

# GARY LEUNG

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## Education

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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)

## Skills

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C++, *Python*, C, JavaScript

OpenCV, TensorFlow,  
scikit-learn, Linux, Git,  
MATLAB

## Experience

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Dynamics Graphic Project - C++ *Software Developer*

May – Aug 2017

- Developed structured light imaging functions to display and compare optimized patterns for object depth recognition using the OpenCV library in C++.
- Implemented image analysis algorithms for object depth calculations in a scene.
- Updated system with new research-assisting 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

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Mechatronic Design Association - *Computer Vision Team*

Sept 2016 – Mar 2017

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

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.

## Awards & Accomplishments

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- 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