Alyssa Sawyer

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Professional Experience

Incoming Solutions Architect Intern, NVIDIA May 2025 - August 2025
- NVIDIA Infrastructure Specialists Team (NVIS)

Solutions Architect Intern, NVIDIA May 2024 - August 2024
- Lead development of generative AI application with retrieval augmented generation (RAG) using LangChain to rank resumes.
- RAG app resulted in immediate impact by accelerating the time to recruit and speed of identification of strong candidates.
- Worked with Tier 1 Cloud Service Providers on data center scale validation projects. Supported by traveling onsite.
- Owned Edge AI applications by using NVIDIA Jetson products to run deep learning models locally.
- Completed Building RAG Agents with LLMs, Fundamentals of Deep Learning, and Deep Learning Institute Instructor courses.

Data Analyst, Claremont Graduate University January 2023 - June 2024
- Programmed an interactive data visualization website for the CGU Cultural Property Disputes Resource using D3.js.
- Provided a resource for lawyers, journalists, and scholars to track information regarding 400+ cases of stolen artifacts.
- Developed a pipeline to scrape xml of cases into summary statistics used by all data analysts on this project.

Software Engineer Intern, Samba TV January 2023 - May 2023
- Architected a synthetic data set by naturally integrating ads in scenes to create 500k+ images using the COCO API.
- Designed logo placement algorithm using Blender Python API. The images are intended to be an open source database.

Education

Harvey Mudd College August 2022 - May 2026
B.S. in **Computer Science and Math,** Harvey S. Mudd Scholar, Dean's List

College of San Mateo, Cañada College, Skyline College, and Foothill College August 2019 - June 2022
Concurrent Enrollment Program

Sequoia High School August 2018 - June 2022
International Baccalaureate Diploma, CA Scholarship Federation Life Member, Honor Roll

Skills and Interests

Relevant Coursework: Data Structures, Algorithms, Computer Vision, Mathematical Analysis, Discrete Mathematics, Computability and Logic, Probability and Statistics, User Experience Research (TA), Principles of Computer Science, Java, Python, JavaScript, Object-Oriented Program Design, Web Design, Ethical Hacking, Linear Algebra, Differential Equations, Multivariable Calculus.
Skills: Python, Java, C++, JavaScript, R, LaTeX, Linux, Git, Natural Language Processing, Generative AI, Computer Vision.
Libraries: NumPy, Matplotlib, PyTorch, Pandas, Beautiful Soup, OpenCV, Selenium, Gradio, LangChain, Streamlit.
Interests: Building mechanical keyboards, running, photography, debate coaching.

Research Experience

Computer Vision Researcher, Harvey Mudd College August 2024 - Present
- Lab for Cognition and Attention in Time and Space (CATs)

Director of Projects, P-ai Claremont Colleges Club September 2022 - Present
- Supporting and leading 5 project managers and guiding them through the process of creating and deploying an application.
- Managed a team of 4, fully designed a computer vision project with transfer learning using ResNet with PyTorch.

Artificial Intelligence Researcher, Harvey Mudd College January 2024 - June 2024
- Led development of a model that predicts drone operator errors in identifying infrastructure faults with over 80% accuracy.

Machine Learning Researcher, Claremont McKenna College May 2023 - January 2024
- First author of paper at the 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining's Data Science Day.
- Finetuned large language models on high quality textbook data to improve performance by 25% on low resource languages.
- Lead a decrease of OpenAI API usage cost by 70x in the pipeline to compare model performances through analyzing perplexity.
- Constructed question answer pairs for finetuning process from a Latin textbook utilizing regular expressions.

Computer Science Researcher, Harvey Mudd College September 2022 - May 2023
- 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.

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 debate camp nonprofit for 200+ underprivileged debaters during COVID-19 for three years.