# Aaron Rajan

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## Education

**McMaster University (B.Eng.Mgt)** Hamilton, ON

*Bachelor of Computer Engineering and Management,* ***GPA: 3.93/4.00*** *Sep. 2020 – Apr. 2025*

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

## Technical Skills

**Languages**: Java • Python • C/C++ • YANG • JavaScript • Verilog • MATLAB • R • LaTeX
**Web Development**: HTML • CSS • React.js • Node.js
**Tools**: Git/GitHub • Jira • BitBucket • VS Code • Linux • Confluence • Agile • Quartus II • Raspberry Pi • Arduino

## Experience

**Software Intern** May 2022 - Aug. 2022

*Ciena* *Ottawa, ON*

- Assisted in the development of test suites to configure a wacsim using **Python** code to solve client issues.
- Utilized **Postman** and **MG-SOFT** to perform Get and Set requests to manage data from a **YANG** tree.
- Appended data to **JSON** and **XML** files to compare data received from Get requests to validate expected results.
- Worked with Python libraries such as **Paramiko** to establish a remote connection to create verification tests.
- Cooperated with a coding team using **Git**, **BitBucket**, **Confluence**, and **Jira**, while practicing **Scrum** methods.

## Projects

**Heart Pacemaker** | *Python Developer* Sep. 2022 - Present

- Created a pacemaker which monitors and regulates a patient's heart rate using different configurations in **MATLAB Simulink** and a **GUI** in **Python** to register users as well as adjust parameters.
- Designed an appealing user interface using **Python Tkinter** and used **Pyserial** to interface with the hardware.

**Currency Converter** | *Java Developer* May 2021 - Jun. 2021

- Developed a converter between **170+** currencies in **Java** using **JSON files** and an **API conversion system**.
- Devised a simple, interactive graphical user interface **(UI/UX)** to enhance user experience using **Java Swing**.

**Management System** | *Java Developer* Apr. 2021 - May 2021

- Designed a management system which tracks the names, IDs, and wages of employees, optimizing the time needed to manage employee data by **70%** using **Java File I/O**.
- Implemented features, allowing for the addition to, removal from, alteration, search, and deletion of employee files.

**System for Recycling Containers** | *Manager, Python Developer* Jan 2021 – Mar. 2021

- Designed a system of **dynamic simulation parts** and **Python code** to recycle containers.
- Created a code model to classify containers using data from a virtual environment (**Q-labs**) and transfer them to bins depending on their level of contamination in under **30 seconds**.
- Led a team of 4 by creating **Gantt charts**, organizing team meetings, and delivering weekly progress reports.

## Extracurricular

**Software Sub-Team Member** Oct. 2022 – Present

*Maction* | *McMaster University* *Hamilton, ON*

- Created a medical dispenser which eases drug withdrawals by **50%**, through the controlled release of chemicals.
- Interfaced with **Python** and an **Arduino** to collect sensor data for the controlled release of chemicals.
- Designed a graphical user interface using **React.js** and **Node.js** to improve client satisfaction.

**Circuitry Sub-Team Member** Sep. 2021 – Present

*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 sensor data in the **Linux environment**.
- Coded in **C/C++**, soldered circuits, and worked with an **Arduino** and **Raspberry Pi** to create the car's circuitry framework.
- Created and maintained the club's website using **HTML**, **CSS** and **JavaScript** to improve club outreach by **40%**.