Gurpreet Singh Multani

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Education

University of Waterloo – *Systems Design Engineering (Bachelor of Applied Science)* **2021 - 2026**

Courses: Data Structures & Algorithms (C++), Digital Computation (C++, Python, Linux), Digital Systems (C)   Cumulative GPA: 91% (3.91/4.0)

Technical Skills

Languages	Java, Golang, Kotlin, C++, SQL, JavaScript/Typescript (Node.js), Python, C#, HTML, CSS
Frameworks	Spring Boot, Spring Security, React.js, Vue.js, GraphQL, gRPC (Protocol Buffers), Electron.js, Qt, Unity
Databases	Microsoft SQL Server, MySQL, PostgreSQL, MongoDB, Redis, Database Design
Infra/Tools	Docker, Kubernetes, Istio, Kafka, Azure, Google Cloud Platform, AWS, Linux, Jenkins, Prometheus, Grafana, CI/CD

Experience

PointClickCare – **Software Engineer Intern** May 2023 – Present

- Developing Identity and Access Management solution using **Spring Boot**, **Kafka**, **Microsoft SQL Server**, **Redis**, and **Azure**
- Delivered OAuth2, OIDC, SAML, and MFA features using **Spring Security**, **Spring Authorization Server**, and **Vue.js** for frontend
- Reduced application logs in **Jenkins** pipelines by **1000+%** cutting infra storage usage by **48 GB** by upgrading loggers to only log errors
- Removed Apigee dep for OAuth app provisioning by creating **MSSQL** migrations, updating automated jobs, and creating new APIs
- Implemented test-driven development practices and achieved **90%** coverage with **Kotlin**, **JUnit**, **Mockito**, and **Cypress** E2E tests

League Inc. – **Backend Engineer Intern** Sep 2022 – Dec 2022

- Developed **microservices** for the rewards team used by **1 M+** users, using **Golang, MongoDB,** and **Google Cloud Platform**
- Migrated monolithic app to microservice by updating **Kubernetes** files, setting up **gRPC**, and creating **Google Pub/Sub** subscriptions
- Developed algorithm to automate bulk creation of **1 M+** new user accounts in **MongoDB** and third-party integrations, and used **Goroutines** and **Channels** to reduce time taken by **20 hours** by creating up to **40** database and HTTP requests simultaneously
- Implemented **7 WebSocket APIs** by designing models and business logic, and writing **integration tests** ensuring **80%** coverage
- Created metrics and alerts for APIs using **Prometheus/Grafana** to improve services monitoring and help identify bottlenecks

Waterloop – **Firmware Engineer** Sep 2022 – Dec 2022

- Developed a **dashboard application** for hyperloop pods to communicate and control the pod when in operation using **C++**, **Electron.js**, **Node.js,** and **Qt**, and low-level protocols such as **TCP/UDP** for high performance communication with firmware

Enzuzo Inc. – **Software Engineer Intern** Jan 2022 – Apr 2022

- Developed **microservices** using **Golang**, and **Node.js** based on client API requirements and updated **Swagger** API documentation
- Designed database/**GraphQL** schemas based on feature requirements for **PostgreSQL** database by applying normalization principles
- Refactored **2 repositories/applications** into 1 application removing duplication of code and **reducing development time by 50%**
- Transitioned application to use **redux** for state management, improving performance of app **by 200%** by reducing number of API calls

WATonomous – **Infrastructure Engineer** Jan 2022 – Apr 2022

- Led design of web app for VM status reporting, resulting in **30% faster resolve time** when troubleshooting issues with infrastructure
- Provisioned VM's on **Proxmox VE** by setting up networking, assigning hardware resources, and integrating with existing infrastructure

Projects

Dungeon Shooter - *C#, Unity Game Engine, ShaderLab, Game design, GIMP* [GITHUB](#)