HAOZHE JIANG

https://astro-eric.github.io

EDUCATION

No.2 High School of East China Normal University *Sep. 2017 - Jun. 2020*
Top student in the Class of Fundamental Science

Yao Class, IIIS, Tsinghua University *Sep. 2020 - Jun. 2024*
Recommended to Yao Class due to extraordinary performance in physics competition
GPA 3.92, top 25%

Paul G. Allen School of Computer Sciense and Engineering, University of Washington *Mar. 2023 - Aug. 2023*
Visiting Scholar, advised by Simon Shaolei Du and Maryam Fazel

RESEARCH EXPERIENCE

Offline Reinforcement Learning with Reverse Model-based Imagination *Nov 2020 - May 2021*
Advised by Chongjie Zhang
- Published on NeurIPS 2021, ArXiv link: https://arxiv.org/abs/2110.00188.
- A novel RL algorithm that learns from logged data without interacting with the environment.
- Responsible for reproducing all baselines in the paper and some other experiments.

Offline Meta Reinforcement Learning with In-Distribution Online Adaptation *Jul 2021 - Sep 2022*
Core Group Member, Advised by Chongjie Zhang
- Published on ICML 2023, Arxiv link : https://arxiv.org/abs/2305.19529.
- A novel RL algorithm that allows fast online adaptation to new task by learning from logged data from given tasks.
- Responsible for developing the theory.

Offline Congestion Games: How Feedback Type Affects Data Coverage Requirement *Jun 2022 - Sep 2022*
First Author, Advised by Simon Shaolei Du and Maryam Fazel
- Published on ICLR 2023. Arxiv link : https://arxiv.org/abs/2210.13396.
- Analyze the condition on offline dataset that allows for learning Nash Equilibria in congestion games and develop efficient NE learning algorithms

Practically Solving LPN in High Noise Regimes Faster Using Neural Networks *Mar 2022 - Now*
First Author, Advised by Yilei Chen
- Arxiv link : https://arxiv.org/abs/2303.07987
- The first ML-based algorithm to attack the famous LPN problem in cryptography and surpasses classical SOTA in the high-noise regime.

A Black-Box Approach for Non-Stationary Multi-Agent Reinforcement Learning *Oct 2022 - May 2023*
First Author, Advised by Simon Shaolei Du and Maryam Fazel
- Submitted to ICLR 2024, Arxiv link : https://arxiv.org/abs/2306.07465.
- The first method to adaptively track equilibria in MARL with time-varying environment with a meta-algorithm.

Optimization in Transformer *Apr 2023 - Now*
Advised by Simon Shaolei Du and Jason D. Lee
- Construct interesting functions that transoformers can easily optimize but other architectures cannot.

Provable Cooperative Multi-Agent Reinforcement Learning without Communication *Jun 2023 - Now*
Advised by Simon Shaolei Du and Maryam Fazel
- Design provably efficient algorithm to solve Cooperative MARL that forbid agent to communicate during learning.

Service: NeurIPS 2023 Reviewer, ICLR 2024 Reviewer

INTERNSHIP

Shanghai Qi Zhi Institute *July 2022 - August 2022*
Research Intern, Advised by Yilei Chen
- Work on the LPN problem supported by the computational resources at the institute.

ZhenFund *September 2023 - December 2023*

Investment Intern, Mentored by Yusen Dai

- Hunt for promising new startups and potential entrepreneurs, mainly focused on technologies such as large language models, AIGC and robotics.

AWARD

- Gold medal of 35th Chinese Physics Olympiad: Rank 35 in the Final Competition 2019
- Freshman Scholarship
- Research Excellence Scholarship Freshman Year
- Academic Excellence Scholarship Freshman Year
- Versatility Scholarship Sophomore Year
- Silver medal of Yau's College Mathematics Contest 2022
- Yao Award: awarded to 16 out of 76 senior Yao class students 2023
- Versatility Scholarship Junior Year