

# MICHAEL ELLIOT WONG

Toronto, Ontario

☎ +1(647)686-8400 ✉ [wongm3079@gmail.com](mailto:wongm3079@gmail.com) 🌐 [michaielewong.ca](http://michaielewong.ca)

## Education

**Bachelor of Engineering Science, Computer Engineering**

**Sept 2019 - April 2024**

*Western University, Dean's Honour List (1st Year)*

*London, Ontario*

## Technical Skills

**Languages:** C/C++, Java, Python, VHDL, ARMv7, Arduino, MATLAB and Simulink

**Developer Tools:** Windbg, JTAG Hardware Debug Tool, VS Code, IntelliJ, Quartus Prime, EAGLE PCB, MicroCap

**Hardware Prototyping:** Simulation Waveform Analysis, Oscilloscope, Multimeter, Soldering, Breadboard Circuits

## Employment Experience

**Radeon Technology Group Software Quality Assurance**

**May 2022 - August 2023**

*Advanced Micro Devices, Inc.*

*Markham, Ontario*

- Developed, defined, and executed automated and manual test plans which covered functionality, performance, reliability, and usability for Navi3x programs
- Automated System setup processes using power shell and batch files which reduces system setup time by 50%
- Identified various bugs and created JIRA tickets for issue tracking
- Diagnosed software defects with Windows Debugger (WinDbg), registry level debug tools, and internal tools
- Effectively communicated and addressed problems and issues found during the various testing phases
- Mentored new co-ops and provided feedback to streamline the new-hire onboarding process
- Received Multiple Spotlight and Co-Op Recognition awards

## Engineering Projects

**Water Absorption Data Parser | Python**

**March 2023**

- Created a program to parse water absorption data to be compared to government drinking water quality guidelines
- Analyzed datasets by sorting, filtering, and grouping pertinent information using the Python Pandas Library
- Utilized the Python Matplotlib library to display relevant data through tables, charts, and graphs
- Consulted and proposed numerous solutions for desired data formatting with the client

**COVID Safety Smart Room Controller | C, ARMv7**

**Feb 2021 - April 2021**

- Developed a solution to track and maintain the number of occupants in a room to adhere to COVID safety guidelines
- Implemented interrupts, timers, counters, and 7-segment displays into final design using ARMv7

**Error Correcting Transmitter and Receiver | Quartus Prime, VHDL**

**March 2021**

- Implemented a PISO shift register to transmit a 20-bit encoded message to a SIPO shift register
- Applied the Hamming code algorithm to detect error with parity bits
- Implemented transmitter and receiver using VHDL

**Multi-FA Security Lock | Arduino, Soldering, Breadboard Prototyping, EAGLE PCB**

**March 2021 - April 2021**

- Designed a prototype utilizing actuators and sensors to improve the standard design of a digital safe
- Implemented the design on Tinkercad, then soldered and constructed all components on a breadboard
- Designed an Arduino shield layout using EAGLE PCB schematic and board

**Project Retina | Java, Arduino, Onshape**

**Jan 2020 - April 2020**

- Developed a system to improve quality of life for clients with severe intellectual disabilities
- Designed and created a GUI interface in Java
- Generated a wireless communication system to receive input from an eye tracker and to deliver signals to external hardware subsystems
- Managed a team of students to ensure deadlines were met and the project stayed within budget

## Personal Projects

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### PC Benchmarking | *Python, Microsoft Excel, PC Building*

Sept 2021 - May 2022

- Built multiple PC variations to test different combinations of components to maximize performance
- Utilized Unigen Heaven, Furmark, Cinebench, and Triple-A games to stress test PC components
- Utilized HWiNFO to record sensor status of all components onto a .csv file during benchmarking
- Developing Python scripts to automate filtering of relevant benchmarking results

### Network Attached Storage | *FreeNas, Linux, PC Building*

June 2020

- Configured and built a PC with power-efficient parts designed to be active 24/7
- Installed a Linux based server utilizing FreeNas
- Configured multiple drives in a RAID 1 array
- Created multiple private user accounts including private and hidden directories

## Interests

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Esports, Boulderling, Self-Teaching Musical Instruments, Producing Music