

HASAN BAIG

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Education

University of Waterloo

Bachelor of Applied Science in Management Engineering (Software/Industrial)

Apr 2029

Waterloo, ON

Experience

Software Engineer

May 2025 – August 2025

Toyota Motor Manufacturing Canada

Waterloo, ON

- Cut AGV production downtime by **5%** by building a fault detection heatmap dashboard with Angular and .NET, enabling engineers to detect fault trends through 10+ customizable filters.
- Eliminated **2-month** release delays by integrating **Zephyr test management** into Jira with automated workflow gates, preventing feature releases from deploying without approved test plans.
- Accelerated Zephyr adoption across **4 regional products** by building automated test case templates and presenting the strategy to executive leadership, reducing defect rates by **15%**.

Software Developer

Jul 2024 – Sep 2024

Inginie Consultants

Markham, ON

- Prevented **18** security vulnerabilities from reaching production by integrating Snyk **security scanning** into CI/CD pipeline, improving deployment reliability and speed.
- Achieved **GDPR compliance** by engineering a secure, automated Azure pipeline with Blob Storage and Key Vault, centralizing key management for **500+** PII files per week.
- Ensured **100%** accurate migration of enterprise data to Snowflake by developing an Azure Functions validation API, uncovering **4 integrity issues** and enabling reliable analytics for downstream teams.

Volunteering

Software Developer

May 2025 – Present

UW MSA

Waterloo, ON

- Eliminated hosting expenses consuming **20%** of annual budget by rebuilding the website on a **zero-cost** React/Firebase stack, freeing funds for community initiatives.
- Resolved critical mobile app crashes affecting **3000+ daily users** by fixing 4 secret-injection failures and implementing preventive EAS CI/CD pipeline, achieving zero configuration-related incidents post-deployment.

Projects

🔗 Chat Royale | MCP, Docker, AWS Lightsail, Cloudflare, Python, Typescript, React

- Built a production full-stack platform enabling natural-language **Clash Royale analytics** via a custom **Model Context Protocol (MCP)** integration, simplifying game data access for casual players.
- Engineered a **three-service microarchitecture** (Python MCP server, Node.js API client, React frontend) with **Docker Compose** for isolated development, independent scaling, and seamless CI/CD deployment.
- Implemented a **streamable HTTP transport layer** after studying MCP SDK source code, enabling reliable inter-container communication and demonstrating ability to learn from undocumented technology.
- Deployed **production-ready infrastructure** with security hardening (Helmet.js, CORS, rate-limiting) and integrated health checks, achieving **zero downtime** since public release.

Technical Skills

Languages: Java, Python, C#, Javascript, Typescript, SQL

Frameworks: React, Angular, .NET, Spring Boot

Cloud & DevOps: AWS EC2 & Lightsail, Azure Functions & Key Vault, GitHub Actions

Tools: Git, Docker, Jira, Snowflake, PostgreSQL, Linux