Zhanhui Lin

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Education

The Chinese University of Hong Kong, Shenzhen, *M.Sc. in AI and Robotics* 2024.09 – Present

Xi'an Jiaotong University, *B.Eng. in Computer Science and Technology* 2019.09 – 2023.06

Research Experience

Cognitive Robotics and AI Lab, Kent State University, *Advised by Rui Liu* 2023.05 – 2024.05

- Investigated trust transfer mechanisms in human-swarm interaction, developing a method to predict human-to-swarm trust utilizing inherent swarm features.
- Implemented a distributed swarm control system with formation maintenance and obstacle avoidance in a custom-built 3D AirSim environment. [Code]

Institute of AI and Robotics, Xi'an Jiaotong University, *Advised by Sanping Zhou* 2021.11 – 2022.07

- **Publication:** Zhanhui Lin, Yanlin Liu, Sanping Zhou. *Robust Self-Training with Closed-loop Label Correction for Learning from Noisy Labels.* [PDF]
- Proposed a scalable paradigm for purifying large-scale noisy data using a small set of clean data, achieving state-of-the-art performance on benchmark datasets while consuming less computational resources than existing methods.

Institute for AI Industry Research, Tsinghua University, *Research Intern* 2021.07 – 2021.09

- Reproduced and analyzed the *MELD* framework, focusing on latent variable optimization in POMDP models for Multi-task and Meta-Reinforcement Learning.
- Developed control programs for CR-5 and UR-5 robotic arms to support advanced research applications.

Industry Experience

Magiclab (Dreame), *Motion Control (Reinforcement Learning) Intern* 2025.02 – 2025.07

- Developed visionless quadruped locomotion policy. Achieved key obstacle traversal capabilities: navigated 18cm steps, climbed 30cm platforms, and maintained high stability during continuous descent. Validated the policy's effectiveness in real-world scenarios, demonstrating successful Sim2Real transfer.
- Designed and implemented a flexible C++ deployment framework and a high-fidelity MuJoCo Sim2Sim environment to streamline validation and deployment.

Exponential Deep Space Industries, Beijing, *Research Intern* 2023.08 – 2024.03

- Developed a scalable imitation learning pipeline for real-world robot arm manipulation, enabling efficient data collection and inference. Integrated LLM-Guided Function calls to enhance robot task execution and data acquisition.

Meituan, Beijing, *System Development Intern* 2022.07 – 2022.10

- Developed and maintained a cost management system for B2B services, implementing a back-end framework for timed task scheduling to improve automation.

Competitions & Projects

Robomaster Competition, *Champion of Northwest China Region* 2022.11 – 2023.06

- Developed a high-performance 3D SLAM solution, significantly improving its localization and strategic capabilities in dynamic environments. [Code]

National Robotics Competition, *First Prize & Third Prize* 2022.01 – 2022.06

- Integrated computer vision, speech recognition, navigation, and manipulation modules to achieve functionalities like locating and delivering goods in supermarket scenarios and performing automated waste sorting.

Selected Projects,

- **MIT 6.824: Distributed Systems:** Implemented the Raft consensus protocol to build a fault-tolerant, sharded key-value database service; **CMU 15-445: Database Systems:** Engineered core database components, including a buffer pool manager, an extendable hash index, and a query execution engine.

Technical Skills

- **Domains:** Robotics, Control Theory, SLAM, Machine Learning (semi-supervised, meta, ...), Reinforcement Learning
- **Languages & Tools:** C++ (STL, Eigen), Python (Jax, PyTorch), Go, ROS, Linux, Git, Docker
- **Emerging Areas:** Familiar with the latest advances in Embodied AI, such as VLA, humanoid whole-body control, etc.

› More details can be found on my homepage: radiance-nt.github.io