

# Aditya Rao

☎ 647-978-3730 | ✉ [raoa32@mcmaster.ca](mailto:raoa32@mcmaster.ca) | 🌐 [in/adityarao2005](https://in/adityarao2005) | 🔄 [adityarao2005](https://adityarao2005) | 🌐 [adityarao.me](https://adityarao.me)

## EDUCATION

### McMaster University

*B.Eng in Software Engineering (CO-OP)*

Hamilton, ON

*Sept 2023 – Apr 2028*

- 3.99/4.00 CGPA - Dean's Honour List
- Relevant Coursework: Digital Systems, OOP, Discrete Math I & II, Intro to Software Design, DSA, Computer Architecture, Software Development Basics

## EXPERIENCE

### Software Developer Intern

May 2025 – Aug 2026

*IBM*

*Markham, ON*

- Developing WebSphere Application Server v8.5.5, v9.0, WebSphere Liberty, and OpenLiberty and the tools which support development.
- Re-engineered a suite of 4 internal legacy tools from scratch, modernizing the UX, standardizing Docker deployments, and establishing the first Unit/Integration testing pipelines to eliminate manual verification.
- Optimized the core data processing tool within this suite, replacing heavy framework overhead with custom API wrappers to reduce execution time by 99% (from 10 mins to <4 secs).
- Refactored the critical Product Installation Verification Suite, migrating 20+ legacy FAT tests to a unified framework which enhanced debuggability and system reliability.

### Full Stack Developer Intern

May 2024 – Aug 2024

*Medium AI*

*Hamilton, ON*

- Developed and maintained React and TypeScript code for Medium AI, contributing to 2 first-place and 1 second-place finishes in the McMaster Startup Survivor competition, and helping secure \$10,000 in funding.
- Implemented real-time speech transcription using Python, OpenAI Whisper, FFmpeg, and Socket.IO

## PROJECTS

### WebCraft | 🔄 | C++, CMake, Vcpkg, Asynchronous Programming, Github Actions

Apr 2025 – Sept 2025

- Developed an asynchronous runtime and programming library using C++ 23 features to allow developers who are used to Node.js, Python, and Java to write fast and simple async C++ code easily.
- Created coroutine abstractions, the async runtime, async streams, file and networking module abstractions over low level OS specific async library code to simplify cross-platform C++ development.
- Created CI/CD pipelines and created over 130+ tests to verify correctness using gtest, CTest, Vcpkg, and Github Actions to ensure code quality and reliability.
- Created a vcpkg port so developers can easily access it.

### Resume Builder | 🔄 | Java, Spring Boot, Next.js, Typescript, Python, FastAPI, LangChain, Docker

Aug 2024 – Feb 2025

- Developed an AI-powered resume builder for automated resume creation, scoring, and real-time editing.
- Improved resume management by reducing manual effort in tailoring resumes for job applications.

### FashioNova | 🔄 🌐 | Typescript, Next.js, Python, Socket.io, OpenCV, Cloudflare AI, Flask

Oct 2024 – Oct 2024

- Developed a virtual wardrobe and AI fashion advisor in 36 hours at Hack the Valley 9 at UofT Scarborough
- Created an OpenCV pipeline using Python Flask and Socket.io to fit virtual clothes onto users via live video feed
- Leveraged Cloudflare AI to suggest outfits based on the occasion, promoting sustainable fashion consumption.

### Smart Study Buddy | 🔄 🌐 | Python, Flask, Wolfram Alpha API, OpenAI API, Next.js, Typescript

Oct 2024 – Oct 2024

- Developed a virtual wardrobe and AI fashion advisor in 36 hours at Hack the Valley 9 at UofT Scarborough
- Created an OpenCV pipeline using Python Flask and Socket.io to fit virtual clothes onto users via live video feed
- Leveraged Cloudflare AI to suggest outfits based on the occasion, promoting sustainable fashion consumption.

### QuakeGuard | 🔄 🌐 | Next.js, Flask, Typescript, Python, TensorFlow, Keras, SciKit Learn, Pandas

Jan 2024 – Jan 2024

- Developed an earthquake prediction tool using ML models showcased at DeltaHacks X and GDSC McMaster
- Visualized global earthquake data and high-risk areas with Next.js and Python, Flask, SciKit Learn, and TensorFlow

EXTRA CURRICULARS

<b>Sys-Admin and Fullstack Developer Executive</b> <i>IEEE McMaster Student Branch</i> <ul style="list-style-type: none"><li>• Set up an RPi 3B+ Cluster for a server to handle up to 100 clients in an instant with a budget of \$5000</li><li>• Managed and provisioned a CI/CD pipeline which generates Docker images for our Kubernetes cluster</li><li>• Developing the website for the IEEE student branch and the admin dashboard for executives to manage</li></ul>	Nov 2024 – Present <i>Hamilton, ON</i>
--	---

TECHNICAL SKILLS

<b>Languages:</b> Java, Python, SQL, .NET Framework, C, C++, JavaScript/TypeScript, Verilog <b>Frameworks:</b> Spring Boot, Jakarta EE, MicroProfile, Hibernate, Express, Next.js, FastAPI, Flask, UWP <b>Developer Tools:</b> VS Code, IBM Bob, Eclipse, AWS, GCP, Git, Github, Docker, OpenShift, Kubernetes, Databases <b>Libraries:</b> Pandas, TensorFlow, OpenCV, SciKit Learn, JavaFX, Redux, JQuery, React, Mongoose <b>Hobbies:</b> Sketching, Painting, Violin (Western and Carnatic), Badminton, Swimming, Chess	
---	--

CERTIFICATIONS

<b>Clean Code</b> <i>Udemy</i>	September 2025
<b>IBM Agile Explorer</b> <i>IBM</i>	September 2025
<b>The DevOps Essentials - The Handbook</b> <i>Udemy</i>	September 2025
<b>Introduction to Containers, Kubernetes, and OpenShift</b> <i>IBM</i>	August 2025
<b>Practical OpenShift for Developers - OpenShift 4</b> <i>Udemy</i>	August 2025
<b>[NEW] Ultimate AWS Certified Cloud Practitioner CLF-C02 2025</b> <i>Udemy</i>	February 2025
<b>Docker &amp; Kubernetes: The Practical Guide [2025 Edition]</b> <i>Udemy</i>	January 2025