Hai Zhang

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Education

TONGJI UNIVERSITY, SHANGHAI, CHINA 2022.09 – 2025.03 (expected)

MASTER, COMPUTER SCIENCE AND TECHNOLOGY
with GPA of 85.19/100

TONGJI UNIVERSITY, SHANGHAI, CHINA 2018.09 – 2022.06

BACHELOR, COMPUTER SCIENCE AND TECHNOLOGY
with GPA of 4.76/5.0, general ranking of 8/155, top 5.16%

Skills and Awards

- Graduate National Scholarship (top 0.2%) 2023.09 – 2024.08
- Tongji University Distinguished Student Honor (top 5%) 2023.09 – 2024.08
- TOEFL 2024.03
- Outstanding Undergraduate Thesis 2022.06
- Scholarship for outstanding students for three consecutive years 2018.09 – 2021.08

Selected Papers

** means co-first author*

- **Scrutinize What We Ignore: Reining In Task Representation Shift In Context-Based Offline Meta Reinforcement Learning.** **Zhang. H**, Zheng. B, Ji. T, Liu. J, Guo. A, Zhao. J, Li. L. *Under review in International Conference on Learning Representations (ICLR) 2025*
- **How to Fine-tune the Model: Unified Model Shift and Model Bias Policy Optimization.** **Zhang. H**, Yu. H, Zhao. J, Zhang. D, Huang. C, Zhou. H, Zhang. X, Ye. C. *In Advances in Neural Information Processing Systems (NeurIPS) 2023*
- **Towards an Information Theoretic Framework of Context-Based Offline Meta-Reinforcement Learning.** Li. L* (supervisor), **Zhang. H***, Zhang. X, Zhu. S, Yu. Y, Zhao. J, and Heng. P. *In Advances in Neural Information Processing Systems (NeurIPS) 2024* ***Spotlight(top 2%)***
- **Safe Reinforcement Learning with Dead-Ends Avoidance and Recovery.** Zhang. X, **Zhang. H**, Zhou. H, Huang. C, Zhang. D, Ye. C, Zhao. J. *In IEEE Robotics and Automation Letters (RA-L) 2023 (**Oral** in International Conference on Robotics and Automation (ICRA) 2024)*
- **Focus On What Matters: Separated Models For Visual-Based RL Generalization.** Zhang. D, Lv. B, **Zhang. H**, Yang. F, Zhou. H, Huang. C, Yu. H, Ye. C, Zhao. J, Jiang. C. *In Advances in Neural Information Processing Systems (NeurIPS) 2024*

Research experience

QIZHI INSTITUTE SHANGHAI, CHINA 2024.06 – up to now

RESEARCH INTERN supervised by Prof. Yang Gao

Explore the generalization ability towards robotic manipulation via VLA architecture.

ZHEJIANG LAB HANGZHOU, ZHEJIANG, CHINA 2023.07 – 2024.05

RESEARCH INTERN supervised by Prof. Lanqing Li & Prof. Pheng-Ann Heng

Explore the generalization ability towards offline meta-reinforcement learning with the model-based techniques.

Projects

OpenVLA-PLUS. 2024.06 – up to now

- Role: Substitute the backbone of OpenVLA from Llama2 7B to a small model with only 0.2B parameters to achieve computational and communication reduction. (FSDP → DDP)
- Performance improvement on LIBERO-Long benchmark is 53.7% -> 75.6% with only 1.5 hours training on 8 × A800 GPUs.

Distributed Complete Vehicle Cloudization 2022.05 – 2023.01

- Invention Patent (Submitted, Patent Number: 202310899331.2)
- National Key R&D Program
- Role: Use the distributed framework to achieve cloud-based transmission of vehicle information.

NIO, SHANGHAI, CHINA 2021.10 – 2022.03

- Intern for Backend Development Engineer
- Role: Use MongoDB and Redis database, Kafka consumer group to solve distributed events.

Unknown Environment Exploration and Application Device Based on Deep Reinforcement Learning 2020.05 – 2021.03

- Innovation and Entrepreneurship Program for SHANGHAI University Students.
- Role: Use representation learning combined with RL to achieve end-to-end vehicle driving on CARLA.

Competitions

RLChina Intelligent Agent Challenge Nonin Spring Season Curling Challenge

- Second Place in finals, Sixth Place in total scores
- Role: Optimize PPO and rule-based agent to complete curling strikes in a POMDP environment

WAIC: Meta-verse Lights Up Autonomous Driving, AI Simulation Driving Competition

- Second Place (Unique), won 40 thousand RMB
- Role: Process the perceptual information and Design the code of the decision state machine

Intel Cup National College Students Embedded System Invitational Competition

- National Second Prize
- Role: Design the overall architecture and complete the full-view image stitching

Professional Service

- Reviewer: International Conference on Learning Representations (ICLR) 2025