Aaron Belikoff
azbelikoff@wpi.edu
Alameda, CA | Worcester, MA
github.com/EndeavoringOrb | endeavoringorb.github.io

Work Experience

Intern Cyber Security Researcher @ Peraton Labs *Summer 2026 - Current*

- Made an app for automated hardware reverse engineering. Given images of a printed circuit board, it helps the user figure out what is on the board and what the board does. Trained & deployed an ensemble of ML models for various parts of the pipeline.

Undergraduate Researcher @ Worcester Polytechnic Institute *Spring 2024 - Spring 2026*

- Wrote a paper on using LLM agents for causal inference. **Accepted & published** at MIT URTC 2025
- Worked on causal reasoning and natural language processing under Prof. Raha Moraffah

Software Development Work-Study @ Academic/Research Computing (ARC) *Fall 2024 - Current*

- Set up and managed a cluster of computers to run LLMs on-prem, serving students & faculty.
- Created a chatbot to answer student queries about course material on a learning platform, Canvas.
- Created Regi, a registration system for training sessions offered by ARC.

Intern Software Engineer @ Ethereal Matter *Summer 2023 - Summer 2024*

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

Education

Worcester Polytechnic Institute | BS/MS in Computer Science | GPA 3.89 *(Fall 2024 - Spring 2028)*

- Courses: Distributed Systems, Machine Learning, Operating Systems, Discrete Math, Linear Algebra, Differential Equations, Probability, Calculus 4, Stats, Program Design, 3D Modeling
- Extracurricular: Varsity Men's Rowing *(Fall 2024 - Current)*

Projects

Tensor Graphs (github.com/EndeavoringOrb/tensor_graphs) **Skills: Compilers, AI, CUDA, C++**

- An inference engine/compiler written in C++. Runs LLMs & image diffusion models quickly on heterogeneous systems (e.g. CPU+GPU). Can optimize any computational task that can be expressed as a directed acyclic graph of tensor operations.

Federated Learning

- 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

- Trained computer vision models to track hand position via camera, enabling drawing and note-taking without peripherals. Built a custom data collection and labeling pipeline.

C++ Projects

- 2D Eulerian Fluid Simulation **;** Boids Simulation **;** Custom 3D Physics & Render Engine ; 3D fractal renderer using ray-marching ; 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++, CUDA, SQL, PyTorch, Javascript, Go, Java, C#, Flask, Numpy, Pandas, OpenCV
- LLMs, Agentic LLM Systems, GRPO/DPO, Reinforcement Learning, High Performance Computing, Retrieval Augmented Generation (RAG), Distributed Computing

Updated 2026/10/17