

Monika Varshney

Assistant Professor

Jaypee University of Information Technology, Solan

monikavarshney.rs.cse21@itbhu.ac.in

+91-9045357200

[Google Scholar](#)



Summary

Researcher in Artificial Intelligence and Machine Learning, specializing in Graph Neural Networks. Committed to advancing impactful research and fostering student learning through teaching and mentorship.

Education

PhD, Computer Science Engineering	2021 – 2026
IIT (BHU), Varanasi	CGPA: 9.60/10
M.Tech, Computer & System Sciences	2019 – 2021
JNU, New Delhi	CGPA: 8.40/9.00
Master of Computer Applications	2016 - 2019
Aligarh Muslim University, Aligarh, India	CGPA: 8.74/10
B.Sc. (Hons.) Mathematics	2013 - 2016
Aligarh Muslim University, Aligarh, India	71.58%
Senior Secondary	2013
Aligarh Muslim University, Aligarh, India	72.25%

Additional Qualifications

- Qualified **UGC-NET** in Computer Science and Applications, 2021.
- Qualified **GATE (Computer Science and Information Technology)**, 2019.
- Qualified **GATE (Data Science and Artificial Intelligence)**, 2024.

Research Experience

PhD Scholar, IIT (BHU)	2021 – Present
• Developed meta-adaptive continual learning methods for dynamic graph data under evolving distributions. • Proposed privacy-preserving alignment techniques for federated graph neural networks under out-of-distribution. • Designed methods to mitigate oversmoothing in deep GNNs across heterogeneous graph domains and analyzed expressivity and efficiency trade-offs in graph neural network architectures.	
M.Tech Thesis: Fog-Cloud Resource Prediction using LSTM	2019 – 2021
• Developed LSTM-based models for predicting resource demand in distributed fog-cloud environments. • Improved cloud resource provisioning using historical workload traces from fog nodes.	

Publications

- **Varshney, M.**, Dutta, T. *Meta-Adaptive Continual Learning for Dynamic Social Communication Graphs*. IEEE Transactions on Computational Social Systems, 2026.
- **Varshney, M.**, Dutta, T. *Privacy-Preserving Out-of-Distribution Alignment for Federated Graph Neural Networks*. IEEE MultiMedia, 2025.
- **Varshney, M.**, Dutta, T. *Efficient and Expressive Graph Neural Networks*. NeurIPS 2025 Workshop on New Perspectives in Graph Machine Learning.
- **Varshney, M.**, Dutta, T. *Mitigating Oversmoothing in Graph Neural Networks Across Diverse Graph Domains*. ICONIP 2025, Springer CCIS, 2026.
- Verma, D., Dutta, T., **Varshney, M.** *A Low-Cost Driving Risk Prediction System for Hilly Roads*. ACM BuildSys 2022.

Skills

Languages: Python, C++, Java.

Frameworks/Libraries: PyTorch, PyTorch Geometric, Advanced Python.