

Yunrui LIAN

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🐙 [GitHub](#)

[Personal Website](#) [Google Scholar](#)

Research Interests: Robot learning, 3D vision, and whole-body humanoid control.

Education

IIIS, Tsinghua University

Sep 2025 - Present

Master of Science in Computer Science

Beijing, China

Fudan University

Sep 2020 - Jun 2025

Bachelor of Science in Information Security

Shanghai, China

Research Experience

IIIS, Tsinghua University (Advisor: Prof. Li Yi)

Apr 2025 - Present

M.S. Student

Tsinghua University, China

- Develop algorithms that enable robots to learn complex, dynamic, and natural human skills, and to generalize them across diverse tasks and environments.
- Pursue to help build the next-generation general-purpose humanoid robot perception-decision-action system.

Industry Experiences

GALBOT

Apr 2025 - Present

Research Intern

Beijing, China

- General humanoid whole-body control.
- Full-stack robot development.

Selected Research Publications

Learning Athletic Humanoid Tennis Skills from Imperfect Human Motion Data

IROIS 2026

Z. Zhang*, H. Lu*, **Y. Lian***, Z. Chen, Y. Liu, C. Lin, H. Xue, Z. Zeng, Z. Qi, S. Zheng, Q.

Project | Code

Luan, J. Wang, J. Xing, H. Wang, L. Yi

- Co-developed LATENT as an equal contributor. Constructed a latent action space from imperfect human motion data to learn athletic humanoid tennis skills, enabling the Unitree G1 robot to sustain multi-shot rallies with human players.

Humanoid-GPT: Scaling Data and Structure for Zero-Shot Motion Tracking

CVPR 2026

Z. Qi*, X. Chen*, D. Liu*, C. Lin*, **Y. Lian**, S. Liang, Z. Zhang, Y. Guan, J. Wang, W. Zhang,

Project | Code

X. Yu, H. Wang, L. Yi

- Contributed to a GPT-style Transformer trained on a billion-scale motion corpus for whole-body control, achieving zero-shot generalization to unseen motions and control tasks.

Collision-Free Humanoid Traversal in Cluttered Indoor Scenes

RA-L 2026, ICRA 2027

H. Xue*, S. Liang*, Z. Zhang*, Z. Zeng, Y. Liu, **Y. Lian**, J. Wang, Q. Liu, X. Shi, L. Yi

Project | Code

- Contributed to a system that enabled collision-free humanoid traversal in cluttered indoor scenes with Humanoid Potential Field (HumanoidPF), a general guidance for learning obstacle avoidance skills.

Track Any Motions under Any Disturbances

ICRA 2026

Z. Zhang*, J. Guo*, C. Chen, J. Wang, C. Lin, **Y. Lian**, H. Xue, Z. Wang, M. Liu, J. Lyu, H.

Project | Code

Liu, H. Wang, L. Yi

- Contributed to a two-stage RL framework to track multiple highly dynamic, contact-rich motions (over 40 hours in total) under terrain, external-force, and payload disturbances by introducing a dynamics world model for policy fine-tuning.

* Equal contribution.

Selected Awards & Achievements

National Scholarship (Top 0.2%)

2022

Conferred by the Ministry of Education of the People's Republic of China

First Prize, Scholarship for Hong Kong, Macao, and Overseas Chinese Students (Top 5%)

2023

Conferred by Fudan University

Second Prize (Provincial), China Undergraduate Mathematical Contest in Modeling (CUMCM)

2022

Conferred by the China Society for Industrial and Applied Mathematics

Outstanding Graduate

2025

Conferred by Fudan University