

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

- Spearheaded establishment of code standards, improving code velocity, maintainability, and testability resulting in improved resource utilization and development efficiency.
- Developed an automated CI/CD integration pipeline with **AWS** CodeDeploy, EC2, and S3 reducing test execution times by 43%.
- Designed a custom UNet in **PyTorch** to perform 3D cardiovascular auto-segmentations, resulting in a 92.84% Dice and 27% time reduction in QA personnel manual adjustments.
- Implemented parallel computing and infrastructure and software architecture overhaul reducing product execution time by 30%.
- Established and provided training for an automated unit-testing framework, overseeing 200+ tests distributed across 10+ components for a team of 10+ engineers.

TOHacks | DATA ANALYST

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

- Analyzed prior years' user submission data with **Python**, **Seaborn**, and **Pandas** to guide data-driven business decisions, improving user submissions, increasing registrations by 84% and 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 stress model simulations in **MATLAB** increasing structural integrity by 35%: placing 2nd globally at URC2019
- Led a 15-member agile team to develop an autonomous robot in **C++**; placing 1st nationally at 2018 and 2019 VEXU.
- 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

- Designed an 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 | Robotics Intl. Society of Manufacturing Engineers Award | Mechanical Eng. Alumni Award