Owen Fahey

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Experience

Salavon Lab Chicago, IL
Machine Learning Operations Engineer *September 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 in the lab's codebase.
- Architected video rendering pipelines that autonomously generated thousands of hours of video content from massive datasets of conditioning data, utilizing diffusion models, OpenCV, and GPU task allocation.
- Managed 2 engineers and worked alongside 3 designers to build a 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 visual literacy arising from differences in color perception.
- Developed numerical computing software to produce individualized color spaces, enhancing data comprehension.
- 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 – September 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.