Austin **Luu**

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Technical Skills

Programming Languages	MATLAB, C/C++, Java, Python, VBA, JavaScript, LaTeX, Octave, VHDL, Ladder Logic
Tools & Frameworks	GIT, React, jQuery, Node.js, HTML, CSS, Bootstrap, npm, TensorFlow

Projects and Courses

Kabo

HACK THE NORTH 2020++ ↗   *2021*

- Designed and implemented a Discord bot for simulating karaoke with live pitch and lyrical correctness scoring
- Developed using **Python** and **JavaScript** for the back end and front end respectively. Utilizing Aubio, Numpy, SpeechRecognition, Pydub, LyricsGenius, and Wave libraries for audio analysis and Node.js, Discord.js, and PythonShell for interfacing

Machine Learning

ONLINE COURSE BY STANFORD UNIVERSITY ON COURSERA   *2021*

- Used SVM with Gaussian kernels to build an email spam classifiers with a test accuracy of **98.5%**
- Implemented the K-means clustering algorithm to compress image sizes upwards of **90.0%**
- Built a neural network implementing feedforward and backpropagation to recognize hand-written digits to **97.0%** accuracy

RUKPOP

LEAD WEB DEVELOPER ↗   *2019*

- Piloted design and development of end to end web applications for organizing sponsorship, navigation, event updates, and communication for Ryerson University's "Korean Pop Culture" student organization
- Developed user-friendly mobile first web application utilizing **JavaScript, CSS,** and **HTML** managed on Bluehost

Parallel Computing Drone Swarm

PENNAPPS HACKATHON ↗   *2018*

- Designed system and hardware architecture for a hazard detection 2D mapping robot which collects thermal, moisture, and relative location data from two autonomous IoT enabled ground drones; placing in the top 20th percentile
- Developed with: **Python, C++, MQTT Protocol**, Arduino 101s, laser cutting, and 3D printing

Vision Motion

THACKS2 ↗   *2017*

- Built an Android application that measures and graphs the kinematic motion from real-time computer vision using OpenCV

Experience

Celestica   *Toronto, ON, Canada*

PRODUCT DATA ANALYST   *May 2019 — Present*

- Initiated and managed an Aerospace & Defense value engineering cost savings project. Reducing excess inventory by over 20% and expanding product variance by over 15%, leading to an annual cost savings of $1.5 million
- Developed **VBA** macros for; consolidating & analyzing performance metric reports, consolidating & scrubbing customer BOMs for product data management, neural network predictive analysis of component cost based on description

Ryerson Rams Robotics   *Toronto, ON, Canada*

MECHANICAL DESIGN CO-LEAD   *Sep. 2016 — Present*

- Piloted development of dynamic and static force model simulations in **MATLAB**; increasing structural integrity by over 35% for the URC2019 competition, placing 2nd internationally
- Led an agile team of 15 in design & development of an autonomous robot with PID control, developed in **C++**; placing 1st nationally over the 2018 & 2019 VEXU competitions

Education

Ryerson University   *Toronto, ON, Canada*

B.ENG IN MECHANICAL ENGINEERING   *2016 — 2021*

- GPA: 3.70 | Dean's Honour List
- Relevant Courses: Intelligent Systems, Real-Time Computer Control Systems, Digital Systems, Linear Algebra, and Statistics