Christopher Leo, B.Eng

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QUALIFCATIONS

- ❖ Complete knowledge of programing languages such as JAVA, C
- ❖ Intermediate knowledge of programing languages such as PYTHON, MATLAB, ASSEMBLY, SIMULINK, HTML/CSS and basic knowledge in VHDL & JAVASCRIPT
- ❖ Well diverse in using microcontrollers such as STM32, AVR, PIC32
- ❖ Experienced in communication protocols such as i2C, i2S, SPI, UART/USART
- ❖ Extensive knowledge in control theory, power electronics, signal processing, digital/analog circuits
- ❖ Working knowledge of TCP/IP Stack (TCP & UDP) and DSPs (Fixed & Floating Point)
- ❖ Knowledge of computer aided engineering program such as SOLIDWORKS, AUTOCAD, KEIL uVISION, LABVIEW

WORK EXPERIENCE

Software Engineer, Your Home AV – Toronto, Ontario   September 2019 – September 2020
- ❖ Your Home AV is a consulted & design company in the Home Automation field
- ❖ Creating several programs for clients in a timely & professional manner including documentation & tutorials for the end user
- ❖ Deploy code on-site & execute routine system test
- ❖ Closely collaborating with teams of the installation, sales and alongside the clients to ensure competitive pricing, the needs of the client, and site installation are met
- ❖ Experience in service calls to perform installations, programming, troubleshooting, upgrades to client's system

Applications Engineer, Black Diamond Blinds – Toronto, Ontario   December 2018 – September 2019
- ❖ Black Diamond is a manufacturing & installation company for shading solutions while innovating the shade/blinds/curtain field
- ❖ Used Solidworks to construct a 2D & 3D model of product along with renderings
- ❖ Created blueprints & assembly instructions to be read by end-users and employers
- ❖ Able to create multiple prototypes and deliver to end user for testing and manufacturing stage

EDUCATION

- ❖ **Bachelor of Engineering, Engineering Systems & Computing**
  University of Guelph – Guelph, Ontario   September 2013 – December 2017

RELEVANT PROJECTS

Wireless Class D Amplifier
- ❖ Integrated the fundamentals of DSP, Control Theory, Power Electronics, TCP/IP Stack, Bluetooth classic, Communications protocols, mesh networking, OTA, IR Control
- ❖ Implemented 2nd order Butterworth bandpass filter. Uses a compressor & expander DSP algorithm to autonomously control the gain of the audio signal based on threshold
- ❖ Interfaces over the i2S bus for audio communication and UART for debugging purposes
- ❖ Uses the TCP/IP stack to transfer audio UDP packets, and also data for a web portal

Autonomous Snow Removal Robot with LiDAR
- ❖ Interfaced and implemented the algorithm for the robot to avoid collisions and establish a perimeter to "plow" within. Once done the robot was able to go back "home" to its charging dock

Car Suspension System emulator with Real-Time GUI
- ❖ Emulated a passive, semi – active and active suspension system from a transfer function, then simulated via an embedded C Application to develop a real – time GUI to analysis the system