MICHAEL ELLIOT WONG

Toronto, Ontario

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Education

Bachelor of Engineering Science, Computer Engineering   **Sept 2019 - Present**
Western University, Dean's Honour List (1st Year)   *London, Ontario*

Engineering Projects

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

PC Benchmarking | *Python, Microsoft Excel, PC Building*   **Sept 2021 - Present**
- 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

Extracurricular Experience

External and Esports Executive   **Oct 2021 - Present**
Western Electronic Gaming Association   *London, Ontario*
- Sourced new collaboration opportunities and communicated them with the Vice-President
- Moderated the discord server with over 1,400+ members and helped promote WEGA during events

Grounded Low Voltage Team member   **Sept 2021 - Present**
Western Formula Racing   *London, Ontario*
- Learning the implementation of a CAN bus for the wiring harness
- Analyzing archived circuit schematics of the charge cart for the Accumulator

Technical Skills and Interests

Languages: Java, C, Arduino, MATLAB and Simulink, VHDL, ARMv7, Cadence, Python
Developer Tools: VS Code, IntelliJ, Quartus Prime, EAGLE PCB, MicroCap, Onshape
Operating Systems: Microsoft Windows, macOS, Linux, UNIX
Hardware Prototyping: Multimeter, Breadboard Circuits, Oscilloscope, Soldering
Interests: Esports, Producing Music, Self-Teaching Musical Instruments, Snowboarding