

Alan Sheu

alansheu2004@gmail.com · (408) 218-0411

Portfolio: alansheu2004.github.io **LinkedIn:** linkedin.com/in/alansheu2004 **Github:** github.com/alansheu2004

Experience:

Robotics Team Captain / Operations Director / Lead Programmer (August 2018 - June 2022)

Los Gatos High School FRC Robotics Team

- Led a 50-person team, managed communications, and created curriculum
- Implemented a OpenCV computer vision model and autonomous pathfinding
- Modeled motor movement and projectile physics to design shooter control systems
- Fundraised an annual operating budget of \$100,000 through grants, sponsorships, and events
- Founded and mentored the Robotics Club at Fisher Middle School to promote community STEM interest

Bioinformatic Data Analyst (July 2021 - August 2021)

COSMOS at UC Davis

- Simulated and visualized enzyme reaction rate in a cell in chaotic motion using Matplotlib
- Analyzed the statistics of Markov chains and random walks, such as predator-prey interactions
- Applied bioinformatic tools to process genetic data, identify mutations, and evaluate stability

Teaching Assistant (August 2018 - July 2019)

Mandarin Language & Culture Center

- Worked 1 on 1 to support for children learning Chinese as a second language
- Awarded with President's Volunteer's Service Award - Gold

Projects:

CustomTD

Custom game engine from scratch for creating and hosting user-created levels

- JavaScript and Canvas on front-end and Flask on back-end; assets created with Adobe Illustrator

Robotics Scouting App

Modular web app for gathering and analyzing data on opposing teams

- Flask server with a SQL database for data-processing and React for data visualization

PIDeconstructed

Interactive blog deconstructing PID control theory with as well as a PID tuning tool

- HTML, CSS, Javascript, and SVG web design; applet created with Java

Additional personal projects on my portfolio (alansheu2004.github.io)

Education:

UC Santa Barbara (Class of 2026)

- B.S. in Statistics and Data Science

Los Gatos High School (Class of 2022) - GPA: 4.53 with Honors

- *Notable AP Coursework:* Computer Science (5), Calculus BC (5), Biology (5), Physics C (5), Chemistry (5)
- *Activities:* FRC Robotics, Math and Physics Peer Tutor, Track and Field, Organized March Against Hate
- *Honors:* STEM Award (2021, 2022), Seal of Biliteracy (Chinese, French), Rotary Club Outstanding Scholar

Skills:

- Data Analysis: R, Pandas, Matlab, NumPy, Matplotlib, SQL
 - Programming: Java, Python, C, C++, Git, Jupyter
 - Web Development: HTML, CSS, JavaScript, React, Flask, PHP
 - Graphic Design: Adobe Photoshop & Illustrator
 - Languages: Chinese, English, French
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