Xiaofeng Lin

665 Commonwealth Ave, Office 1442, Boston

(734)4509925 • ✉ xfl@bu.edu • 🌐 xiaofenglin7.github.io • ⭘ XiaofengLin7

Education

Boston University   **Boston, MA**
Ph.D. in Systems Engineering   *Aug 2023 – Dec 2027*

University of Michigan, Ann Arbor   **Ann Arbor, MI**
M.S. in Robotics   *Aug 2021 – May 2023*

Tianjin University   **Tianjin, China**
B.Eng. in Engineering Mechanics   *Sep 2016 – Jul 2020*

Publications

Xiaofeng Lin*, Hejian Sang*, Zhipeng Wang and Xuezhou Zhang. Debunk the myth of SFT Generalization. *Under Review*. [paper]

Xiaofeng Lin and Xuezhou Zhang. Efficient Reinforcement Learning in Probabilistic Reward Machines. In *The Thirty-Ninth AAAI Conference on Artificial Intelligence (AAAI)*, 2025. **Oral Presentation**. [paper]

Zian Ning, Yin Zhang, **Xiaofeng Lin** and Shiyu Zhao. A Real-to-Sim-to-Real Approach for Vision-Based Autonomous MAV-Catching-MAV. In *Unmanned Systems*, 2024. [paper]

Zirui Xu*, **Xiaofeng Lin*** and Vasileios Tzoumas. Leveraging Untrustworthy Commands for Multi-Robot Coordination in Unpredictable Environments: A Bandit Submodular Maximization Approach. In *American Control Conference (ACC)*, 2024. [paper]

Zirui Xu, **Xiaofeng Lin** and Vasileios Tzoumas. Bandit Submodular Maximization for Multi-Robot Coordination in Unpredictable and Partially Observable Environments. In *Robotics: Science and Systems (RSS)*, 2023. [paper]

Research Experience

Boston University   **Advisor: Prof. Xuezhou Zhang**
Debunk the myth of SFT Generalization   *May 2025 – Sept 2025*
○ Identified frozen-prompt artifacts as a key cause of weak generalization in SFT.
○ Showed that prompt diversity and chain-of-thought supervision enable SFT to generalize to unseen tasks and harder regimes.
○ Demonstrated that enhanced SFT can match or surpass RL baselines while remaining simpler and more stable.

Boston University   **Advisor: Prof. Xuezhou Zhang**
Efficient Reinforcement Learning in Probabilistic Reward Machines   *Jan 2024 – Aug 2024*
○ Developed the first efficient algorithm for reinforcement learning with Probabilistic Reward Machines.
○ Established new regret bounds that significantly improve over prior work on Deterministic Reward Machines.
○ Introduced a novel simulation lemma for non-Markovian rewards.

Honors & Awards

SE PhD Travel Award   Feb 2025
Distinguished Systems Engineering Fellowship   Sept 2023
Outstanding Graduate of Tianjin University (Top 10%)   May 2020
Merit Student of Tianjin University (Top 30%)   Oct 2018 / May 2020

Technical Skills

Programming: Python; C++; MATLAB; Java/Android; ROS; MAVLink

Deep Learning: PyTorch; HuggingFace Ecosystem

LLM Training: Verl; TRL (Hugging Face)