Aaron Rajan

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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 • C/C++ • Verilog • Java • YANG • JavaScript • MATLAB • R • SQL
Web Development: HTML • CSS • Flask • React.js • Node.js
Tools: Git/GitHub • Jira • BitBucket • FPGA • VS Code • Linux • Confluence • Agile • Quartus II • IntelliJ • Arduino

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** and **4+** different lifecycle environments.
- 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

Hardware Image Decompressor | *Verilog Developer* Sep. 2023 - Dec. 2023

- Designed a digital system capable of decompressing a **320x240** image to store in the external static random access memory, where the video graphics array controller reads and displays it on a monitor.
- Created a **Verilog** program using **Quartus II** to define a finite state machine and apply the mentioned systems.

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

- 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.

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%**.