

# Nathaniel Annau

Undergraduate CS and Math Student

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## Education

### UC Santa Barbara

Bachelor of Science in Computer Science (3.93 GPA)

Sep 2023 – Jun 2026

Santa Barbara, CA

Notable Coursework: Data Structures and Algorithms; Cryptography; Quantum Computing; Functional Programming

### UC Santa Barbara

Bachelor of Science in Mathematics (3.93 GPA)

Sep 2022 – Jun 2026

Santa Barbara, CA

Notable Coursework: Real, Numerical, and Complex Analysis; Linear Algebra; Abstract Algebra; Topology

Through May 2025, I am participating in the [Directed Reading Program](#), covering Coxeter Groups and Buildings.

### Cañada College

Dual enrollment through Cañada Middle College (4.0 GPA)

Jun 2020 – May 2022

Redwood City, CA

## Experience

### Software Engineering Intern

HiveTop

Jun 2024 – Aug 2024

Berlin, Germany

- Developed key pages of a frontend platform using Vue and Tailwind with Primevue components
- Created REST endpoints in the Rust backend to facilitate data transmission from embedded devices
- Architected major elements of the CI / CD, linting, and other tooling setups

### STEM Center Tutor

Cañada College

Jan 2022 – May 2022

Redwood City, CA

- Assisted students with homework and mastering key concepts in Calculus, Differential Equations, and Newtonian Mechanics
- Created high quality study materials and explanations to address common deficiencies in student understanding

### Software Engineering Intern

PandaWhale

Jun 2021 – Aug 2021

Palo Alto, CA

- Wrote a demo iOS app in Swift to solve a social networking problem involving image processing and worked with computer vision libraries
- Built a Python HTML server and SQLite backend to store user data transmitted from the app
- Thoroughly tested and documented demo, presenting final project to company founders

## Projects

### Courses Graph

- Scraped the UCSB website with Python, queried the UCSB API, and synthesized the data as JSON
- Dynamically displayed course data using a constrained optimization library and d3, with Quasar components
- Presented working prototype in front of audience of peers and industry judges at the 2023 Coders SB Project Showcase, winning third place out of ~35 projects
- At SBHacks 2025, extended this general concept to a [visualization of the dependency graph of Proof Wiki](#)

### Typst superTemplate

- In collaboration with my friend, developed a Typst package for notetaking and completing homeworks in Math, CS, and Physics
- Wrote over a dozen custom environments, custom color themes, and over one hundred macros for common symbols and notations
- While currently only being used by a half dozen UCSB students, a wider release is planned in the near future

### Open Source Contributions

- Contributor to [weo-reader](#), a Python client to read world economic data from the IMF as a pandas dataframe
- Authored [just under one thousand Wikipedia contributions](#), and wrote several tools to help automate data collection
- Made corrections and wrote a chapter for a popular [online summary textbook of early undergraduate math courses](#)

### CTFs

- As the second highest scoring individual contributor on my CTF team, placed in the top 6% in the [PwnMe CTF Qualifier](#)
- As the third highest scoring individual contributor on the UCSB CTF team, placed in the top 15% in the [HackTheBox Binary Badlands University CTF](#)

## Languages and Tools

Python (numpy, pandas, Flask)



Git



Linux (primarily Ubuntu)



TypeScript (Vue.js, Svelte)



Neovim



Rust



C++

