

HONGLIANG LU

leonsny2017@gmail.com · leon_lhl@sjtu.edu.cn · GitHub @Lukebird17

EDUCATION

Shanghai Jiao Tong University, *B.Eng. in Artificial Intelligence*

Sep. 2023 – Jun. 2027

Core GPA: **4.15/4.3** | Ranking: **1/100**

TOEFL: **113** (R: 30, L: 30, S: 24, W: 29) | GRE: **330** (V: 160, Q: 170, AW: 3.5)

PUBLICATIONS

The Great March 100: A Large-scale Detail-Oriented Benchmark for Embodied AI

Ziyu Wang, Chenyuan Liu, Yushun Xiang, Runhao Zhang, Yu Zhang, Qingbo Hao, **Hongliang Lu**, Houyu Chen, Zhizhong Feng, Kaiyue Zheng, Dehao Ye, Xianchao Zeng, Xinyu Zhou, Boran Wen, Jiaxin Li, Mingyu Zhang, Kecheng Zheng, Qian Zhu, Ran Cheng, Yong-Lu Li
Under Review at RSS 2026

Q-DiT4SR: Detail-Preserving Quantization for Diffusion Transformer in Image Super-Resolution

Xun Zhang, Kaicheng Yang, **Hongliang Lu**, Haotong Qin, Yong Guo, Yulun Zhang
Under Review at ICML 2026

RESEARCH EXPERIENCE

SJTU MVIG-RHOS Lab | Advisor: Prof. Yonglu Li & Cewu Lu

Sep. 2024 – Present

Robotic Learning from Human Priors and Reinforcement (Core Contributor)

Sep. 2024 – Sep. 2025

- Led real-robot RL on Flexiv using HILSERL with Koch arm and VR teleoperation modes.
- Trained policies for USB insertion and bottle-cap manipulation; explored VLA+RL architectures.
- Deployed Pi0, Diffusion Policy, and ACT to real robots via OpenPI and LeRobot frameworks.

GM-100: Detail-Oriented Tasks for Evaluating Embodied AI (Contributor)

Sep. 2025 – Feb. 2026

- Developed a 100-task benchmark for evaluating embodied AI across 5 dimensions: meticulous manipulation, long-horizon coordination, semantic understanding, spatial reasoning, and environmental robustness.
- Benchmarked Diffusion Policy and $\pi_{0.5}$, identifying critical gaps in fine-grained control and multi-stage reasoning.

SJTU | Advisor: Prof. Yulun Zhang

Nov. 2025 – Present

Q-DiT4SR: Detail-Preserving PTQ for DiT in Real-World Image SR (Third Author)

Dec. 2025 – Jan. 2026

- First post-training quantization framework for DiT-based Real-World Image SR at W4A4, achieving 5.8x compression and 60x+ FLOPs reduction.
- Developed Hierarchical SVD (H-SVD) in Hadamard domain with dual Global Low-Rank and Local Block-wise branches to preserve high-frequency textures lost in standard SVD quantization.
- Engineered Variance-Aware Spatio-Temporal Mixed Precision (VaSTMP): data-free spatial bit-allocation using weight variance and Dynamic Programming-based temporal precision scheduler across diffusion timesteps.

HONORS & AWARDS

- **SJTU A-Level Academic Excellence Scholarship (Top 1%)**

Dec. 2024, Dec. 2025

- **Meritorious Winner**, COMAP Mathematical Contest in Modeling (MCM/ICM)

May 2024

- **Second Prize**, Chinese Mathematics Competitions (CMC)

Dec. 2024

SKILLS

- **Programming:** Python, C++; Linux, Docker, Git
- **ML & Robotics:** PyTorch | OpenPI, LeRobot frameworks | ROS | Flexiv, Aloha, Xtrainer arms | IsaacSim, Mujoco