

Soran Ismail

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WORK EXPERIENCE

Wabtec Corporation

May 2021 – April 2022

Mechatronics Engineer Intern

London, ON

- Designed and implemented software for bench test equipment (BTE) to test various functionalities of event recorders including JTAG, real time clock, serial number, crash hardened memory format, ethernet
- Developed software for verifiers that tested analog, digital and frequency input (PWM) PCBs on event recorders
- Increased available memory on BTE by **22%** by reconstructing current tools to utilize TCP rather than RS-485 communication for power supply control
- **Leveraged knowledge in** ARM Cortex architecture, embedded linux, embedded C/C++ software, oscilloscopes, Wireshark, and JTAG/SWD debugging interface

Department of Earth Sciences, Western University

May 2020 – Apr 2021

Software Engineer

London, ON

- Migrated app to Google Maps from Mapbox API, increasing battery life by **34%**
- Identified memory leaks in objective-C using XCode debugging tools and fixed them by eliminating retain cycles
- **Leveraged knowledge in** automatic reference counting, Google Maps, Mapbox, Scrum & Agile and Model View Controller design pattern

Magna Seating

May 2019 – Sep 2019

Manufacturing Engineer Intern

London, ON

- Designed and constructed schematic for torque robot control panel, consisting of safety relays, PLC IO modules, and other rack devices for electrical safety authority approval
- Utilized SolidWorks and 3D printing to reduce safety and ergonomic issues by **88%** as they arose on the assembly line
- Developed quality control program using Python to detect failures in robot inspection pictures requiring further verification
- **Leveraged knowledge in** HTML, CSS, Javascript (ES6), Docker, Selenium, pyTesseract, and Fanuc robots

EXTRACURRICULAR

FIRST Robotics Competition

Sep 2016 – Present

Lead Programmer, Mentor

London, ON

- Prepared programming workshops to ensure all students had a working knowledge of Java and Git Workflow prior to the start of the season
- Developed strong understanding of mechatronic systems, contributing heavily to the design process occurring within a six-week time frame
- Incorporated encoders, ultrasonic sensors, gyroscopes, and vision tracking in order to prepare autonomous mode using PID control

EDUCATION

University of Western Ontario

Sep 2018 – Apr 2023

Bachelors of Engineering Science, Electrical Engineering

London, ON

Bachelors of Science, Major in Computer Science

SKILLS

Languages : C/C++, C#, Java, Python, JavaScript (ES6), Objective-C, MATLAB, VHDL, ARM & x86 Assembly, FreeRTOS

Hardware : Oscilloscopes, Multimeters, Soldering, Sensors, Pneumatics, ARM Cortex, Serial Communication, FPGA