

Owen Fahey

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Experience

Salavon Lab

Chicago, IL

Machine Learning Operations Engineer

June 2022 – May 2024

- Led system design of large-scale computational art pieces created using in-house models, netting \$120k+ in sales.
- Authored over 15,000 lines of Python and 5,000 lines of JavaScript to the lab's codebase.
- Architected video rendering pipelines that autonomously generated thousands of hours of video content from massive datasets of conditioning data, utilizing OpenCV, diffusion models, and GPU task allocation.
- Managed 2 engineers and worked alongside 3 designers to build web application that integrates 43,700 video tiles into a synchronized map interface with React, Apache, Leaflet, and Node.

University of Chicago Computer Science Department

Chicago, IL

Visual Computing Research Assistant (working under Prof. Kindlmann)

May 2023 – May 2024

- Researched failures in visualization comprehension arising from perceptual differences.
- Developed numerical computing software to model color perception and produce personalized colorspaces.
- Designed course content and held office hours for over 50 students for CMSC 23900: Data Visualization.

Lexset.ai

Brooklyn, NY

Software Engineer Intern

January 2022 – June 2022

- Added dozens of client-requested features to Blender-based 3D scene generator, facilitating the at scale creation of photorealistic synthetic image datasets for downstream computer vision tasks.
- Produced a dataset of 38,000 synthetic sign language images, instrumental in securing the company's largest client.
- Monitored and debugged CoreWeave GPU instances ensuring optimal performance in machine learning workflows.
- Implemented an automated asset and image tagging system, reducing processing time by 80%.

Education

The University of Chicago

Chicago, IL

Bachelor's in Computer Science (with Honors) & Bachelor's in Philosophy

June 2024

- CS GPA: 3.92. Graduated Cum Laude. Specialization: Machine Learning.
- Relevant Coursework: Honors Algorithms, Database Systems, Computer Systems, Deep Learning Systems (graduate).

National Outdoor Leadership School

Lander, WY

Fall Semester in the Rockies

August 2021 – November 2021

- Developed teamwork, leadership, and first responder skills on wilderness expeditions.

Harvard-Westlake School

Los Angeles, CA

Diploma (Summa Cum Laude)

September 2013 – June 2019

- GPA: 4.59. SAT: 1590. ACT: 36. American Invitational Math Exam Invitee (top 5% of AMC 12 scores).

Skills

Languages: Python, JavaScript, C, Rust, HTML, CSS, Scala

Python Libraries: PyTorch, OpenCV, NumPy, PIL, Flask, Jupyter Notebook

Other: Linux, CI/CD, Git, GitHub, Bash, FFmpeg

Projects

Scientific Visualizations Tools · C, WebAssembly

January 2024 – Present

- Created visualization tools for topographic mapping, multithreaded volume rendering, and vector field imaging.
- Adapted C-based visualization tools for web use with WebAssembly and WebAssembly System Interface.

Relational Database Storage Manager · Rust

January 2023 – March 2023

- Engineered a high-performance storage manager, enabling efficient queries, concurrency, and durability.
- Implemented query functions such as AGGREGATE, GROUP BY, and JOIN from scratch.

Music Overlap Analyzer · Python, OAuth, scikit-learn

April 2022

- Built an application to identify songs and artists mutually listened to by two users.
- Employed k-means clustering to generate Spotify playlists based on overlapping musical preferences.