Harman Singh

Kitchener, Ontario, Canada | 226 - 792 - 8072 | harmansingh2003ca@gmail.com | harmansingh.tech

SUMMARY

4th-year engineering student experienced in fullstack, backend, frontend, mobile, development and embedded programming. Seeking a Fall 2025 internship, available September - December 2025.

EDUCATION

University of Guelph   **Guelph, ON**
Bachelor of Engineering in Engineering Systems and Computing   *Expected: May 2026*
GPA: 3.8

WORK EXPERIENCE

Citi   **Mississauga, ON**
Software Engineer Intern   *May 2025 - Present*
- Reduced deploy time by 95% by implementing an OpenShift Bash tool to scale multiple services to any desired pod count, consolidating 100+ redundant scripts and eliminating over 150 associated automated jobs.
- Saved 5+ hours weekly on compliance audits and enabled real-time dependency visibility by automating aggregation and tracking of dependencies across 90+ repositories with Python and Autosys.
- Creating CI/CD pipelines to automate deploys and using Jenkins to display OpenShift build insights.

Ciena   **Ottawa, ON**
Internal Tools Developer Intern   *May 2024 - Aug 2024*
- Implemented a backend API using FastAPI and Python to streamline the process of managing vulnerable assets, resulting in a 30% reduction of security vulnerabilities across company devices.
- Led project planning, scheduling, and backend/database development for an API used by the security team, coordinating with stakeholders to deliver a fully integrated application on time.
- Implemented robust authentication and authorization protocols using JWTs and Okta to safeguard backend resources.
- Automated build and deploys using GitHub actions, providing the security team with real-time data on vulnerabilities.
- Deployed AWS API Gateways and Lambdas with Terraform to enable company-wide access to the application.

Wave Financial   **Toronto, ON**
Software Engineer Co-op   *Jan 2024 - Apr 2024*
- Developed and maintained microservices, using Python and Django, improving system stability and user experience.
- Optimized AWS S3 infrastructure by implementing lifecycle policies, resulting in $2,000 in yearly cloud savings.
- Developed user interfaces for a mobile application with over 100,000 active users, utilizing React Native, HTML, CSS, JavaScript, TypeScript, and GraphQL to enhance user experience and improve application performance.
- Facilitated data driven decision making using SQL to analyze 10,000+ data points for the ML team
- Reduced incident response times by implementing automated Slack alerts using Datadog and Terraform.

Centre for Biodiversity Genomics   **Guelph, ON**
Programmer Co-op   *Jun 2023 - Sep 2023*
- Improved performance, enhanced security, and increased stability for a research institution with the world's largest repository of DNA barcode data (10M+ specimen records) by migrating the backend from PHP 5.3 to PHP 8.1.
- Led the code review of the database access layer, resolving bugs and improving code maintainability.
- Refactored legacy PostgreSQL queries to enhance security and maintainability.

PROJECTS

Campus Free Room Locator (gryphspace.com) | *Python, React.js, Next.js, Cloudflare*
- Developed a website to reduce crowding in study areas at UofG by locating unused classrooms to study in.
- Implemented using Python, Next.js/React.js frontend and hosted on Cloudflare.

Six-Axis Robot Arm | *Python, C++, 3D Modelling*
- Designed and engineered a 3D-printed 6-axis robotic arm with 360-degree range of motion using SolidWorks and Fusion 360, optimizing designs for efficient 3D printing and improved functionality.
- Developed and implemented code in C++ and Python for precise motor control using Arduino and Raspberry Pi

SKILLS

Languages & Frameworks: Python, Django, FastAPI, HTML, CSS, React Native, React, JavaScript, TypeScript, SQL, GraphQL, C, C++, Java, Terraform, PHP, R, Assembly, VHDL, MATLAB, RTOS
Tools & Concepts: AWS, REST APIs, Monitoring & Observability, Authentication, Object-oriented Programming, Fullstack, Frontend, Backend, Git, JIRA, Agile/Scrum, Datadog, Arduino, Raspberry Pi, SolidWorks, Fusion 360

AWARDS

University of Guelph Engineering Design Day (2023): 1st out of 50+ teams. Led team of 6 engineers to create a functional 3D-printed crossbow Kinder Egg toy, competing with 300+ other students.