

Andre Arcaina

linkedin.com/in/andrearcaina | github.com/andrearcaina | andrearcaina.me

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 principles for 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, PostgreSQL, Redis, Docker, Kubernetes, GCP, gRPC, GraphQL, Prometheus, Grafana

GitHub

- Engineered a distributed stock-trading simulation platform using Go microservices with gRPC inter-service communication, a GraphQL API gateway, database-per-service design, and Google Pub/Sub for event orchestration.
- Developed DevOps workflows with Docker, Makefile automation, and monitoring using Prometheus and Grafana.
- Integrated a Redis caching layer to reduce FMP API calls and improve response times by 98% (790 ms to 10 ms).

Vivid Fitness | Python, Django, Supabase (PostgreSQL), WebSockets, React.js/Next.js, TailwindCSS

GitHub

- Led a 5-person team to build a membership and finance management system for fitness clubs, earning highest possible grade in Intro to Software Engineering course at TMU.
- Developed secure Django REST APIs with JWT authentication and real-time messaging using Django Channels.

Whisp | Go, NeonDB (PostgreSQL), Docker, WebSockets, Alpine.js, TailwindCSS

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