

OM PATEL

🎓 4th Year | ✉ o22patel@uwaterloo.ca | ☎ (647) 231-8391 | 🌐 /omrpatel | 🌐 /ompat5 | 🌐 omrpatel.ca

Programming Languages: Python, SQL, R, C++, C, JavaScript, HTML/CSS

Libraries: Pandas, Numpy, TensorFlow, Scikit-Learn, Matplotlib, OpenCV, Keras

Technologies: Snowflake, Looker, DBT Labs, Fivetran, RStudio, Power BI, MongoDB, Azure ML, Azure DevOps, MySQL, Oracle SQL

EDUCATION

University of Waterloo (*Bachelor of Mathematics, Honours Data Science*)

Sept 2021 - May 2025

- **Awards & Academics:** 83% Cumulative GPA, President's Scholarship of Distinction.
- **Course Highlights:** **CS 486** Intro to Artificial Intelligence, **CS 341** Data Structures and Algorithms, **CS 348** Database Management, **STAT 333** Stochastic Processes, **STAT 330** Mathematical Statistics

WORK EXPERIENCE

Data Analyst Intern @ Ministry of Education

Sep 2024 - Present

- Designing and implementing schema changes in a **relational database** and a **star schema** data warehouse, ensuring untampered continuity of the **ETL process**.
- Writing and executing **SQL** testing scripts in **Oracle** to validate data integrity and accuracy after ETL processes.
- Utilizing **Azure DevOps** to identify defects in pipelines and manage tasks during sprint cycles, streamlining workflow.

Data Scientist Intern @ Darwin CX

Sep 2023 - Apr 2024

- Implemented **K-Means model** to introduce predictive clustering of data and improve forecasting accuracy by **20%** by accounting for seasonal fluctuations in sales data.
- Identified major reports with large processing times and reduced **98%** of loading time by establishing **persistent derived tables**.
- Increased data pipeline efficiency by **15%** by using **DBT Labs** to enhance data validation tests and automate job scheduling.
- Decreased **10%** of Analytics Division operations costs by optimizing **Snowflake** compute resources and refactoring SQL queries.
- Improved data pipeline reliability by leveraging **Fivetran** for automated data extraction and loading, reducing manual intervention.

Data Analyst Intern @ Darwin CX

Apr 2023 - Sep 2023

- Translated raw data into actionable insights by designing and creating **20+ Looker** reports specific to customer requirements.
- Developed **SQL** queries to produce data integrity verification reports, achieving a **50%** decrease in audit resolution time.
- Conducted ad-hoc analysis to identify and remove anomalies within business reports flagged by customers.

Data Manager Intern @ Ministry of Transportation

Sep 2022 - Dec 2022

- Generated dynamic **Power BI** reports on trends in the organization's IT application usage, supporting decisions on modifying the technology stack.
- Created **Python** scripts to automate the reformatting of business documents, reducing processing time by **75%**.
- Compiled data from various databases into a central data warehouse to process organization-wide analytics.
- Converted technical reports into business objectives to effectively present information on the MTO publications website.

PROJECTS

Minesweeper AI Bot Python | Numpy | Matplotlib 🤖

Jun 2024 - Sep 2024

- Developed a Minesweeper AI agent using **Python** that models the game as a **Constraint Satisfaction Problem** and solves it through recursive inference, achieving a **83%** success rate.
- Implemented a three-phase solver combining basic deduction, subset solving, and heuristic-based random exploration to efficiently flag mines and open safe cells.

Sign Language Detector Python | TensorFlow | Numpy | OpenCV | Keras 🤖

Jul 2024 - Aug 2024

- Developed a computer vision model using **OpenCV** to detect and classify the American Sign Language (ASL) alphabet.
- Collected data, trained, and tested a **Convolutional Neural Network** using **TensorFlow**, resulting in an **77%** detection accuracy.