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## **Education**

University of Toronto St. George Campus

Sep 2015 - May 2019

• Bachelor of Applied Science in Engineering Science (3<sup>rd</sup> Year Robotics Option)

• Cumulative GPA: 3.94/4.00

 Relevant Coursework: Data Structure and Algorithms, Digital and Computer Systems, Operating Systems

# **Experience**

# Dynamics Graphic Project

May 2017 – Aug 2017 Toronto, Ontario

## University of Toronto Project Holodeck

Sept 2017 – Present Toronto, Ontario

## CUHK Institute of Precision Engineering

May 2016 – Aug 2016 Hong Kong, China

### Mechatronic Design Association

Sept 2016 – May 2016 Toronto, Ontario

#### C++ Software Developer

- Calibrated and debugged camera/projector setups using the OpenCV library in C++.
- Developed structured light imaging functions to display and compare optimized patterns for depth calculations.
- Implemented several image analysis algorithms to calculate object depth in a scene.

#### C#/Unity Software Member

- Interfaced serial communication between Unity and an omnidirectional treadmill to mimic walking in VR space.
- Created test environments to debug project prototypes.

#### **Prototype Development Researcher**

- Wrote C code for Arduino to achieve precise control of a mechatronic arm.
- Presented to research team improvements/insights analyzed from collected model movement data, which are now implemented for next prototypes.

#### C++ Software Developer

- Developed a C++ program using OpenCV in Linux for the movement of an autonomous submarine in response to colored buoys.
- Lead and managed the buoy software sub team by organizing the program structure and allocating weekly tasks.

# **Projects**

# **Kaitan Word Learner** JavaScript, jQuery

 Developed a chrome extension which assists users in language learning by compiling statistics of encountered words.

# Ad Data Visualization

C#, Unity

- Developed an augmented reality visualization program for advertising data.
- Implemented a predictive model for future trends using a neural network.

## Skills

Proficient in: C++, Python, JavaScript

**Experience with:** C, C#, Java, HTML, CSS, Arduino

Tools: Linux, Git, Visual Studio, Unity

# **Awards and Accomplishments**

- 4x University of Toronto Dean's List
- Engineering Science Pong Al Tournament 2015 1<sup>st</sup> Place
- Hack the Valley 2017 MLH Hack Harassment Award Winner
- Hack with IX 2016 3<sup>rd</sup> Place