Mithilan Muralitharan

Mechatronics Engineering & Management Graduate

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Education

September 2015 – April 2020

Bachelor of Engineering – Mechatronics Engineering and Management

McMaster University, Hamilton ON

- Received Deans' Honour List for multiple years
- Strong communication, organization and time management skills developed through course work
- Excellent teamwork and leadership abilities developed while working on multiple group projects

Experience

May 2019 – Present

Independent Contractor | Longan Vision Corp., Hamilton ON

- Working in a team of six to create a modular device that would allow fire fighter helmets to stream visuals of emergency situations to a web application accessed by main centre
- Primarily focused on software development, specifically front-end and back-end development of the web application
- Working with Apache, PHP, Flask, AWS (Elastic Beanstalk, RDS and S3)

January 2020 – April 2020

Teaching Assistant | McMaster University, Hamilton ON

- Working with tutorial instructor to guide students through the use of Python to complete laboratory objectives in the Engineering Computation course
- Grading students' work and providing quality feedback in a timely and organized matter

September 2018 – December 2018

Teaching Assistant | McMaster University, Hamilton ON

- Worked with tutorial instructor to guide students through the engineering process in creating their final products for clients in Engineering Profession and Practice course
- Graded students' work according to engineering standards in a timely and organized matter
- Evaluated as an excellent (effective, prepared and professional) teaching assistant by instructional assistant intern

Key Projects

May 2020

Resume Website

- Using HTML, CSS and JavaScript to design and deploy a functional website for potential employers to view

January 2019

Automatic Fish Feeder

- Used Arduino to implement a fish feeding device where user can select number of fish from a range

June 2017

Password Manager

- Created a C program that would store a user's password for various websites and can also generate a password for a website if the user desires

Skills

Programming Languages:

- C, C++
- HTML/CSS
- JavaScript
- SQL
- Python
- Java

Programs:

- Word, PowerPoint, Excel
- Adobe Photoshop
- NI Multisim, Labview
- MATLAB, Simulink
- CAD: Inventor, NX

Hobbies

- Making animated shorts/clips
- Creating graphic designs

Other Projects

June 2019

Obstacle Avoiding Robot

- Built a RC car that used Arduino to avoid obstacles in its view as it drove around

March 2019

Wind Turbine Assembly

- Created a multi-part CAD assembly using Siemens NX while also providing kinematic, CAM and CAE simulation of the assembly.

January 2019

Guess the Movie Game

- Created a Python program that would use a movie database API and ask the user to guess a daily trending movie based on description of the movie

September 2018

ARM CORTEX-M Applications

- Built and programmed various applications including a PWM Fan Controller

September 2018

Marketing Management Project

- Worked with a veterinary clinic to determine where it can improve its business by analyzing its business management and financial records. Concluded the project by providing the clinic with a full report outlining recommendations and why it was deemed necessary.

March 2017

Tracking ADC Converter

- Designed a 4-bit tracking ADC, simulated circuit using NI Multisim and tested circuit using NI myDAQ

September 2016

Dynamics Systems Design Problem

- Designed a system which would lift a client specified mass at required speed. A formal engineering report was created to conclude project.

September 2015

CD-ROM Drive Read Head

- Worked in a team of three. Created 2D drawings, created CAD parts in Inventor, simulated in MapleSim, 3D printed and assembled.