IoT, and Data Communication.
- Led research initiatives in bioinformatics and machine learning applications.
- Supervised student projects in innovative healthcare technologies.
- Designed curriculum to meet modern industry demands.

Assistant Professor

Al-Habeeb College of Engineering & Technology | Hyderabad, Telangana, India
April 2002 – May 2007 (5 years 2 months)

- Taught various core subjects related to Electronics and Communication Engineering, including Electronic Devices and Circuits, Switching Theory and Logic Design, Pulse and Digital Circuits, Linear Integrated Circuits, and Microelectronics.
- Actively participated in curriculum development and mentorship programs for student projects.
- Supervised and handled laboratory sessions focused on practical applications of core subjects.
- Led student projects across multiple domains, ensuring practical implementation of theoretical concepts in areas like microelectronics, circuit design, and digital systems.

Research and Publications

- [1] Smart Use of Machine Learning in Heart Disease Identification, 3rd International Conference (2023)
- [2] Content Based Image Retrieval System using K-means and KNN approach by Feature Extraction (2015)
- [3] Feature Extraction and Enhanced Classification of Urban Sounds (2023)

- [4] Machine Learning Science Using Bioinformatics Leads to More Effective Treatments, ICACITE (2022)
 - [5] Feature Extraction and Classification (2019)
 - [6] Supervised Machine Learning for Urban Sound Classification (2019)
 - [7] Enhancement of Urban Sound Classification Using Various Feature Extraction Techniques (2019)
 - [8] Boosting of Urban Sound Classification using Preprocessing Techniques (2019)
 - [9] Automatic Speaker Verification (ASV) Techniques for Feature Extraction for Cochlear: A Survey (2019)
 - [10] Need of Security in Embedded Systems, National Conference on Recent Trends in Communication Technology & VLSI Design (2010)
 - [11] A Video Compression Based on Adaptive Prediction Scheme, National Conference on Intelligent Information and Distributed Computing (NCCIIDC 2010)
 - [12] Secured Routing and Improvement of QoS using S-DSR in MANETS, International Journal of Advances in Management Technology and Engineering Sciences (IJAMTES 2014)
 - [13] Social Sentiment Analysis on Big Data, National Conference on Emerging & Innovative Trends in Computer Science (2016)
 - [14] Modeling of Vocal and Nasal Tract, International Conference on Systemic, Cybernetics and Informatics (2017)
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Faculty Development Programs (FDPs) Attended

1. **Mission 10X** – (11th February to 15th February 2008)
2. **Application of Electronic Design Automation (EDA) Tool in Chip Design** – Two-week Staff Development Program (16th–28th November 2009)
3. **Recent Trends in VLSI Design** – (18th–20th March 2010)
4. **Basic Electronics** – Two-week ISTE Workshop (28th June to 8th July 2011)
5. **Signals and Systems** – Two-week ISTE Workshop (2nd to 12th January 2014)
6. **Technical Communication** – Two-week ISTE STTP (8th October to 5th December 2015)
7. **Pedagogy for Online and Blended Teaching-Learning Process (FDP 201x)** – Two-week FDP Course (9th September to 14th October 2017)
8. **Foundation Program in ICT for Education (FDP101X)** – Two-week FDP Course (3rd August to 7th September 2017)

9. **VLSI Design and Embedded System** – Two-day Conference at VLSID17 (2017)
10. **Data Science Technologies & Next Generation Artificial Intelligence** – One-week FDP (3rd–8th January 2019)
11. **Outcome Based Pedagogical Initiatives for Effective Teaching and Learning** – AICTE Short Term Training Programme (19th April 2021 to 24th April 2021)
12. **Cyber Security & Cyber Forensics** – One-week FDP at MVSR Engineering College (14th June 2021 to 18th June 2021)
13. **Recent Trends in IoT** – One-week FDP at Mahatma Gandhi Institute of Technology (6th June 2022 to 10th June 2022)
14. **Computational Techniques & Applications in Bioinformatics** – Two-week International Online STTP (13th September 2021 to 25th September 2021)
15. **Learning Paradigms for Outcome-Based Education in Digital Era** – Half-Day Workshop (30th November 2019)
16. **Blockchain for Digital Transformation** – Five-day International STTP (12th August 2021 to 16th August 2021)
17. **Machine Learning and Computer Vision** – AICTE ATAL Online Advanced FDP (5th July 2021 to 9th July 2021)
18. **Artificial Intelligence in Electronic Design Automation** – AICTE ATAL Online Elementary FDP (9th August 2021 to 13th August 2021)
19. **Recent Advances in Communications and Signal Processing** – One-week FDP at JNTUK (24th August 2020 to 29th August 2020)
20. **Speech Processing Applications & Challenges** – One-week FDP at Santhiram Engineering College (20th May 2020 to 25th May 2020)
21. **Computational Intelligence and Machine Learning Applications** – One-week Workshop by IEEE CIS/GRSS (18th December 2020 to 23rd December 2020)
22. **Data Science** – Online Elementary FDP by AICTE ATAL (22nd November 2021 to 26th November 2021)
23. **Research Article Writing using LaTeX with Hands-on**
One-week National Level Online FDP at Maturi Venkata Subba Rao (MVSR) Engineering College, Hyderabad
Date: 5th September 2022 – 9th September 2022
24. **Introduction to Machine Learning** – NPTEL-AICTE Faculty Development Programme (July–September 2024)

Skills

- Proficiency in IoT and Embedded Systems Technologies
 - Advanced Data Communication Strategies
 - Expertise in Healthcare Applications using Bioinformatics
 - Leadership in Academic Research and Student Mentorship
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Certifications

NPTEL CERIFICATION FOR INTRODUCTION TO MACHINE LAERNING

Professional Affiliations

- Member of IEEE
 - IETE
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Languages

- English
- Urdu
- Hindi