

Alan Sheu

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

Experience:

Ecological Modeling Researcher (September 2022 - Present)

Moeller Lab at UC Santa Barbara

- Used R, Python, and Matlab to model plankton thermal performance curves
- Investigated the global effects of climate change on communities in a Darwin Model

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

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 and identify mutations

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

Baddies Inc. Game

Action-strategy game about designing a dungeon room to trap and defeat heroes

- Unity3D game engine with C# Scripting

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

Education:

UC Santa Barbara (Class of 2026) - GPA: 4.00

- B.S. in Statistics and Data Science

Dual Enrollment

- *De Anza College (Summer 2021):* Data Structures
- *Mission College (Fall 2021):* Differential Equations

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

- *Notable AP Coursework:* Computer Science A (5), Calculus BC (5), Biology (5), Physics C (5), Chemistry (5)

Skills:

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