

Austin Luu

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Technical Skills

Programming Languages MATLAB, C/C++, Java, Python, VBA, JavaScript, LaTeX, Octave, VHDL

Tools & Frameworks GIT, React, jQuery, Node.js, HTML, CSS, Bootstrap, npm, TensorFlow

Misc. Microsoft Office, CRM, Power BI, Navision, Figma, Adobe Photoshop

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

AlphaPoly Packaging | PROCESS ENGINEER

Brampton, ON, Canada | June 2021 — Sept. 2021

- Re-developed standard operating procedures for all operational machines forecasting a 65% reduction in operation downtime
- Developed end-to-end quality testing across all manufacturing departments reducing June-to-date quality cases by 31%

Celestica | PRODUCT DATA ANALYST

Toronto, ON, Canada | May 2019 — June 2021

- Initiated and managed Aerospace & Defense value engineering cost saving projects, reducing excess inventory by over 20% and expanding customer AVL portfolio 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, and neural network predictive analysis of component cost based on description
- Managed \$5 million in global Aerospace & Defense cross-functional sourcing projects with manufacturing, quality engineering, commodity management, and planning departments to enable material procurement and manufacturing

Ryerson Rams Robotics | MECHANICAL DESIGN CO-LEAD

Toronto, ON, Canada | Sept. 2016 — June 2021

- 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 | B.ENG IN MECHANICAL ENGINEERING

Toronto, ON, Canada | 2016 — 2021

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