

Ireina Hedad

Software Engineer · AI & Full-Stack Development

Remote (UTC+8) · Canadian citizen · Bilingual French/English | ireinahedad@icloud.com | [LinkedIn](#) | [Portfolio](#)

SUMMARY

Software engineer from Polytechnique Montréal (AI specialization, 2026) who builds products end to end and keeps them running. My main project, Arakice, is a live NHL analytics platform I designed and operate on my own: an XGBoost prediction model, two backends, a React web app, an iOS build with in-app subscriptions, and the production setup behind all of it. I integrate LLMs into real workflows, not just demos, and I care about the less visible parts too: tests, monitoring, documentation. Open to remote full-stack, AI/ML and data roles worldwide.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, C/C++, C#, SQL, HTML, CSS

Front End & Mobile: React, React Native, Capacitor (iOS), Angular, Vite, Tailwind CSS, Recharts, Figma

Back End & Data: Node.js/Express, FastAPI, PostgreSQL, MongoDB, REST APIs, WebSockets (Socket.IO), Stripe, JWT auth

AI/ML: LLM integration & prompt engineering, agentic AI workflows (Claude Code), XGBoost, scikit-learn, recommender systems (Two-Tower), probability calibration, backtesting, pandas/NumPy

Testing: Jest, Vitest, Supertest, Cypress, JUnit

DevOps & Tools: Git, GitHub Actions, Docker, Vercel, Railway, Neon, Supabase, Sentry, FFmpeg, Power BI, Confluence, Zendesk, Contentful, Microsoft Office

EDUCATION

Bachelor of Engineering, Software Engineering — Polytechnique Montréal — Graduated May 2026

Specialization in Artificial Intelligence

PROJECTS

Arakice — NHL Sports Analytics Platform — Personal project, 2026 – present · arakice.com

React / TypeScript · Node / Express · Python / FastAPI · PostgreSQL · XGBoost · Capacitor

Designed, built and run a sports analytics product solo, from the data pipeline and prediction model to the APIs, web and iOS clients, payments and production infrastructure.

- **Prediction model:** trained an XGBoost win-probability model on 15 seasons of NHL data (MoneyPuck advanced stats, starting goalies, weighted star absences, rest, ELO), Platt-calibrated it and validated it on a nine-season walk-forward backtest (log-loss, ROI), with de-vigged market odds as the benchmark
- **LLM features:** every pick comes with an AI-written analysis layered on the model and rule-based predictions; a seven-stage content pipeline turns match data into ready-to-post images and videos (data refresh, deterministic angle selection, constrained LLM copywriting, HTML → PNG rendering, FFmpeg assembly, anti-repetition logging)
- **Front end:** React and TypeScript (Vite, React Router, Tailwind) with user profiles, a live leaderboard, Recharts dashboards, a real-time community chat over Socket.IO, and SEO pages generated for every team and matchup
- **Back end:** an async FastAPI service wrapping the NHL Stats API (httpx, Pydantic, fallbacks when live data drops out) and an Express/TypeScript user service on PostgreSQL with JWT auth, Stripe subscriptions, web push, rate limiting and structured logging
- **iOS:** wrapped the React client with Capacitor, added Apple in-app subscriptions next to Stripe on the web, built through cloud macOS CI without a Mac, and tested on device via TestFlight
- **Production:** Vercel and containerised services on custom domains, SQL migrations, env-var validation gating every build, Sentry on both tiers, Vitest/Supertest coverage and privacy-first defaults; used Claude Code as an AI pair programmer for scaffolding, refactors and codebase audits

CAPSTONE PROJECT — POLYTECHNIQUE MONTRÉAL (2026)

Intelligent Web Middleware System — Client: Moment Factory · team of 5

Web middleware that turns Google Calendar events into Wrike timesheet entries, cutting down the manual time reporting Moment Factory staff had to do.

- Designed and implemented the rule-based engine that maps calendar events to timesheet entries
- Integrated a large language model (LLM) through prompt engineering
- Implemented a Two-Tower recommendation model with a continuous feedback loop, plus a dashboard tracking each model's performance

- Contributed to UI/UX design and front-end development
- Worked in Agile sprints with code reviews, software testing and iterative releases

WORK EXPERIENCE

Knowledge Base Support, Dormakaba, Montreal — *December 2025 – May 2026*

- Cleaned up and reorganized Zendesk knowledge base articles to improve quality and consistency
- Migrated documentation and support content to Contentful
- Reviewed article formatting, structure and metadata so documentation stayed accurate

Firmware Intern, Dormakaba, Montreal — *May 2025 – August 2025*

- Wrote a Python tool that streamlined the Engineering Change Notice (ECN) process for internal engineering teams
- Co-designed and built a Python interface controlling an automated test panel used to validate products before QA
- Documented both projects on Confluence

Laboratory Receptionist, Cerba, Laval — *September 2021 – June 2023*

- Processed laboratory samples and entered patient and sample information into internal systems
- Verified and identified samples to keep tracking and documentation accurate
- Handled high-volume data entry where accuracy mattered, and organized incoming sample shipments