

BASIL YUSUF

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⚙️ SKILLS

Languages: Java, Go, C/C++, TypeScript, JavaScript, Python, SQL, PostgreSQL, HTML5/CSS3, Ajax
Tools: React, Node, jQuery, Dagger, Spring Boot, AWS, Azure, Jenkins, Kubernetes, Docker, Git, Jira

💻 WORK EXPERIENCE

Google

Software Engineer (*Go, Python, Ruby, C++*)

Toronto, Ontario
Dec 2024 - Present

- Spearheaded the integration of a large-scale distributed system with a corporate chaos testing framework (Rudra) to proactively validate service resilience and ensure compliance with Zone Isolation (ZICY) and Disaster Recovery (DR) mandates.
- Designed and implemented network-level fault injection scenarios using Rudra to simulate multi-zone failures, uncovering and resolving critical single points of failure across production and staging environments.
- Designed and automated a suite of end-to-end reliability tests for Critical User Journeys (CUJs), validating high availability and ensuring zonal Recovery Point/Time Objectives (RPO/RTO) were consistently met during simulated failure events.
- Led the deployment and configuration of multi-zone service footprints in staging and production environments (us-east4, us-east7) specifically to facilitate rigorous, ongoing chaos testing drills.
- Analyzed and enhanced distributed system behavior under duress, optimizing GSLB configurations and implementing backend draining to ensure graceful degradation and failover during fault injection tests.
- Designed and implemented a production alert monitoring system that visualizes historical production alert changes, enabling teams to analyze how alerts evolve over time and assess change impacts

Deloitte

Software Engineer (*TypeScript, Python*)

Toronto, Ontario
Sep 2023 - July 2024

- Transitioned from manual deployments to Continuous Deployment (CD) by building a Deployment Pipeline that tests and deploys directly to AWS infrastructure, reducing deployment time from 20 minutes to < 5 minutes
- Built a Python-based AWS Lambda Scheduler to run daily jobs that fetch new cybersecurity incidents, enhancing the timeliness and effectiveness of our incident response and monitoring systems
- Implemented an Application Load Balancer in AWS for efficient traffic distribution across multiple Fargate instances, reducing downtime from 15 minutes to 0 seconds for each deployment

Amazon

Software Engineer Intern (*Java, TypeScript*)

Toronto, Ontario
May 2023 - Aug 2023

- Engineered a web app for Amazon Kids+ to fetch subscription offers from different regions, attach metadata to offers, and update customer eligibility for offers, reducing processing time from 3 - 5 minutes to < 5 seconds
- Lowered subscription service downtime from 5 minutes to ~ 0.1 seconds by automating AWS Systems Manager configuration (AWS AppConfig) deployments for customer eligibility using Java and AWS CDK

University of Guelph

Undergraduate Researcher (*C++*)

Guelph, Ontario
May 2023 - Aug 2023

- Developed a modular TCP server in C++ using advanced OOP design patterns such as Singleton, Builder, and Decorator, which streamlined the integration of security/logging features, significantly boosting system adaptability
- Optimized a C++ TCP server by implementing a robust observer-subject framework, which enhanced real-time event logging and observer management, thereby handling multiple client connections simultaneously

TD Bank

Software Engineer Intern (*Java, Python*)

Toronto, Ontario
Jan 2023 - Apr 2023

- Migrated 9 SOAP API endpoints to 3 REST API endpoints in Java and Spring Boot using OpenAPI specifications that scales to over a million customers resulting in reduction of production downtime from 5 minutes to < 1 second
- Devised a robust XML parser using Python that seamlessly converted 9 endpoints from XML to JSON, boosting data accessibility for other engineers on the team by 75% and significantly reducing parsing time by 90%

📖 EDUCATION

University of Guelph

Bachelor of Computing, Computer Science and Economics

Guelph, Ontario

- **cGPA:** 3.70, Research Assistant (C++ Networking) and Teaching Assistant (Java Object-oriented Programming)

</> PROJECTS

distributed-systems (*Go, Zig*) Comprehensive guide, algorithms and tools on distributed systems (200+ ★)

chsim (*Zig, Raylib*) Distributed Consistent Hashing Ring Simulator made using raylib (10+ ★)

dockermake (*JavaScript, Node.js*) An NPM package that creates Makefiles for docker (200+ downloads, 26 ★)

fiable (*React Native*) Hybrid mobile app that incentivises biking through a reward system (GryphHacks 🏆)

beachify (*MongoDB, Express, Node.js, React.js*) A full-stack web app to plan a beach trip (CoastalHacks 🏆)

