## **Education**

### B. Eng. | Sept 2018 – April 2023 | Carleton University

* Major: Computer Systems Engineering with a 4.0 GPA.
* Related coursework: Machine Learning, Object-Oriented Development, Data Structures and Algorithms, Cybersecurity, Communications Engineering, Project Management, Embedded Development

## **Experience**

### Embedded Software Engineer 2 | Ciena | October 2023 – Present

* Developed, documented, and tested software for **pluggable OSFP** optical transceiver module.
* Developed and maintained a **remote logging** and log retrieval tool in a **real-time system**.
* Supported development of **network traffic** provisioning and **error management**.
* Proposed and created a **hub for** **sharing information** between different business groups to increase the knowledge base of the entire team.

### Software Quality Assurance Analyst | Circle NVI | May 2021 – July 2022

* Proposed, developed, and maintained a scalable **automated testing framework** using Selenium/Python.
* Responsible for performing and documenting **software testing** steps on various platforms.
* Implemented a **Continuous Deployment pipeline** to optimize development and testing workflow.
* Worked in **AGILE** environment using SCRUM methods to meet team and company goals.

### Software Engineer | Hotchkiss Brain Institute | April 2022 – July 2022

* Developed **backend architecture**, standard workflows, and mobile app user interactions/use cases.
* Developed **medium-fidelity design** for the proposed app using modern wireframing tools.
* Documented and suggested improvements to existing **data storage** and **controlled access** infrastructure.

### Teaching Assistant | Carleton University | January 2021 – April 2023

* Responsible for helping students understand and apply concepts from **Python** and **Java** courses with a focus on **OOP**.
* Worked with professors and coworkers to **improve course delivery** using student feedback.

## **Projects**

### Autonomous Car – Lane Following System

* Implemented an edge-detection-assisted **deep learning** hybrid model to identify lane boundaries in real time.
* Used traditional optimization and pre-processing techniques in C++/Python using TensorFlow to reduce complexity and improve performance, allowing analysis of live video on embedded SoC controller.
* Incorporated and interpreted open-source C++ vision modules into project and created internal documentation for open-source modules.

### StaySafe

* Developed a person-tracker device that used **computer-vision** to track people passing through a doorway to keep count of the number present in a closed space; designed to help reduce the spread of COVID-19 in small indoor spaces.

## **Skills**

* Languages: C, Python, Bash
* Tools: Deep Learning (CNN), Computer Vision, TensorFlow/PyTorch, Git, JIRA, BitBucket, Embedded Software
* Leadership: Skills gained as an Air Cadet Warrant Officer and as a University Teaching Assistant

## **Accolades**

Eric Sigurdson Award – 2020-23, Dean’s Honor List recipient –2019-23, J. Lorne Grey Scholarship – 2019