

Scott Lang

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Highlights of Qualifications

- Enrolled in level 4 of the 4-year Electrical Engineering co-op program at McMaster University
- Excellent teamwork & communication skills gained through various extracurricular involvements
- Experience with analog and digital circuitry and logical systems, both analog and digital, gained through course and lab work
- Strong problem solving and analytical skills developed while working as an Equipment Engineering co-op student

Education

Bachelor of Engineering, Electrical Engineering (Co-op)

April 2023

McMaster University, Hamilton ON

- Current cumulative grade-point average of 3.0/4.0

Experience

Equipment Engineering Student

May – August 2020

Hydro One Networks Inc., Toronto ON

- Analyzed designs submitted by vendors for future installation at specific electrical substations
- Reviewed and approved daily tendered documents based on price, technical analysis, and competency of design from different vendors for new equipment purchases
- Edited and drafted several standards and specifications for various materials for installation, maintenance, or tender purposes
- Assigned equipment orders for specific projects based on the scope of work, technical needs, and cost of equipment
- Processed equipment into the internal asset registry system using SAP software

Design Engineering Student

May – August 2021

Orthoplex Solutions Inc., Toronto ON

- Collaborated alongside the project coordinator to target new business and assisted with mechanical design services
- Brainstormed ideas regarding client needs and presented options using Microsoft PowerPoint
- Designed a rotating seat for rowing machines with increased degrees of freedom, allowing the user to benefit from a more dynamic workout and increasing efficiency of 40% by modelling the seat using Autodesk Inventor to create a dynamic simulation for visual representation
- Implemented the seat using Autodesk Inventor and created a dynamic simulation for visual representation

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Technical Projects

Signal Convolution Simulation

Spring 2022

- Designed and implemented a practical simulation using MATLAB for a variety of signals convoluted in different environments
- Gained a stronger understanding of different frequency contributions and system responses to varying inputs
- Ascertained the usefulness of simulation when encountered with a black box problem
- Results provided sufficient information to comprehend the system behavior

Smart Wearable Intelligence for Sleep Quality

Fall 2021

- Created a web app hosted on E2C Amazon Web Services to display analysis of the heart rate, bio signals, and data from other wearable sensors stored on a MySQL database
- Wrote app in Node.js and included dc.js in the front-end library for interactive charts
- Utilized supervised deep learning with MATLAB, to identify different stages of the sleep cycle

Extracurricular Activities

High Voltage Team Lead | McMaster University

Fall 2019 - Present

- Designed the high voltage electrical powertrain for the solar car project using AutoCAD
- Built a test bench to be able to physically test as well as simulate track conditions for specific races
- Ordered and installed specific high voltage equipment such as IGBTs, MOSFETs, batteries and supercapacitors.

Student Volunteer | May @ Mac

Fall 2020

- Provided information to high school students and their families about McMaster, the Faculty of Engineering and the ECE program

Stewardship Youth Ranger | McMaster University

Summer 2018

- Assisted with the removal of invasive species, water treatments, and habitat reconstruction for the Region of Halton
- Developed strong written and verbal communication skills through the production of weekly reports, presenting the final summary of work done to Supervisors, Team Leads, and other members of the Stewardship Youth Ranger program

Skills

Programming:

- Java/Javascript
- MATLAB
- LAVBIEW
- Python
- C
- SQL
- Assembly

Laboratory:

- Soldering and wiring circuits using PCB's breadboards, and jumpers

Software:

- Microsoft Word, Excel & Access
- Simulink
- AutoCAD
- Pspice
- Arduino

Safety

- WHIMIS Trained
- Standard First Aid Certified