

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, NeonDB, MongoDB, Redis, Postman, JetBrains
- **Concepts:** Microservices, REST/gRPC APIs, CI/CD, Agile/Scrum, System Design, Object Oriented Programming (OOP)

WORK EXPERIENCE

Environment and Climate Change Canada (ECCC)

June 2025 – Present

Software Engineer Intern

North York, ON

- Developed and maintained a Java Spring Boot microservice to process geospatial ice telemetry from ESRI geodatabases, leveraging Redis caching to cut query latency and boost throughput.
- Refactored 5,000+ lines across 10+ Java modules from javax.* to Jakarta EE 10, resolving 1,200+ compiler warnings.
- Contributed to migration from Oracle to PostgreSQL using Ora2Pg, transferring over 80 GB of data efficiently.
- Refactored data access and validation logic to use psycopg2 instead of oracledb for Python services and APIs.
- Optimized C# WPF/.NET applications leveraging ArcGIS SDKs for improved map rendering and spatial caching.

Undergraduate Science Society of TMU (USSTM)

Jan 2025 – Present

Backend Engineer

Toronto, ON

- Authored OpenAPI YAML specs, wrote SQLc queries, and implemented RESTful API endpoints for core backend services.
- Developed and executed 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 code.

DataKinetics

May 2024 – Aug 2024

Software Engineer Intern

Ottawa, ON

- Built Java backend services using Spring Boot, designing RESTful APIs to convert and process structured data efficiently (COBOL Copybooks to JSON), using internal data conversion tools.
- Enabled users to upload copybooks and visualize with DataTables and jQuery.
- Developed and documented comprehensive API test suites with Postman.

PROJECTS

Fafnir | Go, Next.js, PostgreSQL, GCP, Docker, Kubernetes, Prometheus/Grafana | [GitHub](#)

- Developed a scalable microservices application with gRPC inter-service communication, GraphQL API gateway, and database-per-service architecture for a stock trading simulation platform.
- Built DevOps automation workflows with Docker, Makefile, automated code generation and Prometheus/Grafana monitoring.

Vivid Fitness | Django, Next.js, PostgreSQL, Supabase, TailwindCSS, WebSockets | [GitHub](#)

- Collaborated in a 5-person team to develop a finance/membership management system for fitness clubs, earning a 4.33 GPA in Intro to Software Engineering.
- Built secure Django REST APIs with JWT authentication and PostgreSQL (Supabase) persistence for users, finance, messaging, and scheduling.
- Implemented real-time WebSocket communication via Django Channels for member-admin messaging, class updates, and administrative announcements.

Whisp | Go, Templ, Alpine.js, TailwindCSS, NeonDB, Docker, Makefile, Render | [GitHub](#) | [Website](#)

- Implemented concurrent WebSocket architecture with hub-based client management and message broadcasting.
- Streamlined deployment with multi-stage Docker builds, GitHub Container Registry, Render hosting and automated CI/CD via GitHub Actions.

Pathfinder | Go, Goroutines, Concurrency, File Tree Traversal | [GitHub](#)

- Built a high-performance CLI tool using goroutines and DFS to scan 73,000+ files in 4.995 seconds with 281% CPU utilization.

EDUCATION

Toronto Metropolitan University (TMU, Formerly Ryerson University)

Sept 2022 – Present

Bachelor of Science (Honours), Computer Science (Co-op)

Toronto, ON

- **CGPA:** 3.70/4.33 (3.6/4.0)
- **Involvements:** Backend Lead @ PACS, Backend Engineer @ USSTM, Web Developer @ TMUCSA
- **Coursework:** Data Structures, Algorithms, Operating Systems, Databases, Computer Networks, Software Engineering