Xihuai Wang

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Google Scholar Semantic Scholar

Research Interests

Xihuai's research interests include *Decision-making* and *Multi-agent System*. Specifically, he is now focusing on

- Multi-agent Decision-making in Cooperative Scenarios
  - Efficiency of Cooperative Multi-agent Reinforcement Learning
  - Capability of Zero-shot Generalization to Unseen Partners
- Large Language Models for Decision Making.

Education

Shanghai Jiao Tong University *Sep. 2020 - present*
Doctor of Philosophy in Computer Science and Technology (expected July, 2025)
Advisor: Prof. Weinan Zhang and Prof. Ying Wen

Sun Yat-sen University *Sep. 2016 - July. 2020*
Bachelor of Engineering in Computer Science and Technology (GPA Top 1%)

Publications

Order Matters: Agent-by-agent Policy Optimization
Xihuai Wang, Zheng Tian, Ziyu Wan, Ying Wen, Jun Wang, Weinan Zhang
In The Eleventh International Conference on Learning Representations, ICLR 2023.
https://openreview.net/forum?id=Q-neeWNVv1 .

Model-based Multi-agent Policy Optimization with Adaptive Opponent-wise Rollouts
Zhang Weinan, Wang Xihuai, Shen Jian, Zhou Ming.
Proceedings of the Thirtieth International Joint Conference on Artificial Intelligence, IJCAI 2021.
https://www.ijcai.org/proceedings/2021/0466.pdf .

Preprints

ZSC-Eval: An Evaluation Toolkit and Benchmark for Multi-agent Zero-shot Coordination
Xihuai Wang, Shao Zhang, Wenhao Zhang, Wentao Dong, Jingxiao Chen, Ying Wen, and Weinan Zhang.
https://arxiv.org/abs/2310.05208 .

Model-based Model-based Multi-agent Reinforcement Learning: Recent Progress and Prospects
Xihuai Wang, Zhicheng Zhang, and Weinan Zhang.
https://arxiv.org/abs/2203.10603 .

Talks

Coordinate Agents vis Policy Optimization *Aug. 8 2023*

A tutorial about cooperative multi-agent reinforcement learning at RLChina.

Research Internships

Shanghai Digital Brain Lab *Apr. 2022 - May. 2023*

Intern Researcher

Game AI research.

Large Language Models research.

Tencent AI Platform *July. 2020 - Jan. 2021*

Intern Researcher

Game AI research.

Competitions

Top 7 in the 2nd Tencent KaiWu Multi-Agent Reinforcement Learning Competition, 2022.

Awards & Honors

Wenjun Wu Honored Ph.D. Class, 2020 - Present.

National Scholarship, 2017 - 2018 Academic Year.

National Scholarship, 2016 - 2017 Academic Year.