

Hetang Patel

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Education

Dalhousie University, Halifax
Bachelor's in computer science

Jan 2021 to Dec 2025

Certifications

Google Advanced Data Analytics Professional Certificate, Google

Issued April 2026

Skills

- | | | | |
|--|----------------------|---------------|--------------------|
| • SQL | • Python | • JavaScript | • Snowflake |
| • Azure (Databricks, ADLS Gen2, Data Factory, Cosmos DB) | • dbt | • PostgreSQL | • Data Pipeline |
| • Power BI | • Tableau | • ETL/ELT | • scikit-learn |
| • Data Modeling | • Data Warehouse | • XGBoost | • Causal Inference |
| • Ridge Regression | • Hypothesis Testing | • A/B Testing | • Docker |
| • FastAPI | • Git | • GitHub | • GitLab CI |
| • Kubernetes | • Agile | • Scrum | • GitHub Actions |
| | • Confluence | • CI/CD | • Jira |

Work Experience

F1 Regulation Impact Analyzer, Personal Portfolio Project

Jan 2026 to May 2026

- Enabled regulation-cycle impact analysis across four F1 eras by building a Snowflake data warehouse with automated dbt staging-to-mart transformations. Displayed result through three-view Power BI Dashboard.
- Quantified the causal impact of the 2022 regulation overhaul on constructor performance by applying a difference-in-differences analysis comparing top-tier and midfield teams as treatment and control groups.
- Cut forecast error 42% below the naive baseline (MSE 0.0484 vs 0.0830) by training a walk-forward Ridge regression model now generating live 2026 season predictions for remaining races.

Halifax Transit Analytics Platform, Personal Portfolio Project

Nov 2025 to Jan 2026

- Identified route-level performance gaps, including 41% of stops served by only one route, by processing 663,788 records with PostgreSQL/PostGIS spatial queries, CTEs, and window functions.
- Surfaced a 47% Sunday service reduction relative to weekday levels through a Streamlit dashboard visualizing ridership trends, on-time performance, and geographic equity, giving operations stakeholders a concrete basis for resource allocation decisions.

F1 Strategy A/B Testing Framework, Personal Portfolio Project

Oct 2025 to Dec 2025

- Built an XGBoost lap time predictor achieving 2.6s mean absolute error across 86,000+ historical race laps.
- Deployed the model through a Dockerized Flask REST API on Railway with a React frontend on Vercel, automating releases via GitHub Actions CI/CD.
- Benchmarked model reliability against the Abu Dhabi 2024 GP, correctly predicting Norris's optimal 1-stop strategy over a 2-stop alternative across a full 58-lap simulation.

Project Lead, BIOMEX (Dalhousie University), Halifax

Sep 2025 to Dec 2025

- Architected a scalable React + Firebase + R Plumber API capable of processing 60,000 to 90,000 DNA samples per run.
- Replaced a legacy R+Shiny workflow with a self-service platform, removing manual script handoffs and letting researchers run differential expression analyses directly without engineering support.
- Drove all project milestones to on-schedule delivery across a 10-person cross-functional team by translating faculty requirements directly into sprint priorities.

Software Developer, Radius Research & Development (Dalhousie University), Halifax

Jan 2025 to Apr 2025

- Boosted on-time sprint task completion from 70% to 90% by establishing Scrum ceremonies, Jira-based tracking, and GitLab CI automation across the squad.
- Reduced team onboarding time from one week to two days by authoring structured documentation and mentoring developers on design patterns and test-driven development practices.