Owen Fahey

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Experience

Jason Salavon Studio Chicago, IL
Software Developer *June 2022 – Present*

- Leading system design and engineering on computational art pieces created using in-house GAN and style transfer models, contributing 10k+ lines of Python and 5k+ lines of JavaScript to the art-research lab's codebase.
- Developing an internal library of image and video processing tools using OpenCV, diffusion models, and parallel computing, facilitating the creation of animations with billions of pixels per frame.
- Created scripts to automate movie downloads and perform tasks such as optical flow, pose, and depth estimation.
- Engineering a web application with a highly customized map interface using React.js, Leaflet, Apache, and Node.js that receives thousands of monthly visitors.

University of Chicago Computer Science Department Chicago, IL
Research Assistant to Professor Gordon Kindlmann *May 2023 – Present*

- Working to improve the effectiveness of data visualizations by accounting for differences in color perception.
- Refining the CIELAB model to produce perceptually uniform color spaces tailored to individual users.
- Constructing an application for research studies to compare the efficacy of techniques aimed at rapidly and accurately modeling an individual's color perception.

Lexset.ai Brooklyn, NY
Software Engineering Intern *January 2022 – June 2022*

- Added dozens of client-requested features to Blender-based 3D scene generator, facilitating the creation of photorealistic synthetic image datasets to improve downstream computer vision tasks.
- Secured the company's largest client by creating a dataset of 38,000 synthetic American Sign Language images.
- Reviewed and implemented advanced techniques from computer vision papers.
- Automated asset and image tagging, reducing processing time by 75%.

Education

The University of Chicago Chicago, IL
Bachelor of Science in Computer Science & Bachelor of Arts in Philosophy *Expected June 2024*

- CS GPA: 3.90
- Specialization: Machine Learning
- Selected Coursework: Honors Algorithms, Database Systems, Computer Systems, Deep Learning Systems (graduate), Mathematics of Machine Learning, Computer Vision, Scientific Visualization

National Outdoor Leadership School Lander, WY
Fall Semester in the Rockies *August 2021 – November 2021*

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

Test Scores: SAT: 1590, ACT: 36, American Invitational Math Exam Invitee (top 5% of AMC 12 scores)

Skills

Languages: Python, JavaScript, C, Rust, Scala, SQL
Python Libraries: PyTorch, scikit-learn, OpenCV, NumPy, PIL, Django
Other: Linux, CI/CD, Git, Github, Bash, FFmpeg

Projects

Relational Database Storage Manager · *Rust* *January 2023 – March 2023*

- Designed a functioning storage manager and slotted pages for a relational database using heap files.
- Implemented query operators such as AGGREGATE, GROUP BY, and JOIN from scratch.

Programming Language Interpreters · *Scala* *October 2022*

- Engineered an interpreter for the simply-typed lambda calculus, complete with a scanner, parser, and evaluator.
- Implemented an interpreter for a novel language with mutable memory, exceptions, and type checking / melding.

Music Overlap Analyzer · *Python, Flask, OAuth, scikit-learn* *April 2022*

- Developed an app to identify songs and artists mutually listened to by two users.
- Employed k-means clustering to generate a Spotify playlist based on overlapping musical preferences.