Ibad Rashid

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Summary

Full-stack Senior Software Engineer with a Bachelor of Engineering and 5+ years of experience architecting and delivering enterprise-scale software. Motivated by building high-quality software while advocating for strong technical standards.

Technical Skills

Languages: **C#**, **TypeScript**, Python, SQL, Go

Frameworks & Libraries: **.NET**, **React**, Node Express, Flask, Astro, Svelte, Next.js, Pandas, Entity Framework, Moq, Playwright, Cypress, Vitest, Jest

Databases and Infrastructure: Postgres, MySQL, SQLite, Firestore, GCP, AWS, Docker, Terraform, Ansible, NGINX, Traefik

Workflow: **OpenCode**, **Claude Code**, tmux, vim, git, ssh, test driven development (TDD)

Work Experience

Geotab · **Senior Software Engineer** ***June 2024 - Present***

- Developed Geotab's video features within the MyGeotab application, working across the **full stack** ranging from the **TypeScript/React** frontend to the **C#/.NET** backend in bi-weekly agile sprints.
- **Led the migration** of Geotab's camera platform from legacy architecture to MyGeotab's B2B SaaS, delivering scalable APIs, server-side keyset pagination, and reusable platform components that improved data loading efficiency and **enabled highly requested product features**.
- **Architected** an asynchronous event-enrichment architecture that decoupled processing from the existing real-time event pipeline, enabling scalable post-processing of video events while establishing a reusable architectural pattern **later adopted across the platform**.
- Improved high-volume video search performance by **58%**, reducing API response time from 335ms to 140ms through **SQL query optimization** and database design improvements.
- Designed and delivered the platform services powering camera health monitoring, using **WebSockets** to provide real-time visibility into the health of customers' devices.
- **Strengthened security** across the platform by implementing **role-based access controls** for 35+ backend endpoints.
- Modernized frontend development by introducing internal npm packages, API auto-generation, modern tooling with **Vite**, and improved **CI/CD workflows**, reducing pipeline **runtimes by 15%**.
- Delivered reusable React and TypeScript components supporting multiple camera vendors, replacing vendor-specific implementations with a unified frontend platform that accelerated future product development.
- Performed deep production investigations across **distributed systems, databases, and infrastructure**, identifying root causes for critical customer-facing incidents as part of a regular **on-call rotation**.
- **Mentored** junior developers through **code reviews**, **architecture reviews**, pair programming, and knowledge-sharing lunch and learns.
- **Led 50+ technical interviews** across intern, developer, and senior engineering roles.

Arcadis · **Systems Engineer** ***July 2019 - June 2024***

- **Architected and developed** a GIS-based fibre management platform using **TypeScript, React, Python, and Maps SDK**, enabling customers to manage fibre infrastructure, plan routes, track outages, and visualize fibre strand utilization.
- **Designed** the data model and routing engine for a fibre management platform, implementing a customized **graph search algorithm** that automatically identified optimal cable paths, required splices, and physical connections between network endpoints.
- Developed a **Flask** web application leveraging a Python SNMP network monitoring system to track uptime, packet activity, and firmware compliance across client intranets to visualize network status and support automated monitoring workflows.
- Leveraged a **backtracking optimization** to minimize sensor deployments for Ontario's province-wide travel time monitoring system reducing hardware costs by **15%**.
- **Authored functional and technical specifications** for a province-wide highway queue-end safety system, incorporating edge servers performing real-time vehicle detection reporting to centralized cloud servers for data analysis. Defined **API requirements**, **network architecture** and **security measures**.

Education

Bachelor of Engineering (B.Eng)
Toronto Metropolitan University (Ryerson) ***September 2015 - April 2019***