Hai Zhang

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ⓘ Personal Statement

A dedicated, practicing, and capable researcher in reinforcement learning (RL), specifically in model-based RL (MBRL), offline RL and context-based meta RL, with more than 100 well-read papers in related fields. A confident and cohesive member in collaborative work, brilliant at communication and organization. A pragmatic and skillful back-end development engineer before diving into RL, with the mastering of C++, PYTHON, Golang, and some common techniques.

🎓 Education

TONGJI UNIVERSITY, SHANGHAI, CHINA   2022.09 – up to now
MASTER(without examination), COMPUTER SCIENCE AND TECHNOLOGY
with GPA of more than 85

TONGJI UNIVERSITY, SHANGHAI, CHINA   2018.09 – 2022.06
BACHELOR, COMPUTER SCIENCE AND TECHNOLOGY
with GPA of more than 92, general ranking of 5.12%

👥 Research experience

ZHEJIANG LAB HANGZHOU, ZHEJIANG, CHINA   2023.07 – up to now
RESEARCH INTERN

The research needs to devise a SOTA offline meta RL algorithm with the help of the model. The corresponding paper will be submitted in ICML 2024.

TIEV LAB SHANGHAI, CHINA   2022.09 – up to now
- **How to Fine-tune the Model: Unified Model Shift and Model Bias Policy Optimization.** *Hai Zhang*, Hang Yu, Junqiao Zhao*, Di Zhang, Chang Huang, Hongtu Zhou, Xiao Zhang and Chen Ye. *In NeuralIPS (Accepted as a Poster)*
- **Safe Reinforcement Learning with Dead-Ends Avoidance and Recovery.** Xiao Zhang, *Hai Zhang*, Hongtu Zhou, Chang Huang, Di Zhang, Chen Ye*, Junqiao Zhao*. *In IEEE Robotics and Automation Letters (Submitted)*

⚙ Projects

Distributed Complete Vehicle Cloudization   2022.05 – 2023.01
- Invention Patent (Submitted, Patent Number: 202310899331.2)
- Affiliated with the National Key R&D Program
- Core Technique: distributed framework architecture, k8s deployment

NIO, SHANGHAI, CHINA   2021.10-2022.03
BACKEND DEVELOPMENT ENGINEER

- LIFELONG CYCLE MANAGE SYSTEM (MongoDB replica set, MongoDB atomic operation, Nginx reverse proxy, docker deployment, Redis distributed lock)
- EDGE-SIDE DATA UPLOAD AND DISPLAY (Protobuf, web-socket, TTL index, split-table storage)
- DATA SYNCHRONIZATION SERVICE (Kafka consumer group, full and increment synchronization)
- 5T MAGNITUDE DATA MIGRATION AND BACKUP (MongoDB shared set, shared key setting, index setting, MongoDB cluster construction)

Unknown environment exploration and application device based on deep reinforcement learning 2020.05-2021.03

- Innovation and Entrepreneurship Program for SHANGHAI University Students.
- Responsible for accomplishing end-to-end vehicle driving on the CARLA simulator using representation learning combined with reinforcement learning algorithms such as SAC, TD3, and PPO.
- Responsible for training visual models to work with the ROS system to fulfill target detection.

♡ COMPETITIONS

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

- Second Place (Unique)
- Responsible for perceptual information processing and code implementation of the decision state machine

Intel Cup National College Students Embedded System Invitational Competition: All Sight Security Eye - Intelligent Suspect Detection System

- National Second Prize (Leader)
- Responsible for the overall architecture of the project implementation as well as the full-view image stitching

RLChina Intelligent Agent Challenge Nonin Spring Season Curling Challenge

- Second Place in finals, Sixth Place in total scores
- Responsible for optimizing PPO and rule-based intelligence to complete curling strikes in a POMDP environment

ⓘ OTHERS

- Good at badminton
- Outstanding Undergraduate Thesis
- Scholarship for outstanding students for three consecutive years