

# Sixu Lin

Ph.D. Candidate in Computer Science, School of Data Science  
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## EDUCATION

### Harbin Institute of Technology, Shenzhen, China (09/2021 - 07/2025)

- **B. Eng.** in Automation (Rank 5/256, Top 2%) 2021-2025  
At the School of Electrical Engineering and Automation

### The Chinese University of Hong Kong, Shenzhen, China (09/2024 - 02/2025)

- **Research Assistant** in Computer Science 2024-2025  
Advisor: Assistant Professor, Guiliang Liu

### Oxford University, England (07/2023 - 09/2023)

- **Visiting Student** in Computer Science 2023

### Westlake University, China (07/2024 - 09/2024)

- **Visiting Student** in Computer Science 2024

## RESEARCH INTERESTS

Reinforcement Learning, Imitation Learning, Robotics

## RESEARCH EXPERIENCE

### Long-Horizon Manipulation in Embodied AI

06/2025-Present

Remote Research, Hong Kong PolyU

Faculty mentor: Professor, Lap-Pui Chau (IEEE Fellow)

Affiliation: JC STEM Lab of Machine Learning and Computer Vision of PolyU

*Description: We research on long-horizon manipulation tasks in robotics using world models, complex reasoning, and dual systems.*

### Group-based Reinforcement Learning for Vision-Language Action Model

05/2025-09/2025

Research Intern, Shanghai AI Lab

Faculty mentor: Dr. Ming Zhou

Co-supervisor: Dr. Jiangmiao Pang

*Description: We introduce a group-based reinforcement learning framework that addresses the challenges of scalability and effectiveness in multi-task post-training for VLA models.*

### Hierarchical Reinforcement Learning for Robust Humanoid Locomotion

10/2024-03/2025

Research Assistant, CUHKSZ

Faculty mentor: Assistant Professor, Guiliang Liu

Co-supervisor: Professor, Kui Jia

*Description: We introduce a hierarchical humanoid control algorithm designed to dynamically balance the trade-off between optimizing locomotion performance and ensuring safety across diverse deployment environments.*

### Human-to-Humanoid Sign Language Interaction

10/2024-05/2025

Research Assistant, CUHKSZ

Faculty mentor: Assistant Professor, Guiliang Liu

Co-supervisor: Professor, Kui Jia

*Description: We develop a robot capable of sign-language interaction with humans, built on RL-based whole-body control and a vision-based perception pipeline.*

### Multi-Agent Reinforcement Learning for Quadruped Locomotion

02/2024-07/2024

Undergraduate Researcher, HITSZ

Faculty mentor: Professor, Yanjie Li

*Description: We present a multi-agent reinforcement learning approach for single-robot quadruped locomotion that achieves efficient multi-gait acquisition while enhancing limb robustness.*

## Credit Assignment of Multi-Agent Reinforcement Learning

10/2023-02/2024

Undergraduate Researcher, HITSZ

Faculty mentor: Professor, Yanjie Li

**Description:** Aim to address the "lazy agent" problem in MARL. Propose a credit assignment method that redistributes the team reward based on each agent's contribution, improving the overall performance of the team.

## INTERNSHIP EXPERIENCE

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Shanghai AI Laboratory, Shanghai, China

03/2025-09/2025

Research Intern, Vision-Language Action Model, Reinforcement Fine-tuning. Mentor: Ming Zhou

## PUBLICATION

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### Under Review

- [1] S. Lin, G. Qiao, Y. Tai, A. Li, K. Jia, G. Liu, "[HWC-Loco: A Hierarchical Whole-Body Control Approach to Robust Humanoid Locomotion](#)", under review.
- [2] H. Zhao\*, S. Lin\*, Q. Ben, M. Dai, H. Fei, J. Wang, H. Zou, J. Dong, "[SMAP: Self-supervised Motion Adaptation for Physically Plausible Humanoid Whole-body Control](#)", under review.
- [3] G. Qiao, S. Lin, R. Zuo, Z. Wu, K. Jia, G. Liu, "[SignBot: Learning Human-to-Humanoid Sign Language Interaction](#)", under review.
- [4] Y. Qing, S. Chen, Y. Chi, S. Liu, S. Lin, K. Yao, C. Zou, "[BiTrajDiff: Bidirectional Trajectory Generation with Diffusion Models for Offline Reinforcement Learning](#)", under review.

### Technical Report

- [1] S. Zhai, Q. Zhang, T. Zhang, F. Huang, H. Zhang, M. Zhou, S. Zhang, L. Liu, S. Lin, J. Pang, "[A Vision-Language-Action-Critic Model for Robotic Real-World Reinforcement Learning](#)", Technical Report, 2025.

### Conference Proceedings

- [2] Q. Liu, J. Guo, S. Lin, S. Ma, J. Zhu, Y. Li, "[MASQ: Multi-Agent Reinforcement Learning for Single Quadruped Robot Locomotion](#)", In *NewInML workshop, International Conference on Machine Learning (ICML)*, 2025.
- [3] S. Lin, "[Enhanced Adaptive DWA based on Fuzzy Control and Improved A\\* Algorithm](#)", In *3rd World Conference on Intelligent and 3D Technologies (WC3DT)*, 2024.

## PROFESSIONAL SERVICE

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### Conference Reviewer

- IEEE International Conference on Robotics and Automation (ICRA 2025)

## AWARDS & HONORS

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| ○ National Scholarship (top 0.2% of students at Chinese universities)                             | 2023-2024 |
| ○ Yongping Duan Scholarship (15000 RMB per month)   | 2025-2029 |
| ○ The 18 <sup>th</sup> National University Students Intelligence Car Race (National Second Prize) | 2023-2024 |
| ○ First Class Scholarship for Undergraduate Students (top 5%, 2 times, total 12000 RMB)           | 2022-2024 |
| ○ Second Class Scholarship for Undergraduate Students (4000 RMB)                                  | 2021-2022 |
| ○ Outstanding League Member (2 times)   | 2021-2023 |
| ○ Outstanding Student (2 times)   | 2021-2023 |