Owen Fahey

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Education

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

- CS Major GPA: 3.9
- Specialization: Machine Learning
- Selected Coursework: Honors Algorithms, Computer Systems, Databases, Programming Languages, Discrete Math, Data Visualization, Data Science, Computational Geometry, Probability, Deep Learning Systems (TTIC)

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, TypeScript, C, Rust, HTML, CSS, Scala, SQL (Postgress)
Python Libraries: OpenCV, NumPy, PIL, Matplotlib, scikit-learn, PyTorch, Flask, bpy
Web: React.js, Next.js, Node.js, D3.js, NPM, Apache, Web Components, Express.js, Three.js
Other: Git, Github, Linux, FFmpeg, JSON, YAML, Bash, REST

Experience

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

- Spearheading system design and engineering on two art pieces created using in-house AI models, contributing 10k+ lines of code as the lead developer to the studio's codebase.
- Architecting an animation pipeline leveraging parallel computing, diffusion models, and GPT-3 API integration, enabling the production of massive animations with billions of pixels per frame.
- Collaborating with designers to quickly transform Figma mockups into functional software prototypes.
- Engineering a web application with a complex map interface using React.js, Leaflet, Apache, and Node.js that receives tens of 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.
- Devising numerical algorithms to create tailored, perceptually uniform color spaces by calibrating CIELAB models.
- Constructing an application for research studies to assess the efficacy of techniques aimed at rapidly and accurately modeling an individual's perception of color.

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

- Enhanced a Blender-based 3D scene and synthetic data generator with dozens of client-requested features.
- Secured firm's largest client by producing a tech demo dataset of 38,000 synthetic American Sign Language images.
- Automated HDRI classification and tagging, reducing processing time by 75%.

Projects

Voxel Subdivider · *JavaScript, Three.js* — *September 2023*

- Developed a web app to interactively subdivide a single voxel into an intricate voxel model.
- Implemented the logic to convert glTF 3D models into voxelized form.

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

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

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.