Abhi Patel

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EDUCATION

UOIT

BEng in Mechatronics Engineering
Expected on Apr 2021 | Oshawa, ON
President's List (All Semesters)
Major GPA: 4.08 / 4.3

LINKS

Blog:// **abhipateldotblog.wordpress.com**
Github:// **B33Boy**
LinkedIn:// **abhi-patel-0**

COURSEWORK

UNDERGRADUATE

Calculus I and II
Linear Algebra
Engineering Design
Statics and Dynamics
Electrical Engineering Fundamentals
Object-Oriented Programming
Differential Equations
Concurrent Engineering and Design
Circuit Analysis
Introductory Electronics
Numerical Methods
Solid Mechanics
Statistics and Probability

OTHER COURSEWORK

COURSERA

Machine Learning

SKILLS

PROGRAMMING

Languages
Python • Java • C++ • Matlab • HTML • CSS • JavaScript
Operating Systems
Windows, Linux
Libraries/Frameworks
ROS • OpenCV • Numpy • Matplotlib • Pandas • Keras • Tensorflow

CAD
SolidWorks • DraftSight
Excellent understanding of engineering project management, concurrent and traditional design principles, and proficiency with MS Project

EXPERIENCE

CAROBOT LEARNING AND RESEARCH ORGANIZATION

Hardware Developer
May 2018 - August 2018 | Markham, ON

- Applied the engineering design process to develop an Arduino powered robot car for students to assemble during class
- Strengthened communication skills through teaching the CR101, CR102, and CR201 Robotics and Programming classes targeted at youth ages 9-12
- Created the logistics and lesson plans for the Summer Camp Robotics classes
- Supervised volunteers to increase effectiveness in teaching

PROJECTS

DEEP LEARNING SELF-DRIVING RC CAR July 2018 - August 2018

- Modified an RC car by attaching a raspberry pi to stream camera and ultrasonic sensor data to a computer over a TCP connection
- Solved a multi-label classification problem via the implementation of a neural network in Keras to output steering direction from the image inputs
- Interfaced an Arduino with the RC controller to send signals which cause car to move

ACHIEVEMENTS

2017 UNIFOR Local Scholarship
2017 Calculus and Vectors 12U Award
2017 Computer Engineering 12O Award
2016 Physics@MAC Mcmaster Physics Competition Honourable Mentions

EXTRACURRICULARS

UOIT MARS ROVER CLUB October 2017 - Present

- Tested systems consisting of Stereo Cameras, and a LIDAR unit on the Jetson TK1 embedded development board
- Executed SLAM navigation algorithms on ROS to map local terrain
- Interfaced Arduino with high power motors and tested motor control algorithms
- With guidance from the Senior Programming Executive, directed members to complete various tasks concurrently
- Designed ROS coding challenges for potential new club members

UTRAHACKS - HACKATHON November 2018

- Designed a robot that uses OpenCV to detect drowsiness and shoot water to wake up the target.

UOTTAHACKS - HACKATHON January 2018

- Collaborated with other engineering students to successfully create an augmented reality game with OpenCV

THACKS2 - HACKATHON October 2017

- Worked in a team to create Sociafy, a web app that organizes music playlists