

CAMERON ESTABROOKS

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EDUCATION

BASc in Computer Engineering, Queen's University, Kingston, ON
Certificate in Business, Smith School of Business at Queen's University

graduating April 2024

- *GPA*: 3.8/4.0, Dean's Scholar
- *Awards*: \$36,000 Chancellor's Scholarship (1000+ nominees nationwide, awarded for academics, leadership, and creativity), Silver Medalist at Queen's Engineering Competition (Programming Section)
- *Courses*: Neural Networks, Computer Vision, Computer Architecture, Embedded Systems, Algorithms, Data Structures

WORK EXPERIENCE

Software Developer Intern, Autodesk Inc.

May 2022 – August 2023

Supported the design, implementation, development, testing, and deployment of Alias. This large-scale CAD application (~5 million lines of code) is used extensively in the automotive and industrial design industries for surface modelling.

- Redesigned various sections of the application to reduce dependency on legacy code and streamline future development.
- Engineered high-quality, readable, and performant C++ and QML code across 211 different areas of the codebase.
- Delivered multiple presentations, including a lightning talk on coding environment optimization and a showcase of project outcomes to division managers and the VP.
- Engaged in the agile development process, including daily scrum, sprint planning, code reviews, and QA activities.
- Performed code and system analysis to identify bugs, log issues in Jira, and review pull requests on GitHub.
- Collaborated with a highly engaged team of software engineers, QA engineers, and UX designers, locally and globally.

Full Stack Developer, Queen's University: Department of Emergency Medicine

May 2021 – Sept. 2021

Created an application to analyze CPR performance and provide real-time feedback to critical care nurses and healthcare workers.

- Streamlined CPR manikin training for over 400 healthcare workers at the Kingston Health Sciences Centre (KHSC).
- Developed 5,000+ lines of code using Java, SQL, CSS, FXML, and JavaScript, while using JUnit 5 for unit testing.
- Engineered a custom protocol using C to transfer data from the manikin's embedded system to the application core.
- Collaborated on a student-led team under the supervision of researchers from one of Canada's top research hospitals, KHSC.

LEADERSHIP EXPERIENCE

Consulting Project Manager, QMIND

April 2023 – Present

Leading a team of 6 people to create a machine learning model for satellite anomaly detection, ensuring continuity of satellite operations by elevating safety and functionality—initially launched in collaboration with the Department of National Defence.

Director of IT, Queen's Space Conference

April 2021 – April 2022

Led the IT team for a non-profit, student-run conference focused on connecting undergraduates with space industry leaders from NASA, Canada Space Agency, MDA, and more. Additional responsibilities included webmaster (developed and maintained website).

ADDITIONAL TECHNICAL EXPERIENCE

Capstone Project – LiDAR Object Detection with Deep Learning, Queen's AutoDrive

Sept. 2023 – Present

Spearheading the LiDAR-based Object Detection initiative for Queen's AutoDrive to enhance the safety and robustness of their self-driving car using machine learning to detect, track, and classify various objects in a LiDAR point cloud.

Design Team Member – Quantum Computing, QMIND

Sept. 2021 – April 2022

Developed a machine learning model capable of novel image generation using a quantum generative adversarial network. The findings were presented at the national level at CUCAI (the Canadian Undergraduate Conference on AI).

Control Systems Team Member, Queen's Hyperloop Design Team

Jan. 2021 – April 2021

Designed a web-based GUI using HTML and CSS to remotely control the hyperloop and provide live telematic updates.

Software Engineer, Queen's Space Engineering Team

Sept. 2019 – April 2020

Engineered software for a rover using Python and ROS to autonomously navigate terrain at the University Rover Challenge in Utah.

SKILLS

Highly proficient with: C++, Python, PyTorch, C, Java, Git, Bash
Proficient with: Qt framework (QML), MySQL, HTML, CSS, JavaScript, Verilog, Nios II Assembly, MATLAB