

# Austin Luu

MECHANICAL ENGINEERING UNDERGRADUATE  
Toronto, Canada

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## Education

### Ryerson University

Toronto, ON, Canada

B.ENG IN MECHANICAL ENGINEERING

2016-2021

- GPA: 3.74 | Dean's Honour List
- Mechanical Eng. First Year Alumni Award recipient
- Robotics International Society of Manufacturing Engineers Award recipient
- Relevant Courses: Stress Analysis, Mechanics of Machines, Machine Design, Control Systems, and Intro to Machining

## Technical Skills

**Design** SolidWorks, AutoCAD, Autodesk Inventor, ANSYS

**Manufacturing** 3D Printing, Laser Cutting, Turning, Milling, Drilling

**Programming** MATLAB, C, Java, Python, VBA, JavaScript, LaTeX

**Misc** GIT, ENOVIA, Microsoft Office, CRM, Teamcenter PLM, Adobe Photoshop

## 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
- Coordinate and manage \$5 million in global Aerospace & Defense cross-functional sourcing projects with buying, sourcing, design, and manufacturing departments to enable material procurement and manufacturing
- Consolidate, tabulate, and analyze reports on performance metrics through Microsoft Excel, CRM, and PowerBI

### Ryerson Rams Robotics

Toronto, ON, Canada

CHASSIS SUBSYSTEM LEAD

Sep. 2016 — Present

- Piloted development and evaluation of dynamic and static force model simulations in MATLAB for technical enhancements and modifications to existing designs, increasing structural integrity by over 35%
- Redeveloped system architecture of rocker bogie and differential bar mechanisms using SolidWorks & ANSYS FEA; decreasing weight and moment forces for the URC2019 competition, placing 2<sup>nd</sup> internationally
- Led an agile team of 15 in designing and developing a robot capable of expanding 150cm in height, repetitive lifting of 10lb, and omni-directional drive; placing 1<sup>st</sup> nationally over the 2018 & 2019 competitions

### Home Staging by K

Brampton, ON, Canada

LEAD WEB DEVELOPER

Sep. 2016 — Dec. 2018

- Led planning, design, and implementation of new and existing web services and applications; including an online report pipeline and a user-friendly front-end with JavaScript, CSS, HTML, using WordPress CMS
- Implemented evaluation and development efforts to web service modifications increasing user pool by 20%

## Projects

### Parallel Computing Drone Swarm

TEAM PROJECT @ 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 top 20th percentile
- Developed with: Python, C/C++, MQTT Protocol, laser cutting, 3D printing, and Arduino 101s

### Bionic Arm

TEAM PROJECT @ RYERSON RAMS ROBOTICS

2018

- Designed and fabricated a prosthetic arm assembly offering 15 degrees of freedom using an Arduino mega, C programming, SolidWorks & ANSYS softwares, and 3D printing
- Implemented a \$150 budget design as a proof of concept to further the field of bio-mechanics in hope of making prosthetics more accessible and versatile