

EDUCATION

- **Shanghai Jiao Tong University** Shanghai, China
Undergraduate in Computer Science *Sep. 2021 - present*
 - GPA : 4.1/4.3, Ranking : 1/17
 - Member of **JOHN Honors Class**, an elite CS program at SJTU for top 5% of students, with a focus on **Theoretical Computer Science**.

RESEARCH INTERESTS

Reinforcement Learning, Online Learning, Operations Research and Experimentation.

RESEARCH EXPERIENCE

- **John Hopcroft Center, Shanghai Jiao Tong University** Shanghai, China
Research Intern, Advisor: Prof. Shuai Li *July 2023 - Present*
 - **Topic:** Online Learning and Algorithmic Game Theory
 - * We study imperfect-information extensive-form games (IIEFGs) with linear function approximation, particularly two-player zero-sum games where finding the Nash equilibrium (NE) can be converted to the regret minimization in online learning. We present provably efficient algorithms for fast convergence to NE in large-scale IIEFGs.
- **Apex Data&Knowledge Management Lab, Shanghai Jiao Tong University** Shanghai, China
Research Intern, Advisor: Prof. Weinan Zhang *Oct. 2022 - July 2023*
 - **Topic:** Deep Reinforcement Learning
 - * An implementation of state-of-the-art deep reinforcement learning algorithms with pure Jax.
 - * We propose REWARD CACHE, a solution that enhances the exploration capabilities of deep reinforcement learning algorithms, particularly for goal-conditioned tasks.

PREPRINTS

1. **Towards provably efficient learning of extensive-form games with imperfect information and linear function approximation**
with Canzhe Zhao, Shuai Li et al.
In Submission.

ACADEMIC PROJECTS

- **JaxRL:** A pure Jax implementation of state-of-the-art deep reinforcement learning algorithms like PPO, TD3, SAC, DQN etc.
 - Integrate Just-in-Time Compilation and pure function to accelerate training for deep reinforcement learning.
 - Benchmark on popular deep reinforcement learning environments like Openai Gym, Mujoco and Minigrid.
- **SEAL Compiler:** Engineer a compiler from scratch for a C-like programming language SEAL.
 - Complete implementation of a modern compiler, from lexer and parser to assembly code generator that runs on Qemu RISC-V Simulator.
 - Optimizations implemented like tree-based register allocation and constant folding etc.

ACADEMIC ACTIVITIES

- **SJTU-THU-PKU international computer science summer school** Shanghai, China
An international summer school focusing on cutting-edge topics in AI and cryptography. *July 2023*

HONORS AND AWARDS

- National Scholarship of China (Top 0.2% nationwide) 2021-2022
- Fan Hsu-Chi Scholarship (15 winners each year, Shanghai Jiao Tong University) 2022-2023
- Han-Ying-Ju-Hua Scholarship (15 winners each year, Shanghai Jiao Tong University) 2022-2023
- Zhiyuan Honorary Scholarship (Top 5%, , Shanghai Jiao Tong University) 2021-2022, 2022-2023
- A-class Academic Excellence Scholarship, Shanghai Jiao Tong University 2021-2022

SKILLS SUMMARY

- **Programming Languages:** C/C++, Python, scheme
- **Frameworks:** Pytorch, Jax