

Education

University of British Columbia

BASc Engineering Physics

2019 Trek Scholarship Recipient

2017 – Present

Vancouver, BC

Work Experience

TRIUMF

Co-op Student

Jan. 2019 – April 2019

Vancouver, BC

- > Optimized reflector geometry on photomultiplier tubes for Hyper Kamiokande, JPN. (MATLAB/C++)
- > Designed a large permanent magnet spectrometer (up to 2 Tesla) for a new experiment in FERMILAB, USA. (COMSOL)
- > Ran large simulations using a local cluster and Compute Canada Servers
- > Presented at meetings on average three times a week

Projects

Machine Learning Robot Simulation

Sept. 2019 - Present

- > A simulated robot competition where our robot must use computer vision to ticket illegally parked cars from license plate data
- > Simulated with ROS and trained with the use of Keras and TensorFlow

ENPH 253 Robot Competition

May 2019 - Aug. 2019

- > A completely autonomous robot tasked with navigating to pillars of different heights, picking up stones on the pillars, returning home and placing the stones accurately in a tilted gauntlet.
- > Competed against 15 other robots and went undefeated
- > Programmed arm movements and navigation in C++
- > Designed with SOLIDWORKS
- > Built multiple H-Bridges and control circuits

Boggle Player

November 2018

- > Implemented a Graph ADT in Java to calculate the maximum score of a Boggle board game using a dictionary text file

Skills

Languages C++/C, Python, Java, MATLAB, HTML/CSS

Software Linux OS, ROS, SOLIDWORKS, COMSOL Multiphysics

Hardware Soldering, Hand/Power tools, Oscilloscope, Function Generator

Extracurriculars

Vaisakhi Parade Volunteer for a local cultural event

Sports Play recreational Ice Hockey and Water Polo