

# ALYSSA SAWYER

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## EDUCATION

### Harvey Mudd College

August 2022 - May 2026

*Bachelor of Science in Computer Science and Math Major GPA: 3.8/4.0*

- **Relevant Coursework:** Discrete Mathematics (c), Data Structures/Program Development(c), Differential Equations (c), Principles of Computer Science, and Introduction to Computer Science

### Sequoia High School

August 2018 - June 2022

*International Baccalaureate Diploma, Honor Roll (GPA: 4.45/4.0, CA Scholarship Federation Life Member)*

### College of San Mateo, Cañada College, Skyline College, and Foothill College

August 2019 - June 2022

*Dual Enrollment Program*

- **Relevant Coursework:** Analytical Geometry/Calculus III, Linear Algebra, Differential Equations, Intro to Object-Oriented Program Design, Programming Methods: Java, Python Programming, Introduction to Web Design, Ethical Hacking, JavaScript for Programmers, and Spreadsheets.

## SKILLS

**Proficient:** Java, Python, C++, Javascript, HTML, CSS, R,  $\LaTeX$ , Hugo, WordPress, Matplotlib, Pytorch, Arduino, Microsoft Office

## EXPERIENCE

### Machine Learning Researcher

May 2023 - Present

*Claremont McKenna College, advised by Professor Mike Izbicki*

- First author of paper at the 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining's Data Science Day.
- Finetuning large language models on high quality textbook data to improve performance by 25% on low resource languages.
- Decreased OpenAI API usage cost by 70x in the pipeline to compare baseline model performance compared to our models through calculating the lowest perplexity option of multiple choice quiz questions.

### Front-End Web Developer

January 2023 - Present

*Claremont Graduate University*

- Programming an interactive data visualization website for the CGU Cultural Property Disputes Resource using D3.js.
- Providing a resource for lawyers, journalists, and scholars to track information regarding 400+ cases of stolen artifacts.

### Project Manager

September 2022 - Present

*P-ai Claremont Colleges Club*

- P-recipe: Managing 4+ students for my computer vision project, training an image classification model using PyTorch.
- P-okemon: Used black box optimization with fmin in Javascript and Pokemon API to reverse engineer information in a battle.

### Software Engineer Intern

January 2023 - May 2023

*Samba TV*

- Created a synthetic data set by naturally integrating generating scenes to create 500k+ images using the COCO API.
- Generated logo placement using Python in Blender. These pictures are intended to be released as an open source database.

### Computer Science Researcher

September 2022 - May 2023

*Harvey Mudd College, advised by Professor Lucas Bang*

- Developed a wearable device that vibrates northward for a sensory augmentation experiment using Arduino.
- Integrated the device into a Pitzer College philosophy class to improve student learning with an interactive element.

### Artificial Intelligence Research Intern

August 2021 - March 2022

*California State Senate, under Senator Josh Becker*

- Summarized and discussed research briefs about AI's effect on labor and tech education to inform State Senate policy.

## PROJECTS

**Tutoring MGT System** | Used pandas and sendemail to automatically send out personal pairing emails for tutoring programs.

**Thoughtful Discord Bot** | Sends a message from the Shower Thoughts Subreddit with the PRAW module and Discord Dev Tools.

**First To Register** | Programmed notification system for standardized testing registration opening using selenium and schedule library.

## AWARDS

**Harvey S. Mudd Scholar** | Received merit award due to being identified as in the top 2% of the applicant pool.

**Top 4 Lincoln-Douglas Debater in the Country** | Placed in the top 4 at Nationals, top female, after qualifying out of 20,000+.

**300+ Volunteer Hours** | At 30+ organizations through the National Charity League. Received Presidential Bronze Volunteer Award.