Wo Wei Lin

Malden, Massachusetts
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Profile

PhD student researching Robotics and AI with a focus on multi-agent and multi-robot learning for human-robot collaboration. Experienced in designing and implementing advanced reinforcement learning algorithms in both simulated and real-world environments. Passionate about translating complex AI research into engaging demos and user-centered applications. Eager to contribute technical and creative skills, including web development and API integration, to innovative AI projects.

EDUCATION

Northeastern University | Ph.D Computer Science: AI and Robotics — May 2028
Northeastern University | M.S Computer Science: AI — Dec 2025
Tufts University | *B.S* Computer Engineering — May 2023

WORK EXPERIENCE

Northeastern University: Multimodal Learning, Interaction and Perception Lab
Boston, MA
Research Assistant — August 2023 - *Present*

- Investigated multi-agent algorithms to enable coordinated robotic systems for complex real-world tasks, demonstrating an aptitude for integrating advanced AI methodologies to the real world.
- Explored the intersection of cybersecurity, reinforcement learning, and robotics by designing simulation environments and code for evaluating poisoning attacks on agents, showcasing creative problem-solving skills.
- Assisted in delivering the Reinforcement Learning course by clarifying complex AI concepts and facilitating hands-on homework and project sessions, highlighting strong communication and instructional abilities.

Tufts University: Multimodal Learning, Interaction and Perception Lab
Medford, MA
Research Assistant — August 2019 - *May 2023*

- Research in multi-agent algorithms that will allow robots to work in coordination to solve complex real-world tasks
- Developed models and simulations for different environments in Gazebo and Pybullet for reinforcement learning research in curriculum learning, creative problem-solving, and knowledge transfer learning
- Conducted experiments with robots in simulation and the real-world to show efficiency of various reinforcement learning algorithms ensuring rigorous validation of AI techniques
- Researched *Lifelong Creative Problem Solving* on the Baxter and Universal Robotics Arm in simulation and real life to discover new actions for solving problems in novel scenarios

NASA: Goddard Space Flight Center (OSTEM)
Greenbelt, MD
Research Intern — June 2022 - August 2022

- Designed and implemented a working proof of concept towards the challenge of collecting scientific data in autonomous space exploration individually
- Developed an environment that will allow spacecraft to utilize deep reinforcement learning algorithms to maintain themselves autonomously in various scenarios while in space
- Achieved results where the spacecraft is able to make its own sequence of decisions to collect science objectives
- Presented results to branch head and other NASA employees

SKILLS and TECHNICAL

Language(s): **Fluent:** English, Taishanese **Intermediate:** Cantonese **Elementary:** Spanish
Skills*:* Python, Linux, ROS, GIT, VHDL, PyTorch, LLM, Deep Learning, Artificial Intelligence, Machine Learning, Reinforcement Learning

TECHNICAL PROJECTS

Human Robot Interaction Class Project — December 2024

- Started a project exploring the intersection between human robot interaction (HRI) and multi-agent reinforcement learning
- Developed a novel algorithm on multi-agent partially observable inverse reinforcement learning to teach robot teamwork and interpersonal skills using human expert data

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Publication and Works

- E. Gizzi, A. Hassan, W. W. Lin, K. Rhea and J. Sinapov, "Toward Creative Problem Solving Agents: Action Discovery through Behavior Babbling," 2021 IEEE International Conference on Development and Learning (ICDL), 2021, pp. 1-7, doi: 10.1109/ICDL49984.2021.9515658.
- Gizzi, E., Castro, M. G., Lin, W. W., & Sinapov, J. A Framework for Creative Problem Solving Through Action Discovery 2021.
- E. Gizzi, W. W. Lin, M. G. Castro, E. Harvey, J. Sinapov, “Toward Life-Long Creative Problem Solving: Using World Models for Increased Performance in Novelty Resolution” 2022 ICCC.