LINGYUN XIAO

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EDUCATION

Ph.D., The University of Texas at Austin, Operations Research (GPA: 3.97) 2023 – Present

M.S., Univ. of Wisconsin-Madison, Industrial and Systems Engineering (GPA: 4.0) 2022 – 2023

M.A., University of Chicago, Economics (GPA: 3.71) 2020 – 2021

B.A. (Honors), UC Berkeley, Applied Mathematics and Economics (GPA: 3.92) 2016 – 2020

PREPRINTS

1. Rishabh Mediratta*, **Xiao, L.***, Stone, P., Biswas, J., and Stengel-Eskin, E. (2026). Decentralized multi-agent coordination and communication in shared codebases. *arXiv preprint arXiv:2611.00314*. *Equal contribution

PEER-REVIEWED CONFERENCE PROCEEDINGS

2. Wang, C., Fernandez, R., Mustafaoglu, Z. S., Kundan, M. S., Liu, J., Madhan, A., Wang, Z., **Xiao, L.**, Shi, D. Y., Cui, J., Rahman, A., and Stone, P. (2026). JaxAHT: A JAX-based library for ad hoc teamwork. In *ICLR 2026 Workshop on Multi-Agent Learning and Generative AI (MALGAI)*

1. Smith, C., Abdulhai, M., Diaz, M., Tesic, M., Trivedi, R. S., Vezhnevets, A. S., Hammond, L., . . . , **Xiao, L.**, . . . , Leibo, J. Z., and Concordia Contest Participants (2025). Evaluating generalization capabilities of LLM-based agents in mixed-motive scenarios using Concordia. In *Advances in Neural Information Processing Systems (NeurIPS)*. Datasets and Benchmarks Track

PEER-REVIEWED JOURNAL PUBLICATIONS

1. Zheng, Z., Zhang, J., **Xiao, L.**, Williams, W. R., Cheng, J.-R. C., and Liu, K. (2024). Online nonparametric process monitoring for IoT systems using edge computing. *IISE Transactions*, pages 1–15

ACCEPTED PEER-REVIEWED BOOK CHAPTERS

1. Naraghi, S. G., Kareck, T., **Xiao, L.**, Reed, R., Ramanan, P., and Jiang, Z. (2025). Decarbonization of steam cracking for clean olefins production: Microgrid planning and operation. In *Optimization of Sustainable Process Systems: Multiscale Models and Uncertainties*. John Wiley & Sons, Inc

PROJECTS AND RESEARCH EXPERIENCE

Agentic AI & Human Feedback for Adaptive Decision-Making Jan. 2025 – Present
Department of Computer Science, UT Austin *Prof. Peter Stone*

- Developed a novel language-conditioned autonomous agent architecture for Ad Hoc Teamwork (AHT) using JAX and PyTorch, enabling real-time within-episode policy adaptation to unseen teammates.
- Structured a robust retrieval-augmented persistent memory layout for LLM agents, translating real-time human interventions into generalized, structured coordination policies across recurring contexts.
- Built an end-to-end Multimodal VLM pipeline for autonomous driving (MetaDrive) that fuses high-dimensional vision observations with aligned human think-aloud transcripts, boosting target action accuracy by 20%.

Robocup@Home, Team Austin Villa Sep. 2024 – Present
Texas Robotics, UT Austin

- Won **Runner-Up** (2nd Place) globally at the RoboCup@Home International Competition.
- On Booster Humanoid Robot, developed robust multimodal perception and conversational interaction frameworks, integrating real-time Person Tracking with Speech-to-Text and Text-to-Speech models.

Revenue Management Pricing Operations Research PhD Intern May 2024 – Aug. 2024
American Airlines, Dallas-Fort Worth, TX

- Scaled a high-dimensional customer segmentation pricing model by processing and analyzing over 10 million large-scale behavioral records using SQL, Spark, and Azure AutoML on Databricks.

- Optimized multi-class classification accuracy for customer trip intent via supervised ML architectures.
- Designed a combined optimization pipeline utilizing dimensionality reduction, unsupervised learning, and custom decision rules, driving a projected 0.46% increase in quarterly revenue.

ACADEMIC SERVICE

Reviewer, AAAI Conference on Artificial Intelligence (AAAI) 2026

SKILLS AND TECHNICAL STACK

Computer Languages	Python, C++, R, SQL
Frameworks & Libraries	JAX, PyTorch, HuggingFace Transformers, Git, ROS, Docker, Spark
Core Methodologies	Reinforcement Learning, Mathematical Optimization, Agentic AI

AWARDS

Robocup@Home International Competition Salvador, Brazil
2025

Awarded **Second Place** globally out of elite international university robotics teams.

Cockrell School of Engineering Fellowship UT Austin
2023 – 2027

Four-year elite fellowship awarded to premier incoming Ph.D. students for exceptional academic and research milestones.

Chancellor's Opportunity Award UW-Madison
2022

University-wide merit honor recognizing outstanding graduate academic achievements.

Maroon Scholar Research Award University of Chicago
2020 – 2021

Highly competitive research selection granting a full tuition waiver for graduate investigations.

TEACHING AND MENTORING EXPERIENCE

Head Teaching Assistant, CS 394R: Reinforcement Learning, UT Austin (Rating: 4.5/5)	Fall 2024
Graduate Teaching Assistant, ME 335: Engineering Statistics, UT Austin (Rating: 4.6/5)	Spring 2024
Graduate Teaching Assistant, ME 335: Engineering Statistics, UT Austin (Rating: 4.7/5)	Fall 2023
Graduate Teaching Assistant, ECON 23950: Economic Policy Analysis, UChicago	Fall 2020
Undergraduate Instructor, Math 1A: Calculus, UC Berkeley	Summer 2018