Hetkumar Patel

Toronto, ON
(647) 835-3408 hetkumar.patel1403@gmail.com linkedin.com/in/h3t08 Github/het0814

Education

Sheridan College **Jan. 2022 – Apr. 2025**
Honours Bachelor of Computer Science (Data Analytics) — GPA: 3.7 (Awarded-Honours) *Ontario, Canada*

Technical Skills

Programming Languages: Python ●●●, R ●●●, C ●●●, C++ ●●●, C# ●●●, Typescript ●●●
Web Dev: HTML ●●●, CSS ●●●, JavaScript ●●●, ASP.NET ●●●, Flask ●●●, Spring Boot ●●●
Big Data: SQL ●●●, Hadoop ●●●, Spark ●●●, MongoDB ●●●, SQLite ●●●
Visualizations and Cloud: Power BI ●●●, Tableau ●●●, Git ●●●, Docker ●●●, CI/CD ●●●, Ignition ●●●, AWS ●●●, GCP ●●●
AI/ML: LLMs ●●●, BERTopic ●●●, NLP ●●●, TensorFlow ●●●, PyTorch ●●●, Scikit-learn ●●●, Hugging Face ●●●, LangChain ●●●, OpenCV ●●●, MLFlow ●●●

Technical Experience

Artificial Intelligence Researcher (Part-Time) **Sep. 2024 – Aug. 2025**
Sheridan College, Centre for Applied AI *Oakville, ON*

- Led research and development of AI/ML-based pipelines, enhancing automation and decision-making.
- Designed an LLM-powered KPI scorecard system to extract and monitor performance metrics from industry documents.
- Applied BERTopic for advanced topic modeling to uncover insights from fleet-related reports and communications.
- Contributed to two research papers on AI/ML, both presented at international conferences.
- Developed and tested workflows, code, and prompts to validate approaches and meet project objectives.

AI/ML Software Developer (CO-OP) **May 2024 – Sep. 2024**
Naryant, Centre for Applied AI *Oakville, ON*

- Built a CTGAN-based synthetic data pipeline for SUMO mobility simulations, improving dataset diversity and realism.
- Developed and optimized machine learning models for transportation mode detection, achieving 92% classification accuracy.
- Collaborated with stakeholders to translate requirements into technical implementations ensuring project success.
- Utilized Python (Pandas, Scikit-learn, TensorFlow), CTGAN, and SUMO for scalable ML model development.

IIoT Developer (4 Months CO-OP + Part-Time) **May 2023 – Feb. 2024**
Magna International *Milton, ON*

- Developed Ignition-based web dashboards for real-time machinery status and fault detection in maintenance operations.
- Modified PLC programs to retrieve and visualize live data, improving integration across systems.
- Reduced troubleshooting time by 85% and improved monitoring accuracy by 97% through system enhancements.
- Wrote Python scripts to preprocess and visualize data within industrial applications.
- Collaborated in cross-functional teams and communicated regularly with management to provide technical updates.

Projects

ContextIQ: RAG-based Chatbot | *FastAPI, React, Python, Chroma* | **ProjectLink** **Mar. 2025**

- Built a full-stack RAG chatbot to provide context-aware responses using document/URL ingestion.

Climate Change Prediction | *Time Series, ARIMA, Python* | **ProjectLink** **Mar. 2025**

- Forecasted climate trends using historical datasets and ARIMA models.

FairLens | *Flask, Dash, AWS, GPT-4o Mini* | **ProjectLink** **Feb. 2024**

- Built an AI hiring platform that anonymizes resumes, detects biases, and visualizes diversity metrics using ML.

SnapCal | *Flask, Inception v2, Python* | **ProjectLink** **Mar. 2024**

- Deployed food image recognition app with calorie estimation using deep learning.

Inventory Management System | *C#, ASP.NET* | **ProjectLink** **Dec. 2023**

- Built inventory and supplier management system with forecasting features.

Certifications & Achievements

Prompt Engineering & Programming with OpenAI | Columbia University 2025

Research Papers Published

1. Integrating Knowledge and Data Driven Methods to Generate Synthetic Mobility Data | PaperLink
2. Topic Modeling Enhancement using Summaries Generated by LLM Models | PaperLink