

Aaron Belikoff

(510)-295-8255

azbelikoff@wpi.edu

(website in progress) endeavoringorb.github.io

Oakland, CA | Worcester, MA

Education

Worcester Polytechnic Institute | BS in Computer Science | GPA 3.89

(Fall 2024 - Spring 2028)

● Research

(Spring 2024 - Current)

- Summer '25: Participated in an [Undergraduate Research Program](#), wrote a paper on Causal Inference with LLM Agents. **Paper accepted** at [MIT Undergraduate Research Technology Conference 2025](#)
- Working on causal reasoning and natural language processing (NLP) under Prof. Raha Moraffah
- Fine tuned LLMs for poverty assessment & made a website to demonstrate their capabilities.
- Wrote & optimized performance of a Python program to evaluate LLMs on various benchmarks using WPI computing cluster

● Software Development Intern (work-study) @ Academic/Research Computing

(Fall 2024 - Current)

- Created a LLM-based assistant chatbot to answer student queries about course material on a learning platform, Canvas. **RAG , SQL, Flask, Python, Apache**
- Created Regi, a registration system for software training sessions offered by WPI. **SQL, Javascript, Go**

● Courses: Discrete Math, Linear Algebra, Differential Equations, Probability, Calculus 4, 3D Modeling, Stats, Program Design, Operating Systems

● Extracurricular: Varsity Men's Rowing

(Fall 2024 - Current)

Internship

● Intern Software Engineer @ Ethereal Matter

(Summer 2023 - Summer 2024)

- Virtual Reality Game Design & Programming, Motion Capture, 3D Model Rigging & Animation

Personal Projects

Federated Learning

Skills: Socket networking, Distributed computing, Numpy

- Developed a set of python programs which train a Recurrent Neural Network (RNN) on a distributed network of computers using evolution strategies. The trained model generates sonnets in the style of Shakespeare.

Camera-Based Fingertip Tracker

Skills: PyTorch, C++, Data Processing

- Trained a set of Computer Vision AI models used together in a program to let me draw & write notes on my computer using only the camera to track my hands. Developed a custom data collection & labeling pipeline to ensure high quality data.

C++ Projects

- 2D Eulerian Fluid Simulation ; Boids Simulation ; Custom 3D Physics & Render Engine ; 3D fractal renderer using ray-marching and particles ; Image to Painting converter, recreates images using only bezier curves

Python Projects

- Training neural networks via reinforcement learning to play various games (Snake, Elden Ring, Overwatch)
- Lossless image compression using deep neural networks and arithmetic coding for archival of large image galleries

Technical Skills & Knowledge

- Python, C++, Javascript, Go, Java, SQL, C#, Flask, PyTorch, Numpy, Pandas, OpenCV
- LLMs, Agentic LLM Systems, GRPO/DPO, RL, High Performance Computing, Retrieval Augmented Generation (RAG)