Ethan Ellerstein

ethanellerstein.com | eellerstein@gmail.com | (484)–752–2434

EDUCATION

University of Minnesota, Duluth – Bachelor of Science 12/2024
Major: Computer Science 3.5/4.0 GPA
Minor: Professional Writing 4.0/4.0 GPA

COMPUTER SKILLS

Languages: C++, JavaScript, PHP, Python, HTML, CSS, SQL, NoSQL, UML, Lua, Assembly
Frameworks: React, Node.js, Next.js, Three.js, Tailwind CSS
Tools & Systems: Docker, Visual Studio Code, IntelliJ, iTerm2, Nmap, VirtualBox, DataGrip, DBeaver, Hostinger,
OS: Windows, Mac, Linux
Development: Agile Methodology, Git, REST APIs

EXPERIENCE

Outlier AI – AI Research/Contributor 01/2024-Current
Contributed to exploratory and applied AI solutions with a focus on automation and prompt engineering. Developed and tested data pipelines and model interaction layers using Python.

Freelancer Developer – Upwork 01/2025-Current
Completed client projects in front-end development and automation scripting. Delivered clean, responsive codebases using React, Tailwind, and Python with 5-star feedback.

Youth Tech Inc. – Technology Instructor 06/2024-08/2024
Taught coding, game development, and digital design to students aged 6–17 at a non-profit computer camp dedicated to providing enrichment opportunities for students with a passion for learning. Developed and delivered curriculum in areas such as video game design, animation, web design, and robotics. Fostered a fun, interactive learning environment, encouraging creativity and problem-solving skills among students.

PROJECTS

3D-Terminial-Portfolio 05/2025-Current
Created an interactive 3D terminal-style portfolio website using Three.js and React, designed to showcase personal projects in a retro command-line interface. Implemented animated scene transitions, camera controls, and interactive CLI-like inputs to create a highly engaging user experience. Optimized WebGL rendering performance and ensured full responsiveness across desktop and mobile devices.

Traffic-Stop-Detection 03/2025-Current
Developed a real-time traffic light detection system using Python and YOLOv5. The application identifies traffic light states (Red, Yellow, Green) from live camera feeds or video inputs, incorporating a countdown timer for red lights. This project demonstrates proficiency in computer vision and real-time object detection.

SpyderByte 09/2024
Built a full-stack price comparison platform using React, Node.js, and Puppeteer.js for real-time scraping, responsive UI, and dynamic deal tracking across e-commerce retailers. Designed a modular scraping engine that supports plug-and-play APIs for new vendors, improving extensibility.

AI-Powered Threat Detection System 07/2024
Developed a machine learning system for real-time cybersecurity threat prediction. Focused on data preprocessing, predictive modeling, and integration with existing security infrastructure. Built a scalable pipeline for ingesting and analyzing logs in near real-time, enabling proactive threat response through alerts and automated triage.

Beta GetFit APP – UMD 10/2023-12/2023
Led a student team through agile development of a fitness tracking app. Coordinated across roles, implemented features, and maintained high team engagement and productivity.

ACTIVITIES: Association for Computing Machinery (ACM), Robotics, YOUMatter, UMD Esports, Powerlifting
CERTIFICATES: ISC2 Certified in Cybersecurity, AWS Certifications
HONORS: Dean's List