

# Austin Luu

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## Technical Skills

**Languages** Python, Java, JavaScript, HTML, CSS/SCSS, C/C++, SQL, MATLAB, Octave

**Frameworks** PyTorch, TensorFlow, React.js, Next.js, jQuery, Node.js

**Developer Tools** AWS, GCP, Unix/Linux, Node, Docker, Git, Bash

## Experience

**ViTAA Medical Solutions** | SOFTWARE DEVELOPMENT ENGINEER

Montreal, QC, Canada | Jun. 2022 — Present

- Implemented the Fully Convolutional Transformer (FCT) for 3D auto-segmentation of abdominal aorta aneurysm landmarks in **PyTorch** leveraging **MONAI** and **Nifti**, resulting in a 93.84% Dice and 27% time reduction in QA personnel manual adjustments.
- Established comprehensive coding standards and **Python** dataclasses, incorporating microservice principles, resulting in a 15% improvement in deployment flexibility and resource utilization.
- Developed an automated CI/CD integration pipeline with **AWS** CodeDeploy, EC2, and S3 reducing test execution times by 43%.
- Implemented parallel computing and infrastructure and software architecture overhaul reducing product execution time by 30%.

**TOHacks** | DATA ANALYST

Toronto, ON, Canada | Dec. 2021 — Dec. 2022

- Leveraged **Python**, **Seaborn**, and **Pandas** to clean, visualize, and analyze prior years' user submission data, guiding data-driven design & business decisions, improving user submissions, and increasing registrations by 84% & user engagement by 23%.
- Conducted A/B testing to assess the impact of various design decisions, resulting in a 20% increase in user conversion.

**Celestica** | PRODUCT DATA ANALYST

Toronto, ON, Canada | May 2019 — June 2021

- Led Aerospace & Defense cost-saving initiatives, minimizing excess inventory by 20% and expanding the AVL portfolio by 15%, resulting in \$1.5M annual savings. Leveraged **Tableau** alongside **PowerBI** and **Excel** for analysis.
- Analyzed \$5+ million in customer portfolios utilizing **SQL**, **Tableau**, and **PowerBI** to uncover demonetized products and assess effects of commodity price fluctuations.

## Projects

**Ryerson Rams Robotics** | MECHATRONICS LEAD 

2016-2021

- Developed dynamic force model simulations in **MATLAB** increasing structural integrity by 35%: placing 2<sup>nd</sup> globally at URC2019
- Led an agile team of 15 in design & development of an autonomous robot with PID control, developed in **C++**; placing 1<sup>st</sup> nationally at the 2018 & 2019 VEXU competitions
- Designed and fabricated a 15 degrees of freedom PID-driven prosthetic arm assembly using an Arduino Mega, **C++**, and 3D printing

**Kabo** | HACK THE NORTH 2020++ 

2021

- Engineered an AI-driven Discord bot with real-time speech recognition, karaoke simulation, and pitch & lyrical accuracy scoring.
- Developed with **Python** and **JavaScript** using Aubio, SpeechRecognition, Pydub, **PythonShell**, **Node.js**, and **Discord.js** libraries.

**Parallel Computing Drone Swarm** | PENNAPPS HACKATHON 

2018

- Developed an autonomous IoT drone network, providing 2D thermal, moisture, and relative location maps for search and rescue planning
- 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

## Education & Certifications

**Google** | PROJECT MANAGEMENT SPECIALIZATION

Virtual | 2024

**DeepLearning.AI** | DEEP LEARNING SPECIALIZATION

Virtual | 2022

**Toronto Metropolitan University** | B.ENG MECHATRONICS ENGINEERING

Toronto, Canada | 2021

- GPA: 3.70 | Dean's Honour List | Mechanical Eng. Alumni Award | Robotics Intl. Society of Manufacturing Engineers Award