Daniel Robson

University of Waterloo, 2B Mechatronics Engineering
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WORK EXPERIENCE

Embedded Systems Engineer | Savormetrics

May. 2019 – Aug. 2019 | Mississauga, ON

- Automated product testing procedures to control multiple devices using serial port communication in bash, increasing the rate of data collection by over 1000%.
- Created visualizations using Python that organized complex sensor output data for quick analysis by the AI modelling team.
- Developed Arduino firmware to simultaneously test a variety of sensors, greatly decreasing testing time.
- Designed and printed various 3D models of product components for precise testing by the hardware team. These designs include a sensor casing that was incorporated into the final design.

Software Developer | Teranet

Sept. 2018 – Dec. 2018 | Mississauga, ON

- Designed an offline testing environment to mimic registry responses using C# and HTML, allowing the international team to perform uninterrupted application testing.
- Uncovered a fix to a major ongoing server crashing issue through developing a Windows Service and PowerShell script to restart the program at designated times.
- Embedded an exportable SQL table displaying the health of every webpage and service into an existing web application, allowing users to easily monitor server health status.

Mechanical Engineer | Linamar Corporation

Jan. 2018 – Apr. 2018 | Guelph, ON

- Designed many mechanical fixtures using SolidWorks, including one that measures 6 different product specifications simultaneously. This specific fixture increased the efficiency of the process by over 300%.
- Redesigned the welding cell's ventilation system using AutoCAD. The new system was implemented and effectively prevented welders from breathing harmful chemicals.
- Reprogrammed various faulty VBA macros that were critical to the company's day-to-day operations.

PROJECTS

Line Following Robot | Sept. 2019 (Ongoing)

- Building a line following robot through PCB soldering and embedded C programming for Sensors and Instrumentation course.

Google Image Downloader | Jul. 2019

- Developed a Python script capable of downloading up to 500 images corresponding to a query search and compares image histograms to remove duplicates. This creates large datasets for machine learning modelling.

Operation Robot | Dec. 2017

- Programmed a LEGO robot in C capable of playing a modified version of the board game Operation.

TECHNICAL SKILLS

Proficient

C/C++, Python, C#, MATLAB

Working Knowledge

Assembly, SQL, Java, JavaScript

CAD

SolidWorks, AutoCAD

COURSEWORK

- Algorithms and Data Structures
- Sensors and Instrumentation
- Microprocessors and Digital Logic
- Computer Structure and RTOS

HOBBIES

- Piano
- Foosball
- Ping Pong
- Billiards
- Soccer
- Basketball
- Cross Country Running