

ADRIAN PATTERSON

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EXPERIENCE

Backend Developer

March 2025 - Present

GHGSat

Montreal, QC

- Evaluated and broke down epics into actionable work items, leading feature development from conception to completion.
- Implemented GitLab CI continuous deployment, reducing deployment time from 1-2 hours to under 30 minutes.

Software Engineer

November 2024 - March 2025

Groupe Dynamite

Montreal, QC

- Built Slack notification system for Google Cloud Pub/Sub dead letters, replacing silent failures with automated retries and real-time alerts.
- Reduced logging costs by 50% by analyzing log outputs and implementing a custom log filter using Terraform.

Software Developer II

June 2023 - November 2024

Genetec

Montreal, QC

- Led rapid infrastructure scaling for product launch, refactoring Terraform code to enable deployment across 4 new regions in one month, supporting 100+ tenants and 10,000+ devices.
- Built an ASP.NET Core email alerting microservice using react-email for reusable, component-based email templates.
- Built an end-to-end UI testing library using Playwright, adopted by 3+ teams to catch deployment issues before production through automated CI testing.
- Championed inner-source culture across the organization, founding 3 shared libraries that unified development practices for contract testing, UI testing, and React utilities through presentations and cross-team collaboration.
- Mentored 2 interns through project design and implementation, guiding their technical development and project execution.

Software Developer

June 2022 - June 2023

Genetec

Montreal, QC

- Implemented the first black-box integration testing using Docker containers and service mocking, creating tests for multiple services and documentation for team adoption.
- Presented threat models and conducted secure design reviews, completing security training through Security Journey platform.
- Built a dynamic video player timeline component in React with scroll-based range adjustment and drag controls.

Software Developer

September 2021 - June 2022

Liggo

Montreal, QC

- Enhanced UI responsiveness by replacing 2-minute polling with real-time WebSocket notifications, eliminating unnecessary HTTP requests and improving user experience.
- Integrated Twilio SMS notifications for instant machine downtime alerts to factory owners, enabling immediate response to production issues.
- Built a notification scheduling system using React and Postgres, allowing factory owners to set quiet hours and avoid off-duty alerts.

EDUCATION

Computer Engineering B.Eng with Distinction, Concordia University

2018-2022

- GPA: 3.75/4.3 (A-)
- Dean's List 2021/2022
- Engineering Excellence Scholarship 2022
- 2nd Place Capstone Project Award

PROJECTS

FridgeForReal [↗](#)

- Developed a food waste reduction app using React Native (mobile) and Python (backend) that tracks food expiration dates and suggests recipes.
- Leveraged a multi-modal LLM to identify food items from photos, then vectorized the identified contents to match against our own food vector database.
- Built a scalable architecture using AWS EKS, integrated Supabase for authentication, and leveraged LangChain for LLM fine-tuning.
- Created an automated inventory management system that tracks expiration dates and performs auto-cleanup of expired items.

RPi Love Box [↗](#)

- Created an IoT project using Raspberry Pi Zero W and e-paper display that gained 13 stars and 2 forks.
- Built a full-stack solution with Flask API, React frontend, and Firebase real-time database for remote message/image updates.
- Implemented automated deployment using cron jobs for display updates and remote code synchronization.
- Designed and 3D printed custom housing for the Raspberry Pi and Waveshare Pi HAT components.

SKILLS

Programming Languages	Python, ASP.NET Core (C#), React (TypeScript), Bash, PowerShell
Cloud Technologies	Terraform, Docker, Kubernetes, CI/CD Pipelines, Azure, AWS, Google Cloud Platform
Databases	PostgreSQL, MongoDB, Elastic, Redis
Architectures	Microservices, Event-driven Architecture, Micro-frontends

ABOUT ME

Citizenship	American and Canadian
Languages	Fluent in English and French, written and spoken
Interests	Personal software projects (see my pinned repos), Hiking, Skiing & Snowboarding, 3D printing

LINKS

GitHub	github.com/adrian-patterson
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