SAYON KATHIRGAMANATHAN

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SUMMARY OF SKILLS

- **Programming:** Python, C, C++, Java, MATLAB, Arduino, Maple, Minitab
- **CAD Software:** AutoCAD, AutoDesk Inventor, SolidWorks, ProDesktop, Inkscape
- **Technical Software:** Altera Quartus, PSpice, MPLab, CodeWarrior, Adobe Captivate
- Proficient in Microsoft Word, Excel, Publisher, Powerpoint
- Trained and certified in machine workshop safety, soldering
- WHMIS certified

EDUCATION

Bachelor of Engineering, Electrical Engineering (CO-OP) | McMaster University

Class of 2021

- Relevant Projects
  - Created a device using an Esduino that was programmed to display, in binary, the angle at which an accelerometer was held (received A+)
  - Built a working radio transmitter by soldering together electrical components (received A+)
- Relevant Courses
  - **General Engineering:** Engineering Design and Graphics, Engineering Computation, Engineering Profession and Practice, Engineering Sustainability and Ethics, Engineering Economics
  - **Mathematics:** Engineering Mathematics I, II, III & IV, Probability and Statistics for Engineering, Advanced Probability and Random Processes
  - **Electrical Engineering:** Logic Design, Principles of Programming, Introduction to Electrical Engineering, Data Structures, Circuits and Systems, Electrical Devices and Circuits I & II, Electromagnetics I & II, Signals and Systems, Microprocessors, Introduction to Control Systems, Energy Conversion, Communication Systems

WORK EXPERIENCE

Electrical Rail & Transit Engineer (CO-OP) | Hatch Ltd.

MAY 2019 – APRIL 2020

- Worked on AutoCAD detailed design and drafting of signals systems for Ontario Northland Railway and Metrolinx as well as designing signal equipment room layouts for Ottawa's Confederation Line Extension project
- Performed engineering calculations with regards to grade crossing design and breaking analysis
- Provided testing support for commissioning of Canadian Air Transport Security Authority's Smart Lane security systems
- Designed training modules using Adobe Captivate by conducting research and coordinating with a team of engineers
- Assisted team leads with project management duties by using Microsoft Excel to create effective spreadsheets, forms, and databases to input, track, store, and retrieve data
- Assisted in the preparation of technical documents and presentation materials

EXTRACURRICULAR ACTIVITIES

Controls Team Member | McMaster Baja Racing Team

SEPTEMBER 2018 – APRIL 2019

- Designing and building control mechanisms for a Baja Race car such as the steering wheel and braking system using SolidWorks
- Designing a mechanism that follows BAJA SAE competition rules and efficiently mounts a throttle cable to the engine
- Constructing car parts in a machine shop using various metal and wood working tools such as bandsaws and milling machines

Electrical (Software) Team Member | McMaster Solar Car Project

SEPTEMBER 2017 – APRIL 2019

- Designing and building circuits that are used to activate solar cells to power a car
- Working with Arduino and Pickit chips with MPLab to program solar cells and display screens that are used for the car