

EDUCATION

Bachelors of Computer Engineering McMaster University

09/2017 – 04/2021

- Data Structures, Algorithm and Discrete Math in JAVA
- Circuits and Systems: Oscilloscope, Power Supply, Esduino.
- Python Scripting
- Object oriented programming in C++
- Electronic Devices and Circuits

HARDWARE

Co-Founder & Integration Lead McMaster Hyperloop Team

01/2019 – 09/2019

- Oversee engineering operations for software and electrical development of the pod
- Guiding each sub-team to write an effective report for the technology implemented in the pod
- Creating proof of concept electrical devices for verification
- Responsible for establishing communication between two MCUs using 12C
- Independently built a successful partnership with Powersys-Solutions

Accelerometer Data Acquisition Microprocessor Course

01/2019 – 04/2019

- Successful conversion of Analog to Digital signals from Accelerometer to Esduino Xstream Microprocessor
- Established serial communication between the microprocessor and Matlab
- Proficiently used Assembly, C and Matlab together to build this system

Rocket Structure Designer McMaster University Rocketry Team

06/2018 – 09/2019

- Documented design-analysis of launch-rails for Sounding Rocket
- Led selection of rocket's nosecone via hand-computation/simulation
- Modeled rocket air-frame & nosecone on AutoDesk Inventor

Cooling System Designer McMaster University Formula Electric

11/2017 – 04/2018

- Modelled case for electromechanical sensor with SolidWorks
- Installed Formula Electric Car parts (e.g. brakes) using Workshop Machinery
- Designed sensitive components (e.g. radiator frame, pump brackets)
- Gained crucial experience by soldering sensitive components for the team

SKILLS

C/C++

Java

Python

OpenCV

Linux

MATLAB

OOP

HTML

Assembly

Bootstrap

Raspberry Pi

Arduino

Esduino uC

Soldering

AutoCAD

AutoDesk Inventor

Solidworks

Photoshop

Microsoft Office

CAN Communication

Hardware-In-Loop

KiCad

AutoDesk Eagle

SOFTWARE

L A S E R for Hack The North (Sept 2019)

- An award winning artistic robot built for photographers to automate Light Painting
- Designed an edge detection program which imports any image and finds a general outline as well as important features.
- Developed an interface between motorized laser and DSLR Nikon D3400 camera for smart setting management.

Delta Draw for DeltaHacks V (Jan 2019)

- A mechanized artist robot that draws any imported image onto a whiteboard using a marking in under 40 mins
- Used FLASK for testing and developing a local server
- Designed a local tunneling system through NGROK for file transfer
- Tested the viability of a piece of code used to extract etch-a-sketch coordinates through IMAGE PROCESSING

Web Scraper for StarterHacks (Jan 2019)

- Python based automated data-extraction tool for students' University Accounts
- Displays marks, potential learning curve, current course average, and other important information

Face Identification (Dec 2018)

- Used OpenCV, Numpy & PIL to write a facial identification program
- Detects face, eyes, and smile

ACHIEVEMENTS

Winner of Hack The North (Sept 2019)

Awarded at Waterloo University's annual hackathon against 400+ teams

Winner of DeltaHacks V (Jan 2019)

Awarded at McMaster University's annual hackathon against 160 teams

Innovation Award: DeltaHacks V (Jan 2019)

Won one of two most innovative product