

# Charles Zhu

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## Education

### University of California, Los Angeles

*Bachelor of Science in Computer Science*

**Expected Graduation: June 2026**

*Los Angeles, CA*

### Monta Vista High School

*Cumulative GPA: 4.0*

**August 2018 – June 2022**

*Cupertino, CA*

## Experience

### Pioneer Academics

**June 2021 – September 2021**

*Research Intern*

*Cupertino, CA*

- Completed a research project under Professor Sebastiaan Joosten from Dartmouth College to find most effective chess openings for different ratings using Stockfish engine and Lichess database
- Represented opening moves with multiple data structures and optimized position evaluation times
- Authored 20-page research paper demonstrating findings

### Aspiring Scholars Directed Research Program (ASDRP)

**June 2021 – August 2021**

*Research Intern*

*Cupertino, CA*

- Performed time-series analysis under mentorship of Samuel Fendell to evaluate effectiveness of Twitter sentiment at predicting stock prices
- Pre-processed and analyzed datasets from 2015 to 2020 containing S&P 500 stock prices and tweets concerning NASDAQ companies
- Measured series correlation and model prediction accuracy using various statistical methods

### Bay Area Tutoring Association

**September 2020 – February 2021**

*Volunteer Tutor*

*Cupertino, CA*

- Introduced 30+ students to web development (HTML/CSS) and Python through code.org exercises
- Led students in developing personal creative projects during one-on-one sessions
- Coordinated with other tutors to organize lesson plans over several weekly sessions

## Projects

### Personal Website | *HTML/CSS, React*

**July 2022 - August 2022**

- Created personal website using React.js and several React libraries for animation and effects

### Interact Tutors | *HTML/CSS, JavaScript, Flask, SQL*

**August 2020 - July 2022**

- Designed, developed, and deployed a full-stack tutoring website to connect high school tutors with younger students
- Implemented relational database using MySQL to store information about tutors, tutees, and tutoring sessions
- Automated application process and handled tutee requests
- 30+ tutors and 350+ total hours tutored
- [interacttutors.com](https://interacttutors.com)

### Terrain Classification Neural Network | *Python*

**June 2020 - July 2020**

- Trained a neural network to classify images on terrain and suitability for driving at the UCSB Summer Research Academies
- Compared model accuracy with several popular pre-trained models
- Co-authored a research paper and presented findings at capstone seminar

## Technical Skills

**Languages:** Python, Java, C++, HTML/CSS, JavaScript, SQL

**Technologies/Frameworks:** GitHub, Bootstrap, Flask, React, PyTorch, scikit-learn, NumPy, Pandas, Matplotlib, Seaborn

**Spoken Languages:** English (native), Chinese (fluent)