Charles Zhu

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Education

University of California, Los Angeles (UCLA)   **Expected Graduation: June 2026**
GPA: 3.88 (Dean's Honors) | B.S. in Computer Science   *Los Angeles, CA*
- **Activities**: ACM Dev Team (Officer), Foundations Choreography (Events Coordinator), UPE Honor Society, Association of Chinese Americans
- **Relevant Coursework**: Data Structures, Computer Organization, Software Construction, Digital Systems, Algorithms and Complexity, Algorithms in Bioinformatics, Multivariable Calculus, Linear Algebra, Differential Equations, Discrete Mathematics

Monta Vista High School   **August 2018 – June 2022**
GPA: 4.0   *Cupertino, CA*

Experience

Native English Institute   **July 2023 – August 2023**
SWE Intern   *Kobe, Japan*
- Built scheduling algorithm to match 100+ student appointments with 30+ teachers per day based on several categories
- Improved teacher workflow by optimizing ranking system in React and integrated logic into algorithm with TypeScript
- Conducted regular tests using Docker and Kubernetes to ensure algorithm accuracy and reliability

ACM Dev Team   **November 2022 – Present**
Officer   *Los Angeles, CA*
- Developed site template with HTML/SCSS/React used by ACM committees and viewed by thousands of students
- Designed template to be easily customizable by fetching individual committee data from spreadsheets using TypeScript
- Collaborated with group members to automate event generation revamp events page

Pioneer Academics   **June 2021 – September 2021**
Research Intern   *Cupertino, CA*
- Completed research project using Python 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 custom tree data structure to optimize 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 with Python 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 13 million S&P 500 stock prices and 2 million tweets concerning NASDAQ companies
- Measured series correlation and model prediction accuracy using diverse statistical methods

Projects

Personal Website | *HTML/CSS, React*   **July 2022 - August 2022**
- Created dynamic 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
- 30+ tutors and 350+ total hours tutored (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 prominent pre-trained models such as VGG and ResNet
- Co-authored research paper and presented findings at capstone seminar

Relevant Skills

Languages: fluent in Python, Java, C, C++, HTML/CSS/SCSS, JavaScript, TypeScript, SQL; proficient in Assembly
Technologies/Frameworks: GitHub, Bootstrap, Flask, React, MySQL, Node.js, Express.js, Docker, Kubernetes, PyTorch
Spoken Languages: English (native), Chinese (fluent)