

Aaron Rajan

647-801-6421 | rajana8@mcmaster.ca | <https://www.linkedin.com/in/aaron-rajan> | <https://aaron-rajan.github.io/>

EDUCATION

McMaster University (B.Eng.Mgt)

Hamilton, ON

Bachelor of Computer Engineering and Management, **GPA: 3.7/4.0**

Sep. 2020 – Apr. 2025

- McMaster Honour Award (\$1,000) | Dean's Honour List (Fall 2020 - Winter 2022, Fall 2023)

TECHNICAL SKILLS

Languages: Python • Java • Verilog • C/C++ • YANG • JavaScript • MATLAB • R • SQL

Web Development: HTML • CSS • Flask • React.js • Node.js • TailwindCSS

Tools: Git/GitHub • Jira • BitBucket • IntelliJ • VS Code • Linux • Confluence • Agile • Apache Airflow • DBeaver

EXPERIENCE

Software Developer Intern [↗](#)

May 2024 – Aug. 2024

Scotiabank

Toronto, ON

- Designed an interactive UX using **Python**, with **Flask** for backend and API handling, integrating **HTML**, **CSS**, and **JavaScript**, enabling non-functional testing on tasks in **Apache Airflow** for 4+ lifecycle environments.
- Followed the methodology of **DevOps** to build a **Bash** script capable of deploying code across **BitBucket**, 4+ different lifecycle environments, and containerized environments using **Docker**.
- Created a script to accelerate the process of comparing 2 files across different lifecycle environments and dates by **80%** using **Python**, **Linux**, and **SQLite**.
- Expanded functionality for monitor tool to work in new environments by establishing a connection to an **Oracle** database using **Python**, **Linux**, and **Apache Airflow** to send out 10+ emails daily.

Software Intern [↗](#)

May 2023 – Aug. 2023

Ciena

Ottawa, ON

- Utilized **Python**, **C**, and **YANG** to establish a wacsim to manage test suites and improve client experience.
- Improved memory efficiency of a test suite by **40%** using **Linux shell script** and **Python File I/O**.
- Tested changes in hardware by upgrading from 3+ different states to ensure the behaviour is as expected.
- Applied skills in version control (**Git**, **BitBucket**, and **Jira**) to seamlessly integrate my changes with the team.

PROJECTS

Autonomous Vehicle System [↗](#) | Embedded C++ Developer

Jan. 2025 – Mar. 2025

- Engineered a self-driving vehicle system in **C++** using **PX4/NuttX RTOS**, integrating real-time control of motors, steering, and LEDs through **uORB** and **MAVLink** protocols.
- Integrated **Python** scripts on **Raspberry Pi** for camera and ultrasonic processing, enabling obstacle avoidance.

Embedded Spatial Mapping System [↗](#) | Embedded C++ Developer

Feb. 2022 – Mar. 2022

- Developed and implemented firmware in **C/C++** for microcontroller-based spatial mapping, integrating **I2C** communication with a VL53L1X Time-of-Flight sensor, stepper motor control, and real-time data acquisition.
- Designed a **Python**-based interface to process and visualize 3D spatial data, optimizing microcontroller-to-PC communication via **UART**, ensuring efficient data transmission and graphical representation.

EXTRACURRICULAR

Open-Source Team Member [↗](#)

Sep. 2023 – Apr. 2024

Google Developer Student Club | McMaster University

Hamilton, ON

- Followed **Agile** principles with a team of developers to design a learning platform using **Ubuntu**, consisting of various features to enhance users' learning by **40%**.
- Created a user interface using **Flask**, **HTML**, and **CSS**, while implementing features from the **Figma** designs.
- Implemented a database for storage using **SQL** for the back-end of the website, designed with **Python** libraries.

Circuitry Sub-Team Member [↗](#)

Sep. 2021 – Apr. 2023

Chem-E Car Team | McMaster University

Hamilton, ON

- Collaborated with 10+ teammates to design a car that can travel a set distance of 50'-100' carrying a load, using **C/C++**, **Linux** shell scripting, an **Arduino** and **Raspberry Pi**, and soldered circuits.
- Created and maintained the club's website using **HTML**, **CSS** and **JavaScript** to improve club outreach by **40%**.