

DAVID CAO

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WEBSITE: [HTTPS://CAO.SH](https://cao.sh)

EDUCATION

UC San Diego

Anticipated: June 2023

- Freshman, **Computer Science (B.S.)** · GPA: **3.925**
 - Coursework: CSE 20 - Intro to Discrete Math, CSE 30 - Computer Organization and Systems Programming (C, Assembly), CSE 100 - Advanced Data Structures (C++), CSE 105 - Theory of Computability, CSE 230 - Principles of Programming Languages (Haskell; Graduate Level)
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SKILLS

Rust · Haskell · C · Python · C++ · HTML · CSS · JavaScript · Linux · Git

WORK EXPERIENCE

Research Intern, RESYN

2020–Present

- Augmented an existing resource constraint solver with state-of-the-art methods for automated analysis of function resource usage
- Created and implemented a system for performing automated dependent resource analysis
- Conceptualized a system for performing automated dependent resource analysis with conditional expressions

Tutor, CSE 130

2020–Present

- Helped plan and run an upper division course on functional programming at UCSD
- Answered student questions on course material online and during lab hours

Mentor, SPIS 2020

Summer 2020

- Assisted in setting up and running a survey program on computer science topics at UCSD
 - Transitioned SPIS to a virtual setting by creating *spisbot*, a Discord bot which automates new student onboarding, help ticket submission and queuing, Discord server administration, and Discord breakout room functionality
 - Assisted students with theoretical algorithm-based homework and Python-based labs during lab hours.
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PROJECT EXPERIENCE

Developer, SEASCAPE

2019–Present

- Created a widely-used website to analyze UCSD professor quality which receives **40,000 visits/year**.
 - Scraped professor evaluation data on > 16,000 courses at UCSD using Selenium and Haskell.
 - Used Haskell and d3.js to build a robust web app with data visualizations to aid understanding
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EXTRACURRICULARS

UCSD Wushu, *demo organizer and website designer*

2020–Present

Alter Ego Dance, *media director*

2020–Present

Defund SFPD Now, *website designer*

2020