Aidan Kaneshiro

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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, Embedded Design, Fundamentals of Networks, Computing Fundamentals, Circuits, Differential Equations and Linear Algebra, Multivariable Calculus, Discrete Structures

Technical Skills

Languages: TypeScript, JavaScript, Python, C++, HTML, Bash, TailwindCSS, SQL, MariaDB
Frameworks: React, Express, Electron, Node, REST API, WebSockets, FastAI, FPGA, Quartus, Postman, Linux

Work Experience

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

- Conceived and assembled a dynamic desktop application and backend server using **Electron**, **JavaScript**, and **MariaDB (SQL)**, facilitating control of audio devices via **WebSockets and AES70 Protocol**
- Developed a prototype **Full-Stack Web Application** to manage audio distribution of submarine training systems, facilitating configuration for network protocols, database modification, and control over an array of audio devices using **Javascript**, **MariaDB**, **React**, **Express** for **RESTful APIs**, and **TailwindCSS**
- Worked in partnership with the team leader to architect a relational database model in **MariaDB** and **SQL** that streamlined configuration processes for submarine training systems
- 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 6 thin-clients on boot

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, predicting 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 applying a 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
- Enhanced model performance and honed machine learning expertise through the application of advanced **data preprocessing**, **augmentation strategies**, and **gradient descent** methodologies