

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, Linux

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, built **ETL pipelines**; orchestrating **500+ containers** on **Kubernetes** for batch multi-processing, cutting execution runtime by **80%**
- Developed end-to-end **full-stack trading simulation platform** using Ruby on Rails, **React**, TypeScript & **Python GraphQL** backend, boosting trade run throughput by **65%** and integrating Datadog & Preset for real-time order generation monitoring
- Served as **primary technical owner (DRI)** for **simulation platform**, enabling **7 minutes** trading 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 systems **log parsing infrastructure** for enterprise **DevOps CI/CD pipeline**, using Python, **Kafka**, **Spark**, **AWS**, **SQL** and Elasticsearch, reducing multi-region deployment time by **65%**, streaming real-time deployment data
- Built Helios AI autopilot tool by engineering **RAG system** with LangChain agents, **fine-tuning LLMs** (Mistral-7B, Llama2) on-prem AWS SageMaker & vector database **embeddings**, improving context-aware retrieval for deployment data insights
- Engineered and deployed **10+ robust ETL pipelines** for distributed DevOps data ingestion, leveraging Apache **Airflow DAGs**, to optimize **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

- Engineered high-performance **C# API Servers** for JSON to Excel conversion, automating **post-trade logging**, improving **reliability by 40%** and featuring **batch multiprocessing**, real-time custom dashboard for analytics & configurable depth parsing
- Built end-to-end **full-stack application** with ASP.NET, **C#** and React for internal communications on trading floor, integrating role-based access authentication, optimized load balancing and deployed internally with **60,000+ monthly interactions**
- Constructed a financial data validation and correction **internal web tool** using ASP.NET, **C#** and jQuery, enabling efficient validation of Excel/CSV files with customizable configurations, helping traders to trace and resolve bulk data issues in under **5 minutes**

TO-Thrive - Stealth | *Lead Full-Stack Developer*

October 2021 – February 2022

- Architected & developed **scalable web systems** for TO-Thrive **e-commerce stealth startup** incubated under Enactus TMU, utilizing Spring Boot, React, TypeScript & MongoDB database while collaborating with an agile development approach

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 3D space.

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

Petroforecast ([GitHub](#)) - Full-Stack ML app to predict US heating oil futures via 20+ years of time-series data.

EDUCATION

Toronto Metropolitan University (Ryerson University)

September 2021 – April 2026

Bachelor of Science (Hons.), Computer Science (Co-op)

Toronto, ON

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