Xiaofeng Lin

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Availability: Feb–Dec 2026

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][code]

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][code]

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][code]

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][code]

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

BU Systems Engineering PhD Travel Award — Feb 2025

BU 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 and LLM-Training: PyTorch; HuggingFace Ecosystem; Verl; TRL; SFT; DPO