Mohsin Furkh Dar

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ResearchGate GitHub Portfolio

Education

Nov 2020 - Present
Ph.D., University of Hyderabad Computer Science (Thesis Submitted).
Thesis title: *Advances in Deep Learning for Medical Image Segmentation and Classification*.

Sept 2017 – Mar 2019
M.Phil., Computer Science, Mewar University in Computer Science.
Thesis title: *Performance Comparison of Face Detection and Recognition Algorithms*.

Mar 2013 – Jun 2016
MCA, University of Kashmir
Project Thesis title: *SMS Intimation System for Online Leave Management*.

Mar 2010 – Jan 2013
BSc, University of Kashmir
Majors: *Mathematics, Physics, Information Technology*.

Employment History

Assistant Professor
Government Degree College Uri, Baramulla, J&K, India
2019
Taught undergraduate courses in Computer Science
Developed curriculum for programming and data science courses

Teaching Assistant
University of Hyderabad, India
Jan 2022 – Dec 2024
Assisted professors in deep learning and computer vision courses
Conducted laboratory sessions for graduate students
Graded assignments and provided feedback to students

System Administrator
Artificial Intelligence Lab, School of Computer and Information Sciences, University of Hyderabad
Jan 2021 – Dec 2022
Managed computing resources for the AI research lab
Maintained deep learning workstations and server infrastructure
Configured and optimized software environments for research projects

Teaching Experience

Courses Taught as Assistant Professor:

- Introduction to Programming using C/C++
- Data Structures and Algorithms
- Computer Networking
- Database Management Systems

Courses Assisted as Teaching Assistant:

- Deep Learning for Computer Vision
- Advanced Machine Learning

Teaching Experience (continued)

- Neural Networks and Applications
- Research Methodology

Student Mentorship:

- Mentored 10+ IMTech and MTech students in Deep Learning and Computer Vision projects
- Guided two research assistants in projects on:
  Fuzzy Rough Kernel-Based Extreme Learning Machine
  Mineral Prospectivity Classification using Deep CNNs

Research Publications

Journal Articles

1. M. F. Dar and A. Ganivada, "Adaptive ensemble loss and multi-scale attention in breast ultrasound segmentation with uma-net," *Medical & Biological Engineering & Computing*, Jan. 2025, ISSN: 1741-0444. DOI: 10.1007/s11517-025-03301-5.
2. A. N. Alhaj, N. D. Patel, A. Singh, R. K. Bondugula, M. F. Dar, and J. Ahamed, "Design and analysis of a robust security layer for software defined network framework," *International Journal of Sensor Networks*, vol. 46, no. 1, pp. 1–14, 2024. DOI: 10.1504/IJSNET.2024.141613.
3. M. F. Dar and A. Ganivada, "Deep learning and genetic algorithm-based ensemble model for feature selection and classification of breast ultrasound images," *Image and Vision Computing*, vol. 146, p. 105 018, Jun. 2024, ISSN: 0262-8856. DOI: 10.1016/J.IMAVIS.2024.105018.
4. M. F. Dar and A. Ganivada, "Efficientu-net: A novel deep learning method for breast tumor segmentation and classification in ultrasound images," *Neural Processing Letters*, vol. 55, pp. 10 439–10 462, 2023. DOI: 10.1007/s11063-023-11333-x.
5. S. Mukhtar, M. F. Dar, and A. Kaur, "Latent fingerprint enhancement and matching using intuitionistic type-2 fuzzy," *International Journal of Artificial Intelligence and Soft Computing*, vol. 7, no. 4, pp. 313–328, 2022. DOI: 10.1504/IJAISC.2022.130558.
6. M. F. Dar and D. S. Dixit, "Performance comparison of face detection and recognition algorithms," *International Journal of Science and Research (IJSR)*, vol. 8, no. 1, pp. 986–994, Jan. 2019. DOI: 10.21275/ART20194439.

Conference Proceedings

1. M. F. Dar and A. Ganivada, "Dynamic weight adjusted ensemble loss for enhanced medical image segmentation," in *Proceedings of Fourth International Conference on Computing and Communication Networks*, G. Fortino, A. Kumar, A. Swaroop, and P. Shukla, Eds., Singapore: Springer Nature Singapore, 2025.

RESEARCH ACTIVITIES

Research Focus Areas::

- Deep learning architectures for medical image analysis
- Medical image segmentation and classification
- Ensemble learning methods for feature selection

RESEARCH ACTIVITIES (continued)

- Fuzzy rough set theory for handling uncertainty in image processing

Research Metrics:

- h-index (Google Scholar): 3
- Total Citations: 39
- Research Impact: Developed novel deep learning architectures that improve medical image segmentation accuracy by 15% over baseline methods

COMMITTEES AND ADMINISTRATIVE EXPERIENCE

Conference Organization:

- Transport Committee In-charge, International Conference on BigData 2024, University of Hyderabad

Departmental Service:

- System Administrator, AI Lab, School of Computer and Information Sciences, University of Hyderabad (2021-2022)

HONORS AND AWARDS

- **UGC NET+JRF (Computer Science & Application)** - December 2019, All India Rank: 53
- **State Rank 3rd and District Rank 1st** in Programmer J&K Under Samagra Shiksha, 2017

PROFESSIONAL DEVELOPMENT AND WORKSHOPS

- Presenter, *"Dynamic Weight Adjusted Ensemble Loss for Enhanced Medical Image Segmentation"* at ICCCNet-2024 conference, Manchester, UK, 2024
- Workshop Participant, *"MRI and EEG data analysis"* at IIIT Hyderabad, 2024
- Workshop Participant, *"Hands-On Natural Language Processing,"* organized by Machine Learning India (MLI), 2021

TECHNICAL SKILLS

Coding	Python
Databases	MySQL.
Deep Learning	TensorFlow, Keras.
Machine Learning	Scikit-learn, NumPy, Pandas, SciPy, Seaborn.
Research Tools	MATLAB, LaTeX , Jupyter, PyCharm, Git, Docker, Mendeley, Zotero
Misc.	Academic research, teaching, training, consultation, LaTeX typesetting, and publishing.