Clara Wong

github.com/clarawong20 clarawong20.github.io linkedin.com/in/clarawong20 clarawong20@gmail.com

Highlight of Qualifications

- Developed an online FreeSync certification app using .NET framework and C++ as well as managed the FreeSync certification database using Python and SQL at AMD.
- Created an automated medicine dispensing machine in 24 hours using Raspberry Pi, Arduino, Python, and C++ in a fast-paced, team environment for an award-winning hackathon project.
- Developing a full-stack open source project with a team utilizing Flask, Python, HTML/CSS, SQLAlchemy, and Git in the Google Development Software Club.

Education

McMaster University September 2021-April 2027

Bachelor of Electrical and Biomedical Engineering
Relevant Courses: Data Structures and Algorithms, Signals and Systems, Logic Design, Machine Learning

Skills

Languages: C, C++, Python, JavaScript, SQL, MATLAB, Simulink, HTML/CSS, Verilog
Other Tools and Frameworks: Git/GitHub, Pytest, SQLAlchemy, Microcontrollers, .NET, Eclipse, VS Code/Visual Studio, React.js, React Native, Flask, Figma, PowerBI, JIRA, Microsoft Excel

Work Experience

Software Engineer Intern | *C++, Python, Git, Application Development, WinDbg, SQL* May 2024 – Sept 2025
Advanced Micro Devices (AMD), Co-op

- Awarded the Q2 spotlight award for streamlining FreeSync certification processes, leading to a 39% decrease in certification backlog
- Created Python scripts to parse thousands of files to update internal database; fixed bugs and updated existing scripts to parse for new data, ensuring the AMD website was properly updated with recent FreeSync certified products.
- Designed, built, and released an online FreeSync test application using C++ and .NET framework.
- Debugged display driver code in C/C++ to resolve FreeSync-related issues.

Software Research Assistant | *C, Microcontrollers, MATLAB, Simulink* May 2023 – May 2024
McMaster Centre for Software Certification (McSCert), Co-op

- Developed and debugged code for LIN communication in automotive vehicles using NXP microcontrollers.
- Implemented a FreeRTOS scheduler that is used to control and schedule the overall domain gateway.
- Repurposed a 3-phase motor simulation to record rotor information using MATLAB and Simulink.

Extracurriculars

Google Developer Software Club (GDSC) Open Source Team September 2021 – Present

- Working on the full stack development of an open-source project with a small team: creating an interactive learning platform where users complete quizzes and games to win prizes (using Python, Flask, HTML/CSS, Pytest, SQLAlchemy).
- Created back end code for the database schema, unit tests for the login and registration functions, and design mock-ups for front end using Figma.

MacAI Society Project Team September 2024 – May 2025

- Collaborated with a team to create a traffic simulator (TrafficLightRL) that leverages reinforcement learning to dynamically optimize traffic light control systems; using SUMO, OpenAI Gymnasium, and Stable-Baselines3.
- Presented our project to a group of judges at the Canadian Undergraduate Conference on Artificial Intelligence.

Projects

Pill Drop | *C++, Arduino, Raspberry Pi* January 2023

- Designed an automated medication dispensing machine at the Deltahacks 9 hackathon using Raspberry Pi, Arduino, Python, C++, and I2C communication in a group of 4.
- First place winner of the Med X Insight Challenge, previously worked with Med X Insight to further develop Pill Drop.