

Shenyu Qin

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Education

Shanghai Jiao Tong University

Sept. 2022 – Present

Undergraduate in Computer Science

- GPA: 3.7/4.3 (or 87.4/100)
- Member of **John Hopcroft Honors Class**, a CS program at [Zhiyuan College](#) for the top 5% of students, with a focus on Theoretical Computer Science
- Relevant Coursework: Mathematical Analysis, Linear Algebra, Combinatorial Mathematics, Probability Theory, Optimization Methods, Mathematical Logic, Modern Algebra, Machine Learning, Computational Complexity, Online Algorithms, Introduction to Cryptography, Topics in Modern Algorithms

Experience

John Hopcroft Center, SJTU

Shanghai, China

Research Intern, advised by [Dr. Yuhao Zhang](#)

Jul. 2024 – Present

- Do research on online load balancing problem in random arrival order model, aiming to close the gap between the lower bound of $\Omega(\sqrt{\log m})$ and the upper bound of $O(\log m / \log \log m)$ by designing an $O(\sqrt{\log m})$ -competitive algorithm
- Now consider the online graph balancing problem, which is a special case of the original problem, trying to analyze the competitive ratio of a newly-designed algorithm in this case
- participate in TCS Reading Group every week

Projects

Housing Price Prediction

Jul. 2024

Course Project in Data Mining

- Developed a data mining model to analyze the relationship between housing prices and other variables using a partial dataset of Airbnb listings in New York City
- Predicted the price of a given listing and participated in a Kaggle competition

Towards the chat among distinct LLM agents

May. 2024

Course Project in Natural Language Processing and Large Language Model

- Investigated the collaborative potential of completely distinct LLM agents (GPT, Llama, and Wenxin Yiyan) through structured dialogues and wrote a paper about the results
- Discovered a new technique termed "Virtual Conversation", where an LLM internally simulates a multi-agent discussion

Lexical and Syntax Analysis of a Programming Language with Array and String Types

Nov. 2023

Course Project in Programming Languages Design and Implementation

- Perform lexical and syntax analysis on the WHILE language with array and string types, and implement syntax tree output
- Tools Used: Bison, Flex

Deque

Apr. 2023

Course Project in Program Design and Data Structure

- Implement deque in my own way with arrays and a doubly linked list, meeting the complexity requirement

Honors and Awards

Zhiyuan Honors Scholarship (Top 5%), SJTU

2022, 2023, 2024

Skills

Programming Languages: C++, C, Python, Rust

Software: L^AT_EX, MATLAB, Coq