

# ALYSSA SAWYER

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## PROFESSIONAL EXPERIENCE

### Solutions Architect Intern, NVIDIA

May 2025 - Present

- Creating a full stack tool with Django and Angular to verify data center bill of materials, reducing the chance of common manual errors by over 50%. Created complete transceiver interoperability matrix.

### Solutions Architect Intern, NVIDIA

May 2024 - August 2024

- Created generative AI application with RAG and LangChain to identify the 20 top candidates out of 700+. Caused immediate impact by accelerating the speed of identification of strong candidates by 98%.
- Worked with Tier 1 Cloud Service Providers on data center scale validation projects. Traveled onsite and worked on the largest GPU cluster in the world, collaborating with multiple partners.
- Completed "Building RAG Agents with LLMs" and "Fundamentals of Deep Learning," courses.

### Data Scientist, Claremont Graduate University

January 2023 - June 2024

- Programmed an interactive map visualization website for the CGU Cultural Property Disputes Resource using D3.js.
- Provided a resource for lawyers, journalists, and scholars to visually track 400+ cases of stolen artifacts.

### 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. Results will be part of an open source database.

## EDUCATION

### Harvey Mudd College

August 2022 - May 2026

B.S. in **Computer Science and Math**, Harvey S. Mudd Scholar (top 2% of applicants), Dean's List

- **Relevant Coursework:** Data Structures, Algorithms (TA), Computer Vision, Mathematical Analysis, Discrete Mathematics, Computability/Logic (TA), UX Research (TA), Probability and Statistics, Abstract Algebra, Advanced Linear Algebra, 2D Design.
- **Activities:** Underclassmen Mentor, P-ai Project Director, Society of Women Engineers, Campus Wellness Director.

## RESEARCH EXPERIENCE

### Artificial Intelligence Researcher, Harvey Mudd College

January 2024 - January 2025

- Developed model that predicts drone operator errors in identifying infrastructure faults with over 80%+ accuracy.
- Authored research paper about testing fairness of an adversarial diffusion model for makeup. Ran dodging and impersonation attack experiments.

### Machine Learning Researcher, Claremont McKenna College

May 2023 - January 2024

- First author of paper at the ACM SIGKDD Conference's Data Science Day. Presented poster to audience of 50+.
- Finetuned large language models on textbook data to improve performance by 25% on low resource languages.
- Lead a decrease of OpenAI API usage cost by 70x in the results pipeline through analyzing perplexity.

## LEADERSHIP EXPERIENCE

### Founder and President, Code the Change Harvey Mudd College

September 2024 - Present

- Founded a technical tech for good club. Lead development of projects with MIT, The Museum of Science, UNHCR.
- Grew club to 25 regular members, 4 projects. Lead leadership team of 5 in creating regular programming.

### Director of Projects, Campus AI Club

August 2024 - January 2025

- Lead 5 project managers and guided them through the process of creating and deploying complete software.
- Managed a team of 4, fully designed a computer vision project with transfer learning using ResNet with PyTorch.

## SKILLS AND INTERESTS

**Skills:** Python, Java, C++, JavaScript, Typescript, R, LaTeX, Linux, Git, Natural Language Processing, Generative AI.

**Libraries:** NumPy, Matplotlib, PyTorch, Pandas, Beautiful Soup, OpenCV, Selenium, Gradio, LangChain, Streamlit.

**Interests:** Building mechanical keyboards, running, photography, debate coaching, graphic design.