

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 an 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