

# Marvin Wu

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## OBJECTIVE

4th year Computer Engineering student with 2 years of software engineering experience currently seeking job opportunities to transfer the skills learned from academics into meaningful real-world impact and to continually develop my professional career.

## EXPERIENCE

### Ontario Power Generation

Bowmanville, Ontario

Software Engineering Intern

May 2024 - August 2025

- Developed a Django web application that reduced the time spent on reporting plant reliability metrics by 75% (from two weeks to three days per month) by consolidating key information from five independent sources onto one web page.
- Devised a web browser automation tool using Playwright Python and MS Excel VBA scripting that completes work form submissions over 10 times faster than the original manual process while minimizing the need of human oversight.
- Designed a work rescheduling algorithm in Python that processes SQL queries, calculates weekly plant resource availability, and identifies the ideal time slots for tasks, further optimizing the current work scheduling process.
- Initiated and directed the development and deployment of four new software applications to boost the operational efficiency and user convenience of daily workflows for the entire Darlington Work Management department.
- Created and refactored over 50 SQL tables and views to fulfill ad-hoc data requests from managers and to document trends regarding industry operations and safety standards.

## PROJECTS

### Full Stack Cloud Development Capstone

June 2023 - August 2023

- Built a real-world web application serving as the portal for car dealership branches and customer reviews in the United States, achieving a 100% grade and earning my IBM Full Stack Software Developer online professional certificate.
- Created and stylized six web pages with static and dynamic elements using HTML, CSS, and React components.
- Processed RESTful API results, produced data models, and established proxy services with JavaScript, Django, and SQL.
- Constructed a DevOps pipeline by integrating CI/CD action flows and automated code linting with GitHub Actions, containerizing the application with Docker, and automating the deployment process with Kubernetes.
- Utilized database, AI, and storage products from IBM Cloud to implement CRUD cloud functions and to analyze customer review sentiments.

### Geographic Information System Software Program

January 2023 - April 2023

- Worked in a team of three to create a C++ mapping program that displays the streets, intersections, and points of interests of 10 major international cities using the OpenStreetMap database and EZGL graphics package.
- Adopted an Agile methodology by iteratively adding and revising features like local language support, auto-filling searches, and path finding functionality after receiving feedback from teammates and teaching assistants.
- Strengthened design and communication skills by coordinating and distributing work among teammates with Git.
- Tackled the Traveling Salesman Problem through a combination of Dijkstra's algorithm, 2-opt heuristics, and parallel multi-threading to score the rank of 5th fastest solution out of 91 competing teams.

## SKILLS

Languages: C++, Python, HTML, CSS, JavaScript, SQL

Frameworks: React, Django

Tools: Docker, Kubernetes, Git, GitHub, Microsoft Excel, IBM Cloud

## EDUCATION

### University of Toronto - St. George

Toronto, Ontario

Bachelor of Applied Science in Computer Engineering + PEY Co-Op

September 2021 - May 2026 (Expected)

## CERTIFICATIONS

### Full Stack Software Developer Professional Certificate

August 2023

IBM | Coursera

### C++ Certified Associate Programmer

August 2022

C++ Institute

### Python for Everybody Specialization

June 2022

University of Michigan | Coursera