

EDUCATION

- **University of Ottawa** Ottawa, ON
Joint Honours BSc in Computer Science and Mathematics; GPA: 3.8/4 *Sep. 2023 – Apr. 2028*

PROGRAMMING SKILLS

- **Languages:** Java, Python, JavaScript/TypeScript
- **Technologies:** AWS, Azure, Docker, Git, Spring, PostgreSQL, Postman, SonarQube, Jira, WebSphere, OpenShift OCP

EXPERIENCE

- **Innovation, Science and Economic Development Canada** Ottawa, ON
Software Engineer Intern *Jan 2026 - Present*
Tech Stack: Java, Spring Boot, OpenShift, API, SQL, Jenkins, Docker, Salesforce (Apex)
 - Developed and maintained REST, GraphQL, and SOAP APIs that interface with the patent filing system and public database using Java, Spring Boot, and Apache Camel, supporting 3M+ filed patents and millions of associated legal documents.
 - Collaborated in a 13-member Agile team delivering production features through biweekly sprints, aligned with CI/CD deployments across Dev, QA, Integration, E2E, UAT, and Production environments, including sprint planning, backlog refinement, code reviews, and stakeholder-driven delivery.
 - Troubleshooted and resolved production issues across distributed microservices deployed on Red Hat OpenShift, improving system stability under concurrent processing workloads.
 - Improved backend resiliency through concurrency handling, error recovery, scalable service patterns, enhanced logging for observability, and CI/CD-driven deployment reliability.

PROJECTS

- **Lightweight Bus Tracker API & Web App** Dec 2025 - Present
Building with: Spring Boot, Docker, Postman, GTFS, REST
 - Developed a Spring Boot web application to dynamically display real-time bus locations by consuming GTFS open data (gRPC, REST) from local transit agencies.
 - Built a RESTful API (Spring MVC) for real-time transit alerts (detours, delays, cancellations) with optimized payload size, then containerized the backend with Docker and deployed it to a personal home server.
 - Designing a self-built centralized logging architecture following an ELK-inspired pipeline pattern with Redis caching to reduce latency and improve log processing throughput.
- **Remote Receipt Printer API** Feb 2026 - May 2026
Built with: Python, FastAPI, REST APIs, and Tailscale on self-hosted infrastructure
 - Deployed a publicly accessible RESTful API using Python FastAPI that enables remote printing of images and text onto a local printer by exposing the self-hosted service securely through Tailscale Funnel.
 - Implemented CORS middleware allowing only a specific domain origin, fixed-window per-IP rate limiting (one request per 15 seconds), and idempotency UUID validation to secure the API from abuse and duplicate submissions.
 - Tested API endpoints using Postman, validating request/response handling and error scenarios before deployment.
 - Implemented asynchronous job processing with local printer queue, decoupling print submissions from printer availability during offline periods.
- **Full-Stack Hotel Reservation Web App** Jan 2025 - Apr 2025
Built with: SQL, Tomcat, IntelliJ, Java, HTML/CSS, Git
 - Built a full-featured hotel booking system on Apache Tomcat with IntelliJ, implementing real-time availability, a responsive UI, and role-based admin controls for managing reservations.
 - Consistently reviewed team code to remove hardcoded dependencies and handled Git merge requests, ensuring smooth collaboration and conflict-free integration.
 - Selected a SQL database for its relational structure, which matched the hotel's data requirements, and leveraged SQL queries to retrieve data for flexible search filters.