WILLIAM ZHANG

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Profile

Computer engineering student with a solid educational background and progressive experience. Skilled in Python, Java, C/C++, and HTML/CSS. Seeking a challenging computer science or engineering internship.

Education

University of Waterloo   **September 2023 - April 2028**
BASc Computer Engineering   *Waterloo, ON*
- Relevant Courses: Programming (C++), Linear Algebra, Calculus, Classical Mechanics, Project Studio

Experience

Canadian Centre for Cyber Security   **August 2023**
GeekWeek 8 Participant   *Ottawa, ON*
- Containerized a Flask web app frontend and the ZAP website security scanner in the backend in Docker to run the scanner on a user-inputted URL in the frontend
- Utilized Docker Volumes to have containers share files and data, and Dockerfile, Docker Compose, and YAML to launch the containers and run the security scanner and web app ⊙

Thai Express   **July 2023 - August 2023**
Restaurant Team Member   *Ottawa, ON*
- Served customers at the cash register while observing the camera and doorbell
- Assisted in kitchen operations by packing bowls of noodles within a required weight range

Projects

ECE 198 Project - UWaterloo | *C, Embedded Systems Programming, Circuits*   **September 2023 - Ongoing**
- Learned project documentation and applied the engineering design process to an actual project
- Programmed an STM32 Nucleo board in C to control peripheral devices such as an infrared thermometer
- The project goal is to track the temperature of a hot mug and notify the user when it has reached their desired temperature

Flight Tracker | *Python, MySQL, Shell Scripting* | ⊙   **July 2022 - December 2022**
- Utilized a Raspberry Pi and RTL-SDR (Real-Time Software Defined Radio) flight antenna to program a flight tracker
- Wrote shell scripts that collect data from the antenna and send data through a TCP port to a text file
- Developed a Python program to scan the text file, process data, and push it to a MySQL database
- Created a flight data analyzer that reads the database and outputs the busiest days and the overall average flight traffic in the area

Weather Web Scraper | *Web Scraping, MySQL, Python* | ⊙   **July 2022 - December 2022**
- Built a Python web scraper by applying the BeautifulSoup and Requests libraries to collect weather data for cities stored in a text file
- Implemented a Python program to store the data in a MySQL database upon collection
- Developed a weather analyzer that reads the database and compares city data over a user-input period

Technical Skills

Languages: Python, Java, C/C++, HTML/CSS, Shell Scripting, SQL, YAML, LaTeX
Developer Tools: VS Code, Git, Linux, Debian
Technologies/Frameworks: Firmware, Docker, Flask, Raspberry Pi, Microservices, Web scraping, Netcat
Programming: Graph Theory, Data Structures, Dynamic Programming

Interests

Technical: Algorithms, Microservices, Cloud Computing, Cybersecurity, Artificial Intelligence
Hobbies: Music, Reading, Biking, Running, Tennis, Badminton