

# Rushil Karani

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## EDUCATION

### McMaster University (B. Eng)

Apr. 2027

*Honours Software Engineering (3.9 GPA), Dean's Honour Roll (2024, 2025)*

*Hamilton, ON*

**Relevant Coursework:** Data-Structures & Algorithms, Databases, OOP (Java), Software Design Principles, Concurrent Systems, Linear Optimization.

## KEY SKILLS

**Languages:** JavaScript, Java, Python, C/C++, TypeScript, SQL, MATLAB, Bash, Verilog, LaTeX, YAML, UML.  
**Developer Tools:** Node.js, React, Express, Tailwind CSS, HTML/CSS, MongoDB, Git, CI/CD, Oracle, MySQL, Snowflake, Pandas, NumPy, Mathplotlib, Linux, Microsoft 365, Google Suite, Maven, Cohere API, Google API, CAD.  
**Courses:** Learning Cloud Computing: Core Concepts (*LinkedIn*), Learning AWS for Developers (*LinkedIn*), Cybersecurity Foundations (*LinkedIn*), Microsoft Azure Foundations (*LinkedIn*).

## PROJECTS

### HealthConnect | [🔗](#) | JavaScript, Node.JS, React.JS, MongoDB

Jan. 2025

- Developed a **healthcare web application**, to reduce wait times in **5+** walk-in clinics by **up to 20%**.
- Used the **MERN stack** for **full stack** app development, increasing production **speed by 5 hours**.
- Developed an **AI chatbot** using **Cohere's API** and **debugged 10+** complex issues in the chatbot and UI.
- Implemented doctor and patient **UIs** to communicate/book appointments, increasing **usability by 50%**.

### EquiHire | [🔗](#) | Python, Google Vision API, Java, JavaScript, React, SQL

Feb. 2025

- Built an **AI** resume screening tool that reduces hiring biases **by 30%** and speeds up hiring process **by 10%**.
- Used **Google Cloud Vision API**, **Flask** and **SQL** to build a resume screening tool with **90% accuracy**.
- Troubleshoot **5+ complex issues**, overcoming challenges like **API integration** and **git merge** conflicts.

### MatrixMate | [🔗](#) | C, Git, Bash, Linux Command Line

Nov. 2024 – Dec. 2024

- Built a Matrix Calculator **using C**, capable of efficiently performing **6+ complex matrix operations**.
- Improved **runtime efficiency by 25%** with optimized **memory allocation**, **pointers** and **dynamic arrays**.
- Accelerated development time **by 20%** using GitHub workflows for automated testing across **30+ commits**.

### ScholarSync | Java, Vaadin, UI/UX

Sep. 2022 – Jun. 2023

- Built a **web app** to help students log notes, track tasks, and calculate GPA, **boosting productivity by 30%**.
- Implemented **Java** backend logic and a modern GUI using **Vaadin's framework**, improving usability by **50%**.
- Followed **SDLC** and **Agile**, iterating on client feedback to **enhance 5 features** and **resolve 15** usability issues.

### McMaster Engineering Competition - Won 2nd Place

Nov. 2024

- Designed a smart, non-invasive drone that **reduces crime scene investigation times by up to 5 hours**.
- Heavily focused on ethics; making the drone socially, environmentally, and economically ethical and sustainable.
- Earned **2nd Place (out of 10 teams)** in Innovative Design at the **McMaster Engineering Competition**.

## LEADERSHIP EXPERIENCE

### FIRST Robotics Team - Programming and Assembly Teams | Python

Sep. 2022 – Jun. 2023

*Glenforest Secondary School*

*Mississauga, ON*

- Helped **design a robot** that competed against other robots at the **FIRST Robotics Competition**.
- Programming: Coded functions that used ultrasonic and colour sensors to **improve bot speed by 10%**.
- Assembly: Helped in **assembling the conveyor belt** of the robot that was used for shooting.

### Facilitator for YYY Leadership Course

Jun. 2021 – Apr. 2023

*Youth Empowering Youth Foundation [🔗](#)*

*Vancouver, BC*

- Facilitated multiple **workshops** for high school students and coached them to **build leadership skills**.
- Empowered** participants to become **future leaders** by promoting skill development tasks and personal growth.
- Reinforced** my leadership, facilitation and self-management skills, alongside building new technical skills.