Siyi Hu *Ph.D. Candidate*

Contact Information

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Education

Ph.D. in Artificial Intelligence	University of Technology Sydney Advisor: Prof. Xiaojun Chang	2022 - Present
Ph.D. in Artificial Intelligence	Monash University Advisor: Prof. Xiaojun Chang	2021 - 2022
M.Sc. in Electronic Engineering	Fudan University	2017 - 2020
B.Sc. in Communication Engineering	Fudan University	2013 - 2017

Research Interest

My research focuses on advancing the field of Multi-agent Reinforcement Learning (MARL) with an emphasis on scalability, efficiency, and applications in cooperative artificial intelligence. I am particularly interested in developing novel algorithms and libraries, driven to address challenges in heterogeneous-agent learning problems. My goal is to contribute to the broader landscape of reinforcement learning methodologies.

Publications

[1] *MARLlib: A Scalable and Efficient Multi-agent Reinforcement Learning Library*, **JMLR**, 2023.

Siyi Hu, Yifan Zhong, Minquan Gao, Weixun Wang, Hao Dong, Xiaodan Liang, Zhihui Li, Xiaojun Chang, Yaodong Yang

GitHub: Replicable-MARL/MARLlib (627 + ⋆)

[2] *ProAgent: Building Proactive Cooperative AI with Large Language Models*, **arXiv preprint**, 2023.

Ceyao Zhang*, Kaijie Yang*, **Siyi Hu***, et al.

Project Page: pku-proagent.github.io

[3] *Maximum Entropy Heterogeneous-Agent Mirror Learning*, **arXiv preprint**, 2023.

Jiarong Liu, Yifan Zhong, **Siyi Hu**, Haobo Fu, Qiang Fu, Xiaojun Chang, Yaodong Yang,

[4] *Heterogeneous-Agent Reinforcement Learning*, **arXiv preprint**, 2023.

Yifan Zhong, Jakub Grudzien Kuba, **Siyi Hu**, Jiaming Ji, Yaodong Yang

GitHub: PKU-MARL/HARL (207 + ⋆)

[5] *Policy Diagnosis via Measuring Role Diversity in Cooperative Multi-agent RL*, **ICML**, 2022.

Siyi Hu, Chuanlong Xie, Xiaodan Liang, Xiaojun Chang

[6] *UPDeT: Universal Multi-agent RL via Policy Decoupling with Transformers*, **ICLR**, 2021.

Siyi Hu, Fengda Zhu, Xiaojun Chang, Xiaodan Liang

GitHub: Theohhhu/UPDeT (115 + ⋆)

Presentations

1. "UPDeT: Universal Multi-agent RL via Policy Decoupling with Transformers," *ICLR Spotlight*, 2021.
2. "MARLlib: A Scalable and Efficient Multi-agent Reinforcement Learning Library," *Jiang Men Talk*, 2022.

Awards and Honors

Graduated with Honors Fudan University, 2017
First-class Scholarship for Outstanding Student Fudan University, 2015