

Rushil Karani

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EDUCATION

McMaster University (B. Eng) Sep. 2023 – Apr. 2027
Honours Software Engineering (3.9 GPA), Dean's Honour Roll (2024, 2025) Hamilton, ON
Relevant Coursework: DSA, Databases, OOP (Java), Software Design, Concurrency, Linear Optimization.

EXPERIENCE

Software Developer (Incoming), Co-op May 2026 – Aug. 2026
Bell Canada Mississauga, ON

- Incoming Summer 2026 Software Developer co-op on the Enterprise Architecture team.

Automation Analyst, Co-op Jan. 2026 – Apr. 2026
Royal Bank of Canada Toronto, ON

- Automated PDF report validation by building a **Python/React** tool, reducing manual verification time by **96%**. Improved throughput by **10x** using parallel processing and caching across multiple report formats.
- Improved API reliability by developing an automated health-check system to scan **22 endpoints** and send Slack alerts; detected **6 critical issues** and reduced manual monitoring effort by **64%**.
- Debugged and validated a large regression test suite through **GitHub Actions CI pipelines**, ensuring full test suite passage and catching **3 critical defects** before merging to production.

Software Developer, FIRST Robotics Sep. 2022 – Jun. 2023
Glenforest FRC Team Mississauga, ON

- Increased bot speed by **10%** by using **colour sensors for position tracking**.
- Reduced bot latency by **15%** by using a **pipeline architecture** and efficient memory allocation.

PROJECTS

PrepPal (Won 3rd Place @ MEC) | [🔗](#) | *TypeScript, Google Cloud Vision* Nov. 2025

- Integrated Google Cloud Vision API to identify essential evacuation items from user-provided images.
- Achieved **85%** recognition accuracy on common household items by refining and tuning the dataset.
- Developed an emergency chatbot that generates first-aid guidance and provides appropriate online resources.

Health Connect | [🔗](#) | *JavaScript, Node.js, React, Express, 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 development speed by **5 hours**.
- Developed an AI chatbot using **Cohere's API** and resolved 3 complex issues in the chatbot and UI.

Maze Runner | [🔗](#) | *Java, JUnit 5, Maven* Apr. 2025

- Built a maze solver app in Java using Maven for build automation, **reducing build time by 30%**.
- Created 10+ unit tests using **JUnit 5** to handle edge cases, increasing code **reliability by 25%**.
- Used OOP principles/patterns (MVC, Observer, Polymorphism) to improve **maintainability by 40%**.

Equi-Hire | [🔗](#) | *Python, Google Cloud Vision, Java, JavaScript, React, SQL* Feb. 2025

- Built an AI resume screening tool that reduced hiring biases by **30%** and sped up hiring process by **10%**.
- Troubleshoot 3 complex issues, overcoming challenges like **API integration** and **Git merge** conflicts.

Matrix Mate | [🔗](#) | *C, Git, Bash, Linux Command Line* 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.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript/TypeScript, SQL, C/C++.

Frameworks & Tools: React, Node.js, Express, Spring Boot, Git, GitHub Actions, CI/CD, Linux.

Technologies: REST APIs, Distributed Systems, Caching, Parallel Processing, Databases (MongoDB, MySQL).