

Albert Shi Zhu

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Education

Rice University

Houston, TX

Intended B.S. in Computer Science, Mathematics; Minor in Sociology; 4.0/4.0 GPA

2022–2026

- **Past Coursework:** Algorithmic Thinking, Stochastic Models, Fundamentals of Computer Engineering, Honors Linear Algebra, Honors Calculus III/IV.
- **Current Coursework:** Intro to Machine Learning, Reasoning about Algorithms, Probability and Statistics.
- **Activities:** Math Directed Reading Program, ICPC Club, Table Tennis Club (competitive team member).

Experience

RiceApps

Houston, TX

Software Engineer Intern (Open Source Accelerator Program)

May 2023–Aug 2023

- Participated in 4-week web/app development bootcamp. Covered React for frontend; MongoDB, Express, and GraphQL for backend.
- Helped develop Owl Mart, a marketplace web app for Rice students to buy and sell items, as a member of a 9-person team. Implemented landing/home pages using Material UI tools and React.

OptimaLab

Houston, TX

Undergraduate Researcher

May 2023–Aug 2023

- Conducted research in machine learning under supervision of Dr. Tasos Kyrillidis of Rice University; specifically investigated novel methods of solving large-scale linear systems distributively.
- Ran experiments in Jupyter Notebook varying number of local workers, local/global iteration count, as well as testing different step-size schemes.

HackRice

Houston, TX

Board member

Apr 2023–Sep 2023

- Designed prompts and prepared workshops for Rice University's annual hackathon with 200+ participants.
- Wrote Python starter code and demos for First-Timer track; arranged logistics for workshops.

Jane Street Capital

New York, NY

First-Year Trading and Technology Program Participant

Mar 2023

- One of 94 invitees to annual freshman education program. Learned about finance concepts and participated in market simulation games.
- Achieved first place in Electronic Trading Competition, in which our team's Python bot achieved the highest PnL of the field across 60+ simulated market rounds.

AlphaStar Academy

Santa Clara, CA

Math Competitions Instructor

Jun 2022–Aug 2022

- Taught 60+ total students advanced topics in algebra, combinatorics, geometry, and number theory.
- Prepared educational materials (video solutions, interactive activities, lecture notes) for future camps.

Competitive Programming Initiative

Remote

Curriculum Developer, Video Instructor

Jun 2021–May 2022

- Recorded and edited 12 videos for self-study competitive programming courses using Adobe Premiere Pro.
- Wrote problem editorials in C++ and Java; eventually adapted into USACO Guide, a compilation of USA Computing Olympiad resources with over 7 million page views.

Skills

Proficient: Python (Pandas, NumPy, Scikit-Learn, Jupyter Notebook), LaTeX, Git/Terminal

Intermediate: C/C++, HTML, CSS, React, Java, Adobe InDesign, Adobe Premiere Pro

Novice: Express, MongoDB, GraphQL, Adobe PhotoShop

Awards

Rice Datathon, Best Visualization Award

Feb 2023

3x AIME Qualifier

Mar 2019, 2021, 2022

Hewlett-Packard CodeWars Competition, 3rd Place, Advanced Division

Mar 2020