Andre Arcaina

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Technical Skills

Languages: Go, Python, Java, C#, TypeScript, JavaScript, SQL, GraphQL
Frameworks/Libraries: Spring Boot, Flask, FastAPI, Django, React, Next.js, TailwindCSS, JPA, SQLAlchemy
Tools: Git, Bash, Jenkins, Docker, Kubernetes, GCP, Vercel, PostgreSQL, MySQL, MongoDB, Redis, Postman
Concepts: Microservices, REST/gRPC APIs, CI/CD, Agile/Scrum, System Design, OOP

Work Experience

Environment and Climate Change Canada (ECCC) — June 2025 – Present
Software Engineer Intern — *North York, ON*

- Engineered a Spring Boot microservice for geospatial telemetry, integrating Redis caching to reduce query latency by 40% and increase throughput for ice monitoring datasets.
- Modernized legacy Java codebase (5,000+ LOC) to Jakarta EE 10, eliminating 1,200+ compiler warnings and improving maintainability.
- Contributed to Oracle from PostgreSQL migrations (80+ GB dataset), optimizing schema and queries for a 30–40% reduction in report generation time.
- Refactored Python services to use `psycopg2` instead of `oracledb`, streamlining validation logic and database access.
- Optimized C# WPF/.NET mapping applications leveraging ArcGIS SDKs for improved rendering and spatial caching.

Undergraduate Science Society of TMU (USSTM) — Jan 2025 – Present
Backend Engineer — *Toronto, ON*

- Defined OpenAPI YAML specifications and implemented RESTful API endpoints for core backend services.
- Developed 25+ unit and integration tests using mocks to ensure reliability and correctness of business logic.
- Built and maintained 13+ CRUD APIs across 3 PostgreSQL databases following CLEAN architecture for maintainable, testable code.

DataKinetics — May 2024 – Aug 2024
Software Engineer Intern — *Ottawa, ON*

- Developed Spring Boot APIs that automated COBOL-to-JSON conversions, improving data interoperability.
- Built front-end visualization features with DataTables and jQuery for uploaded copybooks.
- Designed comprehensive Postman API test suites to validate endpoints and streamline QA workflows.

Projects

Fafnir | Go, Next.js, PostgreSQL, Docker, Kubernetes, Prometheus/Grafana — GitHub

- Engineered a distributed stock-trading simulation platform using Go microservices with gRPC inter-service communication and GraphQL API gateway.
- Built DevOps workflows with Docker, Makefile automation, and monitoring via Prometheus/Grafana.

Vivid Fitness | Django, Next.js, PostgreSQL, Supabase, WebSockets — GitHub

- Collaborated with a 5-person team to build a finance and membership management system, earning a 4.33 GPA in Software Engineering.
- Developed secure Django REST APIs with JWT authentication and real-time messaging using Django Channels.

Whisp | Go, Alpine.js, TailwindCSS, NeonDB, Docker, CI/CD — GitHub | Live Site

- Designed a concurrent WebSocket architecture with hub-based client management and message broadcasting.
- Deployed via multi-stage Docker builds and GitHub Actions CI/CD, hosting on Render with GHCR.

Education

Toronto Metropolitan University (TMU, formerly Ryerson University) — *Sept 2022 – Present*
Bachelor of Science (Honours), Computer Science (Co-op) — Toronto, ON
Involvements: Backend Lead @ PACS, Backend Engineer @ USSTM, Web Developer @ TMUCSA
Relevant Coursework: Data Structures, Algorithms, Operating Systems I, Database Systems I, Computer Networks I