Mingyuan Zhang

📍 Boston, MA ✉ zhang.mingyua@northeastern.edu 📞 781 219 1785 in Linkedin 🎓 Google Scholar

Education

Northeastern University *Sep. 2023 – Present*
Ph.D in Computer Engineering, advised by Prof. Yun Raymond Fu
- **Reseach Direction:** Sparse Network Training, Large Language Model

Northeastern University *Sep. 2021 – Dec. 2022*
MS. in Electrical/Computer Engineering
- **Concentration:** Computer Vision, Machine Learning and Algorithm

Xidian University *Sep. 2017 – Jun. 2021*
BE. in Telecommunication Engineering

Skills

Languages: Strong reading, writing and speaking competencies for English, Mandarin Chinese.

Coding: Python, MATLAB, C++, C, Xcode.

Web Dev: HTML, CSS.

Misc.: Academic research, LaTeX typesetting and publishing.

Experience

Research Assistant *Boston, MA*
Northeastern University *Sep. 2023 - Present*
- Improved large language model fine-tuning efficiency by introducing Mask Fine-Tuning (MFT), a novel approach that strategically removes certain model weights to enhance performance beyond traditional full fine-tuning methods.
- Using mask learning to investigate the sensitivity of different layers in an LLM to specific rewards during reinforcement learning.

Applied Scientist Intern *Remote*
AinnovationLabs *Oct. 2022 – Dev. 2024*
- Developed a 3D human pose estimation model with temporal information to track fine-grained motion deviations of a single subject, enabling accurate assessment of the monitored individual's physical condition.
- Trained a multi-scale sleep signal detection model that identifies sleep stages and detects sleep disorders from complex acoustic signals.
- Built a pedestrian re-identification (ReID) system capable of accurately detecting the same individual across varying environments.
- Created a mobile app for recording sleep patterns and consulting sleep-related questions, helping researchers collect data on patient groups for sleep studies.

Research Assistant *Nanjing, China*
Southeast University *Jun. 2019 - Aug. 2019*
- Designed a machine learning model to predict atmospheric environmental changes, incorporating multi-modal environmental data to enhance prediction accuracy.

Publications

Conference

Under Review

[1] ***Mingyuan Zhang***, Yue Bai, Huan Wang, Yizhou Wang, Qihua Dong, and Yun Fu, "", (Sparse LLM), submitted to *ICML 2025*.

[2] Yizhou Wang, Lingzhi Zhang, Yue Bai, Mang Tik Chiu, Zhengmian Hu, ***Mingyuan Zhang***, Qihua Dong,

Yu Yin, Sohrab Amirghodsi and Yun Fu, "", (LLM Next Token Prediction), submitted to *ACL 2025*.

[3] ***Mingyuan Zhang***, Yue Bai, Yi Xu, Chang Liu, and Yun Fu, "", (Multi-view Learning), submitted to *ACM MM 2025*.

Ongoing Work

[1] ***Mingyuan Zhang***, Yue Bai, Yitian Zhang and Yun Fu, "", (LLM RL), target at *NeurIPS 2025*.

Journal

Ongoing Work

[1] Yue Bai*, ***Mingyuan Zhang****, Huan Wang, Zhiqiang Tao, Kunpeng Li, and Yun Fu, "", (Network Pruning), target at *TPAMI*.

Patent

Under Review

[1] Yun Fu, ***Mingyuan Zhang***, Zhi Xu, "", (Sleep Monitoring).