Dr. Meher Pindiprolu

PHD IN NETWORK SCIENCE
ETH ZURICH, SWITZERLAND

https://meherchaitanya-eth.github.io/

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SKILLS

- ✓ **Languages:** Python, C++, Java
- ✓ **ML & Graph Frameworks:** PyTorch, TensorFlow, scikit-learn, DGL, PyTorch Geometric, NetworkX
- ✓ **Graph Learning Methods:** Graph Neural Networks, Graph Transformers, Graph Foundation Models, Community Detection, Network Science

RECENT PUBLICATIONS

- "*Cascade-Rewired Graph Transformer*", 2025
- "*Efficient Local Graph Clustering using Higher-Order Random Walks*", 2025
- "*Adjacency Search Embeddings*" *TMLR*, 2025
- "*Tight Sampling in Unbounded Network*" *AAAI*, 2024
- "*An SDP relaxation for minimizing Polarization on Networks*" *Complex Networks* XIV, 2024

AWARDS

- Purdue-Qatar Fellowship ($62,000)
- Best Paper Award at HiPC'16
- AICTE Fellowship ($8,000)

PROFILE

PhD in Network Science with over 8 years of research experience in graph algorithms, machine learning, and complex networks. Demonstrated track record of publishing in top-tier conferences and working extensively with large-scale graph data, specializing in designing scalable and expressive graph neural networks (GNNs), including graph transformers, grounded in principles from network science. Skilled at bridging theory and practice, with a strong ability to translate advanced research into production-ready solutions for real-world ML/AI applications.

WORK EXPERIENCE

Machine Learning Researcher
John Hopkins University | Sep 2024 - Aug 2025

- **Scalable Graph Transformers:** Architected sparse attention models handling millions of nodes while enhancing the predictive accuracy to 9%.

PhD Researcher
ETH Zürich | Feb 2020 - Sep 2024

- **Node Embeddings:** Created node embedding algorithms by leveraging s-t min-cut and contagion theory; improved node classification performance by 12%.
- **Graph Laplacian Learning:** Developed framework for link recommendation that provably reduces polarization.
- **Unsupervised Clustering:** Built first scalable online algorithm for local clustering in multiplex networks (e.g., Twitter).
- **Mentoring & Leadership:** Led an SNSF-funded project on homophily and disinformation in social media; mentored three Master's students which resulted in four peer-reviewed publications.

HPC Researcher
IIIT Hyderabad, India | Aug 2013 – May 2016

- **High Performance Computing for Parallel Graph Algorithms:** Designed scalable parallel solutions for biconnected/triconnected components and all-pairs shortest-paths, delivering up to 4x speedup.

Senior Software Engineer
Nvidia | May 2012 - Jun 2013

- **Embedded Systems & Driver Development:** Implemented kernel-level UART, SPI, and I2C drivers for Nvidia Tegra modules deployed in BMW automotive systems.

EDUCATION

PhD. in Network Science
ETH Zürich, Switzerland | Feb 2020 – Sep 2024

- **Dissertation:** *Influence Processes on Networks*

Master's in Computer Science
Purdue University, West Lafayette, USA | Jun 2016 – May 2019