Xijia "Polina" Zhang

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Education

Georgia Institute of Technology Aug. 2024 – May. 2029

Ph.D. in Robotics

University of Michigan Sep. 2022 – May. 2024

B.S.E in Computer Science

Shanghai Jiao Tong University Sep. 2020 – Aug. 2024

B.E in Electrical and Computer Engineering

Research Focus

Previous: Developing robotic systems that enhance human-robot collaboration, specifically focusing on natural language explanations.

Current: Algorithmically improve foundation models (LLMs, VLMs, and VLAs) for robotics settings.

Relevant Publications

"Model-Agnostic Policy Explanations with Large Language Models" ☑

Zhang Xi-Jia, Yue Guo, Shufei Chen, Simon Stepputtis, Matthew Gombolay, Katia Sycara, Joseph Campbell COLM 2025 (**top 5% of submissions**)

Propose a method for generating natural language explanations of agent behavior based only on observed states and actions, without access to the agent's underlying model.

"Learning Effective Action Advising in the Face of Changing Rewards"

Yue Guo, **Zhang Xi-Jia**, Simon Stepputtis, Joseph Campbell, Katia Sycara CoLLAs 2024 (**Oral**)

Enable the teacher policy to continually learn and adapt its reward function through ongoing observation of the student when providing action advices.

"Teaching the Teacher: Enhancing Human-to-Robot Skill Demonstration with Live Foundation Model and Augmented Reality Feedback"

Nina Moorman, Matthew Luebbers, **Zhang Xi-Jia**, Zulfiqar Zaidi, Marcus Lau, Yixing Yao, Megan Langwasser, Letian Chen, Sanne van Waveren, Matthew Gombolay (in submission)

- Support non-expert users in providing kinesthetic demonstrations through language explanations and policy visualizations.
- Contributions: Language explanations.

"Communication and Verification in LLM Agents towards Collaboration under Information Asymmetry Run Peng, Ziqiao Ma, Amy Pang, Sikai Li, **Zhang Xi-Jia**, Yingzhuo Yu, Cristian-Paul Bara, Joyce Chai (in submission)

- Investigate the performance of LLM agents in human-robot collaboration tasks under information asymmetry.
- Contributions: TIAGo robot development.

See full list of publications [link]

Skills

Toolchain ROS, ROS2, Linux, Docker, Huggingface, RLlib Frameworks & Libraries Gym, NLTK, Transformers, Pytorch, Scikit-Learn Robotics Development TIAGo, Jaco Arm, Khepera, Fetch; RViz, Gazebo

Honors & Awards

Sep. 2024	Robotics Fellowship	Georgia Institute of Technology
Mar. 2024	James B. Angell Scholar	University of Michigan
Apr. 2024	Elected Member	Tau Beta Pi, Michigan Gamma
Dec. 2023	Dean's List	University of Michigan
Apr. 2023	Dean's List	University of Michigan
Dec. 2022	Dean's List	University of Michigan
May. 2023	Chun-Tsung Scholar	Shanghai Jiao Tong University
Oct. 2021	Rongchang Innovation Scholarship Nomination	Shanghai Jiao Tong University
Nov. 2021	Silver Medal	The University Physics Contest