Austin **Luu**

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Education

DeepLearning.AI | DEEP LEARNING SPECIALIZATION *Remote* | *Dec. 2021 — Jan. 2022*
- Neural Networks, Hyperparamater Tuning, Regularization and Optimization, Machine Learning Project Structure, Convolutional Neural Networks, and Sequence Models

Ryerson University | B.ENG IN MECHATRONICS ENGINEERING *Toronto, ON, Canada* | *Sept. 2016 — Apr. 2021*
- GPA: 3.70 | Dean's Honour List
- Robotics International Society of Manufacturing Engineers Award

Technical Skills

Programming Languages	Python, JavaScript, Java, C++, C, SQL, MATLAB, VBA, LaTeX, Octave, VHDL
Tools & Frameworks	GIT, TensorFlow, React, Next.js, jQuery, Node.js, HTML, CSS, Bootstrap, npm
Design & Manufacturing	SolidWorks, AutoCAD, ANSYS, FMEA, 3D Printing, Laser Cutting, Turning, Milling, Drilling, Welding
Misc.	Jira, Notion, Figma, Adobe Photoshop, Microsoft Office, CRM, Power BI, Navision

Experience

TOHacks | DATA ANALYST *Toronto, ON, Canada* | *Jan. 2022 — Present*
- Working on increasing future participant submission rate through a data supported admission process

AlphaPoly Packaging | PROCESS ENGINEER *Brampton, ON, Canada* | *June 2021 — Oct. 2021*
- Analyzed manufacturing operation data in **PowerBI** and **Excel** to redevelop STD operating procedures, forecasting a **65%** reduction in operation downtime
- Developed end-to-end quality testing across all manufacturing departments reducing June-to-September quality cases by **31%**

Ryerson Rams Robotics | MECHATRONICS CO-LEAD *Toronto, ON, Canada* | *Sept. 2016 — June 2021*
- Led an agile team of 15 in design & development of an autonomous robot with PID control, developed in **C++**; placing **1**st nationally over the 2018 & 2019 VEXU competitions
- Piloted development of dynamic force model simulations in **MATLAB** & **ANSYS** FEA; increasing structural integrity by 35%: placing **2**nd internationally at URC2019

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**
- Analyzed over $5 million in customer portfolio data using **PowerBI** and **Excel**; identifying demonetized product developments and the impact of commodity price changes

Ryerson University | ROBOTICS RESEARCH ASSISTANT *Toronto, ON, Canada* | *Sept. 2020 — Jan. 2021*
- Led mechanical design ideation in **SolidWorks** and FEA mechanical behaviour simulations in **GMSH, SOFA,** and **ANSYS**

Projects

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

Bionic Arm | TEAM PROJECT @ RYERSON RAMS ROBOTICS *2019*
- Designed and fabricated a $150 servo-driven 15 degrees of freedom bionic arm assembly capable of lifting 5lb consisting of PID control developed using an **Arduino mega, C++, SolidWorks & ANSYS softwares,** and **3D printing**

Parallel Computing Drone Swarm | PENNAPPS HACKATHON ↗ *2018*
- Built a hazard detection 2D mapping robot which collects thermal, moisture, and relative location data from two autonomous IoT ground drones
- Developed with: **Python, C++, MQTT Protocol, Arduino 101s, laser cutting**, and **3D printing**

Vision Motion | THACKS2 ↗ *2017*
- Leveraged real-time computer vision using **OpenCV** on mobile devices to track and graph the projectile motion of an object