Aidan Kaneshiro

aidankaneshiro@gmail.com ~ (310)755-5534 ~ akaneshiro7.github.io/portfolio

Education

Northeastern University, Boston, MA **May 2025**
Bachelor's of Science in Computer Engineering **GPA:** 3.91
Minors: Math, Computer Science
Honors: Dean of Engineering Merit Scholarship, Dean's List
Coursework*:* Machine Learning, Algorithms, Digital Logic Design, Embedded Design, Networks, Probability, Differential Equations, Linear Algebra, Multivariable Calculus

Technical Skills

Languages: TypeScript, JavaScript, Python, C++, Bash, SQL, MariaDB, PostgreSQL, SystemVerilog
Frameworks: React, Express, Node, Next.js, REST API, WebSockets, FastAI, FPGA, Vivado, Linux, AWS EC2

Work Experience

Leidos Bethesda, MA
System Engineering Co-op January 2023 – Present

- Developed a **Full-Stack Web Application** to manage the audio distribution of submarine training systems using **Javascript**, **MariaDB**, **React**, **Express** for **RESTful APIs**, and **TailwindCSS**
- Conceived and assembled a Desktop Application and WebSocket server using **Electron**, **JavaScript**, and **MariaDB (SQL)**, facilitating control of audio devices via **WebSockets and AES70 Protocol**
- Decreased database latency by **84%** by identifying bottlenecks and multiprocessing queries using **Python**
- Developed and implemented automation processes using **Bash Scripts** and **systemd services**, streamlining RPM package installations across six thin-clients on boot

Goodwill Computing Laboratory Boston, MA
High Performance Computing Research Assistant September 2023 – Present

- Leveraging Cloud Computing, **AWS EC2** and **Python**, to benchmark and quantify resource consumption and carbon emissions of Large Language Models and High Performance Computing Systems
- Employing **Hugging Face Transformers** to finetune and optimize Large Language Models

Generate - Northeastern Product Development Studio Boston, MA
Full-Stack Software Engineer September 2023 – Present

- Developing Front-End Components with **React** and **Typescript** for a gamified, financial-literacy Web App
- Engineering **RESTful endpoints** with **Next.js** and **NextAuth** to interface with a **PostgreSQL** database

Northeastern First Year Engineering Center Boston, MA
Red Vest(Teaching Assistant) and Mentor September 2022 – December 2022

- Improved first-year engineering students' understanding of **C++, MatLab, AutoCAD**, and **SolidWorks**
- Advised four groups of five freshman engineering students in designing and completing their final projects by mentoring groups through the engineer design process and providing feedback on technical concerns

Personal Projects

Natural Language Processing for Algorithmic Trading May 2023 - Present

- Developed an algorithmic trading bot using **Python**, **pandas**, and **Alpaca API** to implement a down-gap trading strategy, based on insights derived from backtesting a mean reversion and momentum strategy
- Leveraged intraday data to scan over **2500 stocks** for stocks that gapped down at least 2% below the prior day's low, and executed sell or buy trades on these stocks to capitalize on the identified market behavior
- Employing **Natural Language Processing** via **Hugging Face Transformers** for classifying historical news data, generating trading signals, and analyzing its impact on historically correlated equities

Deep Learning for Parasitized Malaria Cell Detection March 2023 - June 2023

- Detected infected Malaria Cells with **98% accuracy** by fine tuning a **Convolutional Neural Network** on over **27,000 images** of Parasitized and Uninfected cells using **FastAi** and **Pytorch**
- Implemented **Gradient-weighted Class Activation Mapping** to visualize and interpret the model's predictions, providing insights into the regions contributing to the classification decisions