

Haoyuan Jiang

Senior Algorithm Engineer, Baidu, Shenzhen, China

E-mail: jianghaoyuan@zju.edu.cn | Tel: +86 17645653968 | Google scholar

RESEARCH INTERESTS

My main research interest is focused on **Reinforcement Learning, General Agents, and Embodied AI**, driven by a desire to contribute to the building of AGI algorithms. I have gained substantial experience in reinforcement learning and computer vision through my experience. I was worked closely with Prof. Ziyue Li at the University of Cologne and Principal Researcher Hangyu Mao at SenseTime Research.

PUBLICATIONS

Accepted papers

1. **Haoyuan Jiang**, Ziyue Li, Zhishuai Li, et al.(2024) A General Scenario-Agnostic Reinforcement Learning for Traffic Signal Control, in IEEE Transactions on Intelligent Transportation Systems (**IEEE TITS**).
2. **Haoyuan Jiang**, Ziyue Li, Hua Wei, et al. X-Light: Cross-City Traffic Signal Control Using Transformer on Transformer as Meta Multi-Agent Reinforcement Learner, in 33rd International Joint Conference on Artificial Intelligence (**IJCAI 2024**).
3. Jiaming Lu, Jingqing Ruan, **Haoyuan Jiang**, et al. DuaLight: Enhancing Traffic Signal Control by Leveraging Scenario-Specific and Scenario-Shared Knowledge(**Oral**), in 23rd of International Conference on Autonomous Agents and Multiagent Systems (**AAMAS 2024**).
4. Jingqing Ruan, Ziyue Li, Hua Wei, **Haoyuan Jiang**, et al. CoSLight: Co-optimizing Collaborator Selection and Decision-making to Enhance Traffic Signal Control, in ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (**KDD 2024**).

Submitted paper

1. **Haoyuan Jiang**, Xuantang Xiong, Ziyue Li, et al. GuideLight: “Industrial Solutions” Guidance for More Practical Traffic Signal Control Agents. Submitted to **IROS 2024**.

EDUCATION

Zhejiang University, Hangzhou, China
Master of Software Engineering

Sep.2017 — Jun.2019
Cumulative GPA: 3.61/4.00

Jiangsu University of Science and Technology, Zhenjiang, China
Bachelor of Naval Architecture and Ocean Engineering

Sep.2013 — Jun.2017

WORK & RESEARCH EXPERIENCE

Baidu

Senior Algorithm Engineer

Shenzhen, China
Sep.2023 — Present

- Conducted imitation learning and dataset aggregation(DAgger) to improve the performance of end2end autonomous driving algorithm.
- Conducted reinforcement learning to improve the performance of autonomous driving algorithm, and use multi-agent self-play mechanism to improve vehicle interaction performance.

Sensetime

Researcher

Shenzhen, China
Jul.2019 — Sep.2023

- Led the team members in using reinforcement learning to enhance traffic signal control methods from three perspectives: the algorithm’s generalization, collaboration among multiple agents, and industry meetings.
- Using RL and MARL to participate in competitions: video games and power scheduling.
- LLM Agent: Use LLM to automatically generate SQL(Text-to-SQL).
- Design and develop a machine learning platform.

AWARDS

- 14th National Graduate Mathematical Modeling Competition, Second Prize. 2017
- 11th China College Students’ Entrepreneurship Competition, Bronze Award in Zhejiang Province. 2018
- IJCAI 2022 - NEURAL MMO CHALLENGE, Bronze Tier Award. 2022

SKILLS & INTERESTS

- **Programming:** Python(Pytorch, Tensorflow, Jax, et al.), Latex, C, SQL
- **Languages:** Chinese(native), English(CET6)
- **Interests:** Hiking, Traveling, Movies