

YULIN LUO

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👤 RESEARCH PROFILE

I am a Ph.D. candidate in the School of Computer Science at Peking University, advised by Prof. Shanghang Zhang. My research focuses on open-world generalization for embodied intelligence, with emphasis on generalizable embodied foundation models, goal-aligned robot benchmarks, and evaluation-driven model-data co-evolution.

🎓 EDUCATION

Peking University

Sep. 2023 – Present

- Ph.D. Candidate in Computer Science, School of Computer Science.
- Advisor: Prof. Shanghang Zhang.

Shanghai Jiao Tong University

Sep. 2019 – Jun. 2023

- B.Eng. in Automation, School of Electronic Information and Electrical Engineering.
- GPA: 3.87/4.30; Major rank: 2/89.

🔬 RESEARCH INTERESTS

- **Model:** designing architectures and learning algorithms for embodied foundation models that generalize across objects, skills, embodiments, scenes, and tasks.
- **Evaluation:** building goal-aligned robot benchmarks that diagnose model capabilities under realistic open-world conditions.
- **Model-Data Co-evolution:** turning diagnosed gaps into model and data redesign, then using improved systems to define the next evaluation cycle.

📄 SELECTED PUBLICATIONS

1. Look Before Acting: Enhancing Vision Foundation Representations for Vision-Language-Action Models
Yulin Luo^{*}, Hao Chen^{*,†}, Zhuangzhe Wu^{*}, Bowen Sui^{*}, Jiaming Liu^{*,†}, et al. *ACM MM'26 (CCF-A)*
2. RoboBench: A Comprehensive Evaluation Benchmark for Multimodal Large Language Models as Embodied Brain
Yulin Luo^{*}, Chun-Kai Fan^{*}, Menghang Dong^{*}, Jiayu Shi^{*}, Xiangju Mi^{*}, Mengdi Zhao^{*,†}, Bo-Wen Zhang^{*}, Cheng Chi^{*,†}, et al. *ECCV'26 (CCF-B)*
3. LLM as Dataset Analyst: Subpopulation Structure Discovery with Large Language Model
Yulin Luo^{*}, Ruichuan An^{*}, Bocheng Zou, Yiming Tang, Jiaming Liu, and Shanghang Zhang. *ECCV'24 (CCF-B)*
4. Decomposing the Neurons: Activation Sparsity via Mixture of Experts for Continual Test-Time Adaptation
Rongyu Zhang^{*}, Aosong Cheng^{*}, **Yulin Luo**^{*}, Gaole Dai, Huanrui Yang, et al. *AAAI'26 Oral (CCF-A)*
5. RandStainNA: Learning Stain-Agnostic Features from Histology Slides by Bridging Stain Augmentation and Normalization
Yiqing Shen^{*}, **Yulin Luo**^{*}, Dinggang Shen, and Jing Ke. *MICCAI'22 (CCF-B)*
6. Efficient Deweather Mixture-of-Experts with Uncertainty-Aware Feature-Wise Linear Modulation
Rongyu Zhang, **Yulin Luo**, Jiaming Liu, Huanrui Yang, et al. *AAAI'24 (CCF-A)*
7. RoboMIND: Benchmark on Multi-Embodiment Intelligence Normative Data for Robot Manipulation
Kun Wu, Chengkai Hou, Jiaming Liu, et al., **Yulin Luo**, et al. *RSS'25 (CCF-B)*
8. SEEA-R1: Tree-Structured Reinforcement Fine-Tuning for Self-Evolving Embodied Agents
Wanxin Tian, Shijie Zhang, Kevin Zhang, Xiaowei Chi, Chun-Kai Fan, Junyu Lu, **Yulin Luo**, et al. *NeurIPS'25 (CCF-A)*
9. Draw-and-Understand: Leveraging Visual Prompts to Enable MLLMs to Comprehend What You Want
Weifeng Lin, Xinyu Wei, Ruichuan An, Peng Gao, Bocheng Zou, **Yulin Luo**, et al. *ICLR'25 (CCF-A)*

* Equal contribution. † Project lead.

RESEARCH INTERNSHIPS

Simplexity Robotics, Research Intern Dec. 2025 – Present

- Research on embodied intelligence and generalizable robot foundation models.

Beijing Academy of Artificial Intelligence (BAAI), Research Intern Aug. 2024 – Oct. 2025

- Research on embodied-brain benchmarks for multimodal large language models and robot intelligence.

ByteDance, Research Intern Mar. 2024 – Aug. 2024

- Trust & Safety Applied Algorithm Team for Ads and E-commerce.

HONORS AND AWARDS

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|---|------------------|
| • Shanghai Jiao Tong University Outstanding Graduate | Jun. 2023 |
| • Weichai Power Scholarship | Oct. 2022 |
| • Huawei Scholarship | Dec. 2021 |
| • Shanghai Jiao Tong University B-Class Merit Scholarship | 2020, 2021, 2022 |

ACADEMIC SERVICE

- Reviewer for AAAI 2026, ICLR 2026, CVPR 2026, ECCV 2026, and NeurIPS 2026 Datasets & Benchmarks.