

# GARY LEUNG

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## Education

**University of Toronto** **CGPA: 3.94/4.00**

**BA.Sc. in Engineering Science, 3<sup>rd</sup> Year Robotics**

- Coursework: *Data Structure and Algorithms*, *Operating Systems*
- *Machine Learning* (Coursera), *Deep Learning* (Coursera),  
*Computer Vision: Algorithm and Applications* (Szeliski)

## Skills

**C++, *Python***, C, JavaScript

OpenCV, scikit-learn,

Linux, Git, MATLAB

## Experience

**Dynamics Graphic Project - C++ *Software Developer***

May – Aug 2017

- Rebuilt imaging features for research system to display and compare optimized patterns for structured light imaging using the OpenCV library in C++.
- Implemented image analysis algorithms for depth determination in 3D scene reconstruction.
- Updated research system with new user-centric features such as automatic data collection and error analysis functions.

**CUHK Institute of Precision Engineering - *Prototype Development Researcher***

May – Aug 2016

- 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.

## Projects / Extracurriculars

**Autonomous Bottle-Sorting Robot**

Jan-April 2017

- Designed and implemented a finite-state-machine-decision algorithm in C to perform autonomous bottle sorting. Ranked 4<sup>th</sup> out of 68 teams

**Hack with IX - *Ad Data Visualization/Neural Network***

Nov 2016

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

**Mechatronic Design Association - *Computer Vision Team***

Sept 2015 – Mar 2016

- Constructed a view scanning algorithm with Hough Transforms and Canny Edge Detection in OpenCV in C++ to direct autonomous submarine movement.
- Lead and managed the buoy software sub team by organizing the program structure and allocating weekly tasks.

## Awards & Accomplishments

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