Muxing Wang

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Education

Northeastern University Sep 2023 – Present, Boston, MA, USA
PhD Candidate in Computer Engineering GPA: 4/4

University of Edinburgh Sep 2021 – Sep 2022, Edinburgh, UK
Master of Science in Statistics and Operational Research, with Distinction

University of Waterloo Sep 2015 – Jan 2020, Waterloo, Canada
Bachelor of Computer Science

Awards: Dean's Honors List (2018); Faculty of Mathematics Scholarship (2016–2017); Rank ∼100/14396 in Euclid Mathematics Contest (2015)

Publications

Accepted:

- **On the Convergence Rates of Federated Q-Learning across Heterogeneous Environments**
  Muxing Wang, Pengkun Yang, Lili Su
  *Transactions on Machine Learning Research (**TMLR**)*
  *Workshop version: International Workshop on Federated Foundation Models (**FL@FM**), **NeurIPS 2024***

- **On the Power of Source Screening for Learning Shared Feature Extractors**
  Muxing Wang, Connor Mclaughlin, Lili Su
  *International Conference on Machine Learning (**ICML**), Spotlight Presentation*

Under Review:

- **Collaborative Yet Personalized Policy Training: Single-Timescale Federated Actor-Critic**
  Muxing Wang, Pengkun Yang, Lili Su

- **Personalized Multi-Agent Average Reward TD-Learning via Joint Linear Approximation**
  Muxing Wang, Pengkun Yang, Lili Su

Academic Services

Reviewer: ICML ARLET Workshop 2024; ICML 2026.

Research Interests

Federated Reinforcement Learning; theoretical convergence guarantees for RL algorithms (e.g., Fed-Q-Learning and Fed-Actor-Critic Learning), especially under **heterogeneous environments**.

Projects

Predicting Basketball Games using Integrated Nested Laplace Approximation, Edinburgh May 2022 – Aug 2022
Built Bayesian Poisson and logistic models with Integrated Nested Laplace Approximation (INLA) to predict NBA playoff outcomes and scores. Random-effects models outperformed fixed-effects models; logistic models outperformed Poisson models. The best model achieved RPS = 0.2145.

Reinforcement Learning Coursework, Edinburgh Feb 2022 – Apr 2022
Implemented Value Iteration, DQN, REINFORCE, DDPG, and joint action learning.

Skills

Programming: Python, R, SQL; Scala, C++, MATLAB
Languages: Chinese (Native), English (IELTS 8.0)