

# Aditya Patel

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## SKILLS

**Programming Languages:** Python, C++, C, TypeScript, Go, C#, JavaScript, SQL

**Technologies:** React, Node.js, Django, ASP.NET, Vue.js, Ruby on Rails, TensorFlow, PyTorch, GitHub Actions, Datadog

**Tools:** Git, Docker, AWS, Kubernetes, Terraform, Apache Airflow, Kafka, Spark, MongoDB, PostgreSQL, Redis, Temporal, Linux

## EDUCATION

**Toronto Metropolitan University**

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

September 2021 – April 2026

Toronto, ON

- **Courses:** Networks, Database Systems, Operating Systems, Machine Learning, Data Structures & Algorithms, Computer Security
- **Certifications:** Advanced Learning Algorithms – Stanford University ([Certificate](#))

## EXPERIENCE

**Wealthsimple** | Software Engineering Intern

May 2025 – August 2025

- Building scalable backend systems and data infrastructure for applied algorithmic investing under the Order Generation team

**Wealthsimple** | Software Engineering Intern

May 2024 – August 2024

- Engineered trading algorithm optimization by developing new **distributed data infrastructure** with **AWS** Redshift & S3, developed robust **ETL pipelines**; orchestrating **500+** containers on **Kubernetes** for batch multi-processing, cutting execution runtime by **80%**
- Developed end-to-end **full-stack simulation platform** using Ruby on Rails, React, TypeScript & Python **GraphQL** Server, boosting processing throughput by **65%** and integrating with Datadog & Preset for real-time order generation performance monitoring
- Served as **technical owner (DRI)** for simulation platform, enabling **14 minutes** trading experimental runs; Led alignment meetings with **4+ teams** to optimize systems that manage movement of **\$12+ billion**, providing **3x lower** market-fluctuation reaction time

**Royal Bank of Canada** | Software Engineer Intern (12 months)

May 2023 – April 2024

- Architected distributed **log parsing infrastructure** for enterprise **CI/CD pipeline**, using Python, **Kafka** events middleware, Spark, AWS, PostgreSQL and Elasticsearch, reducing multi-region deployment time by **45%**, streaming real-time deployment insights data
- Developed Helios **AI tool** for deployment data insights, by developing **RAG system** using LangChain agents, **fine-tuning LLMs** (Mistral-40B, Llama 2) on-prem AWS SageMaker & vector database embeddings, improving deployment error resolution time by **60%**
- Built and deployed **10+ robust ETL pipelines** for distributed DevOps data ingestion, leveraging Apache **Airflow DAGs**, optimizing **generating datasets** with **82%** lower latency, enabling scalable **ML model training** infrastructure for data platform

**Scotiabank Capital Markets** | Trading Floor Software Developer Intern

May 2022 – August 2022

- Built & delivered **4 full-stack web tools** for trading operations (communications platform, file validation, JSON-To-Excel, SSH file transfer) using ASP.NET, C#, React, jQuery, and SQL, boosting operational efficiency by **25%** & handling **60,000+** monthly interactions
- Designed high-performance **C# API Server** using asynchronous low-latency programming, automating **post-trade logging** with JSON-to-Excel conversion, boosting reliability by **40%** by optimized AWS ALB load balancing, plus configurable depth parsing option

**Stealth Startup** | Lead Full-Stack Developer

October 2021 – February 2022

- Architected and developed full-stack **e-commerce** website for TO-Thrive startup, incubated under Enactus TMU, leveraging Spring Boot, React & MongoDB, alongside rapid feature development cycles to optimize system design, boosting user engagement by **60%**

## PROJECTS

**Just-Servers** ([GitHub](#)) - Low-level **Golang** network servers (TCP|UDP network protocol), orchestrated on AWS EC2 using Terraform.

**DeskGenius** ([Website](#)) - Frontend 3D rendering engine using React Three-Fiber for visualizing desktop setups in a virtual space.

**Continuesage** ([GitHub](#)) - Backend LangChain RAG server for [Continue.dev](https://continue.dev), serving inference on LLMs hosted via AWS SageMaker.

**Petroforecast** ([GitHub](#)) - Full-Stack machine learning app to predict US heating oil future options via **20+ years** of time-series data.