Jinming Xing

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Education

North Carolina State University **Sep 2023 – Present**

- PhD in Computer Science
- **Research Interest:** Graph Neural Networks, Large Language Models

Shenzhen University **Sep 2019 – Jun 2023**

- BS in Computer Science (Honored)
- **Coursework:** Probabilities, Linear Algebra, Data Structures and Algorithms, Computer Networks, Internet of Things, Cloud Computing, Database, Machine Learning, Practical Deep Learning, Computer Vision

Skills

- Python, C/C++, PyTorch, Hadoop, Spark, Flask, MySQL, Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn
- CNNs, RNNs, GNNs, Transformers, LLM (LlamaIndex, Ollama)

Selected Papers & Research Experience

Research Assistant **North Carolina State University** **Oct 2023 – Present**

Jinming Xing, Guoheng Sun, et al. "NetSight: Graph Attention Based Network Traffic Forecasting." (2025)
[Motivation]: Hidden ST dependencies are ignored. Global-local ST can't be modeled simultaneously.

- A dynamic data-driven spatial-temporal graph was proposed to capture hidden spatial-temporal dependencies.
- A decoder-only transformer was adopted while GAT servers as the graph convolution backbone.
- Proposed NetSight, which copes with global-local spatial-temporal patterns simultaneously. A simple yet effective learnable pooling was designed, and to speed up the convergence, node normalization was introduced.
- NetSight outperforms the average of baselines by 36.37% (MAE), 32.19% (RMSE), and 23.99% (SMAPE).

Jinming Xing, Muhammad Shahzad. "A Reinforcement Learning Framework for Application-Specific TCP Congestion-Control." (2024)
[Motivation]: Diverse optimization goals are overlooked. Client computational load is high.

- Proposed ASC$_{RL}$, a DRL-based framework that can accommodate clients with various optimization goals.
- Designed a client-server updating mechanism, which decouples the training and inference, reducing the client computational load by up to 91%, making it suitable to be deployed on low-power devices.
- Introduced a fast retraining mechanism for client goals changing, resulting in a 50% reduced retraining time.

Research Assistant **Shenzhen University** **Jun 2021 – Jul 2023**

Jinming Xing, Can Gao, et al. "Weighted fuzzy rough sets-based tri-training and its application to medical diagnosis." Applied Soft Computing [Q1, IF:7.28] (2022)
[Motivation]: Noisy data impedes the learning. Tri-training suffers from the initialization problem.

- Proposed the 'bad-point' technique for dataset de-noising and a high-order information extraction strategy.
- Three modal data 'ORI', 'PCA', and 'DIS' are proposed to initialize tri-training base classifiers.
- Designed a robust weighted fuzzy lower approximation classifier for supervised and semi-supervised problems.
- The proposed WFRS-Tri framework outperforms baselines under various noisy supervised and semi-supervised scenarios with a range of accuracy improvements from 3% to 15% on average.

Grants

- National College Students Innovation and Entrepreneurship Training Project, 2021, **20k RMB**
- Guangdong Province Science and Technology Innovation Strategy Special Fund Project, 2022, **15k RMB**

Services

Invited Seminars: "Introduction to GNNs and Their Applications", Jharkhand Rai University, India, May 2025
Teaching Assistant: Computer Network, Data Structures and Algorithms, Senior Design
Program Committee: WWW'25 (Short Paper Track), AMLDS'25
Reviewer: AAAI'26, WWW'25 (Main Track), TKDD, IJCNN'25, Soft Computing, Knowledge-Based Systems, Expert Systems With Applications, IJAR, Applied Soft Computing, NeruoComputing, The Journal of Supercomputing, Results in Engineering