

Ma Yixiao

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SUMMARY

I am interested in positions related to AI, robotics, and software engineering. I have experience with several projects and research in the fields of deep learning and robotics.

WORK EXPERIENCE

Teaching Assistant

Jan 2024 - present

Teaching Assistant for ME5406 Deep Learning for Robotics at NUS, assisting in student queries, project proposal evaluations, and grading.

Research Assistant

May 2023 - present

Part-time Research Assistant at [MARMoT Lab](#), specializing in multi-agent systems, with duties including algorithms coding, simulation on ROS, and real-world testing.

PROJECTS

- A framework for distributed multi-agent exploration task that utilizes deep reinforcement learning and accelerates training with multi-threaded technology.
- A web application for diagnosing X-ray chest images, utilizing deep learning for image classification and Bayesian networks to analyse symptom.
- An iOS lightweight social app based on collaborative filtering recommendation algorithms.

EDUCATION

2023 - present	MComp - Computer Science at National University of Singapore	-
2018 - 2022	B.Sc. (Hons) - Computer Science at The University of Liverpool	(First Class)

PUBLICATIONS

- [1] Jingsong Liang, Yuhong Cao, Yixiao Ma, Hanqi Zhao, and Guillaume Sartoretti. "HDPlanner: Hierarchical Decision Network for Autonomous Deployments in Unknown Territories". In: *IEEE Robotics and Automation Letters* (2024).
- [2] Yixiao Ma, Jingsong Liang, Yuhong Cao, Derek Tan, and Guillaume Sartoretti. "Privileged Reinforcement and Communication Learning for Distributed, Bandwidth-limited Multi-Robot Exploration". In: *International Symposium on Distributed Autonomous Robotic Systems*. Springer. 2024. URL: <https://arxiv.org/abs/2407.20203>.
- [3] Derek Tan, Yixiao Ma, Jingsong Liang, Chng Yi Cheng, Yuhong Cao, and Guillaume Sartoretti. "IR²: Implicit Rendezvous for Robotic Exploration Teams under Sparse Intermittent Connectivity". In: *2024 IEEE/RSJ International Conference on Intelligent Robots and Systems*. IEEE. 2024.

SKILLS

Program Language	Python, C++, Java, Javascript, C, swift
Framework & OS	Pytorch, ROS, Linux, Ubuntu etc.

Last updated: July 30, 2024