Daniel Xie

📞 +1 (519) 300-2863 ✉ dxie33@uwo.ca 🔗 danielxie.me in linkedin.com/in/daniel-xie-2001

EDUCATION

Bachelor of Engineering Science, Computer Engineering   **September 2019 - Present**
Western University, London, ON

WORK EXPERIENCE

Biophysics of Communication Lab - Research Assistant   **October 2021-Present**
Western University, London, ON

- Developing and troubleshooting a custom Windows sound editor and generator application that integrates OCT (Optical Coherence Tomography) imaging system with data acquisition equipment and an audio system. Implemented with Python and Matlab.
- Set project timelines, prioritized tasks, created diagrams for ideation and communicated check-in updates to the head researchers to ensure that the project was on track.
- Improved workflow, data sampling rate precision and data acquisition efficiency.

PROJECTS EXPERIENCE

Western Formula Racing - Traction/GLV Team Member   **September 2019-Present**
Western University, London, ON

- Developed and designed a DC-DC converter PCB (500V to 12V) with teammates using EAGLE AUTODESK that was compliant with the Formula SAE safety guidelines.
- Updated the Power Distribution Module PCB design utilizing undervoltage protection circuits to prevent overdischarge of the lithium-polymer battery cells.
- Designs helped the team earn third place in the Formula SAE North American EV Presentation Event.
- Supported subsystem projects with duties including: sourcing components and generating BOMs, communicating design concepts to teammates, generating documentation, advising PCB assembly and troubleshooting.

Western AI - Summer/Gideon Projects Member   **September 2019-May 2021**
Western University, London, ON

- Developed and troubleshooted a Long Short-Term Memory neural network model with a business applications team to predict stock prices.
- Developed, trained and troubleshooted VGG16 neural network models with two teams that achieved $\sim$95% accuracy in diagnosing different Alzheimer's disease stages from MRI images and achieved $\sim$92% accuracy in diagnosing 14 different diseases X-ray scans.

COVID Safety Smart Room Controller   **February 2021 - April 2021**

- Developed embedded software in C for an ARMv7 microcontroller to track the number of occupants in a room and enforce COVID-19 safety guidelines.
- Implemented using peripherals such as timers, interrupts, counters and seven-segment displays.

SKILLS

- **CAD/ECAD:** Eagle Autodesk, Saturn PCB Design Toolkit, Onshape, SolidWorks, Cadence Virtuoso
- **Prototyping:** Arduino, ESP32, CANBUS, Breadboard Circuits
- **Programming Languages:** Python, Java, MATLAB, C, C++, VHDL, Rust, Bash, ARM Assembly
- **Software:** IntelliJ, Quartus Prime, Microsoft Visual Studio Code, Microsoft Visual Studio, Google Colaboratory, Jupyter Notebook, Android Studio, MATLAB, Simulink, Arduino IDE
- **Tools/Skills:** Digital Oscilloscope, Multimeter, Function Generator, Soldering
- **Frameworks:** PyQt5, Tensorflow
- **Operating Systems:** Windows, Linux, Unix

OTHER INTERESTS

Wireless Microcontrollers, Formula 1 Racing, Cooking and BBQ, Basketball, PC Gaming