AYDEN NGUYEN

Computer Engineering Undergraduate

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TECHNICAL SKILLS:

Software
- Java, JUnit, OOP
- Git, GitHub
- NoSQL, REST API

DevOps
- Debian Linux
- OS Virtualization
- Docker, Networking
- Data Storage

Embedded Systems
- ESP32 IoT Development
- Embedded C for ATmega

EDUCATION:

University of British Columbia (UBC) | Graduating May 2028

Bachelor of Applied Science - Computer Engineering
- C.K. Choi Presidential Scholars Award

EXPERIENCE:

Undergraduate Teaching Assistant   September 2024 - December 2024
UBC Department of Computer Science
- Proctoring computer-based examinations and assisting students with technical/scheduling issues, maintaining efficient examination throughput
- Writing web-scraper with Python and pandas to obtain all scheduled exams throughout the year, ensuring all sessions are accounted for and eliminating manual data entry

Engineering Design Team Lead - Power and Controls   September 2023 - Present
UBC AeroDesign - Heavylist Competition Aircraft
- Leading team of 6 designing power distribution circuits and propulsion systems for team aircraft
- Optimized propulsion system to achieve highest thrust-to-weight ratio given 750-watt power limit
- Wrote C software for Arduino, load cell, and electronic speed controller to automate thrust-testing of motors and propellers, minimizing testing time by 50%

TECHNICAL PROJECTS:

Meal Tracker - Course Project (Software Construction I)   October 2024 - December 2024
Tools used: Java, JUnit Testing, Data Structures, REST API, Spring Boot, Docker
- Developed a meal tracker to track expiry dates, suggest meals, and catalog groceries, reducing the burden of manual meal preparation
- Implemented custom algorithms to suggest meals based on grocery expiry dates
- Designed user interface with login, grocery, and meal entry, and server communication with Spring Boot to return lists of users' groceries and meals from a concurrent, custom JSON database
- Tracked development on GitHub, collaborated with a team of 5

Linux Server - Personal Project   September 2019 - Present
Tools used: Ubuntu Virtual Machine, Docker, SMB, Database Communication
- Installed open-source software on personal server, learning Unix command-line and SQL querying
- Implemented Linux storage server using TrueNAS and RAID, for security camera captures and personal files
- Implemented Docker to isolate applications, gaining networking/software deployment expertise
- Installed open-source software to access personal photos from mobile device from anywhere
- Exposed all services through a single proxy and SSL certificate, reducing deployment time by 90%
- Achieved image tagging leveraging a Java program to invoke API requests to a neural network model running on an Nvidia GTX 1060 GPU for fast inference