Alyssa Sawyer

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EDUCATION

Harvey Mudd College   August 2022 - May 2026
*Bachelor of Science in **Computer Science and Math**, Major GPA: 3.6, Dean's List*
- **Relevant Coursework:** User Experience Research and Evaluation (TA), Data Structures/Program Development, Principles of Computer Science, Discrete Mathematics, Introduction to Computer Science.
- **Activities:** Wellness Director, Inclusive Campus Mentor, Mechanical Keyboard Club President, Society of Women Engineers.

Sequoia High School   August 2018 - June 2022
International Baccalaureate Diploma, GPA: 4.45/4.0, CA Scholarship Federation Life Member, Honor Roll

College of San Mateo, Cañada College, Skyline College, and Foothill College   August 2019 - June 2022
Dual Enrollment Program
- **Relevant Coursework:** Java Programming Methods, Python Programming, JavaScript for Programmers, Intro to Object-Oriented Program Design, Introduction to Web Design, Ethical Hacking, Linear Algebra, Differential Equations, Calculus III.

PROFESSIONAL EXPERIENCE

Software Engineer Intern   January 2023 - May 2023
Samba TV
- Developed a synthetic data set by naturally integrating ads in 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.

RESEARCH EXPERIENCE

Artificial Intelligence Researcher   January 2024 - Present
Harvey Mudd College, advised by Professor David Nembhard
- Creating a model that analyzes biometric data to predict drone operator errors when identifying infrastructure faults.

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 to our modified models. Done through developing a program to calculate the lowest perplexity option of multiple choice quiz questions.

Computer Science Researcher   September 2022 - May 2023
Harvey Mudd College, advised by Professor Lucas Bang
- Created a wearable device for a sensory augmentation experiment using Arduino. Led software and hardware development.
- Integrated the project into a Pitzer College philosophy class to improve student learning with an interactive element.

PROJECTS

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.

Machine Learning Project Manager   September 2022 - Present
P-ai Claremont Colleges Club
- P-recipe: Managing a team of 4, fully designed a computer vision project with transfer learning using ResNet with PyTorch.
- P-okemon: Used black box optimization with fmin in Javascript and Pokemon API to reverse engineer information in a battle.

AWARDS

Harvey S. Mudd Scholar | *Received merit award due to being identified as in the top 2% of the applicant pool.*
Top 4 Debater in the Country | *Placed in the top 4 at Nationals for Lincoln-Douglas debate, after qualifying out of 20,000+.*
300+ Volunteer Hours | *At 30+ organizations through the National Charity League. Received Presidential Bronze Volunteer Award.*
Nonprofit Founder | *Founded and ran a 2-week debate camp nonprofit for 200+ underprivileged debaters during COVID-19 for three years.*

SKILLS AND INTERESTS

Skills: Python, Java, C++, JavaScript, HTML, CSS, R, LaTeX, JSON, Linux, Git, Natural Language Processing, Excel.
Libraries: NumPy, Matplotlib, PyTorch, Pandas, Beautiful Soup, OpenCV, Selenium, Gradio.
Interests: Building mechanical keyboards, running, photography, debate coaching.