# Dhrumil Jayeshbhai Patel

**+1(249)8760299** | **dhrumilj67@gmail.com** |**LinkedIn** |**Github**


## Education

- **Enterprise Software Development**
  Humber College, Toronto, Canada — Jan 2023 - Aug 2023
- **Applied Artificial Intelligence Solution Development**
  George Brown College, Toronto, Canada — Jan 2022 - Dec 2022
- **Bachelor of Technology: Information and Communication Technology**
  Pandit Deendayal Petroleum University, Gandhinagar, India — Aug 2016 - Jun 2020

## Experience

- **Machine Learning Researcher**
  Humber College, Toronto, Canada — July 2023 – Present
  - **Mitsubishi** as client, **reduced operational losses by 10%** by providing future action plans and by facilitating data-driven decision making to optimize inventory.
  - Wrangled data **by cleansing and organizing a large 12-year dataset**, performed feature engineering and data analysis techniques, **benchmarked best ml algorithm, and consequently 4% increase in prediction accuracy.**
- **AI Intern**
  Dynacare, Toronto, Canada — May 2023 – Present
  - Led a team of 4 members to develop **a question-answering AI chatbot**, which provides accurate answers to employees' inquiries based on the company's SOPs and documents, **reducing average time response by 40%.**
  - Leveraged Langchain, commercial LLMs, AWS Sagemaker and **improved 25% overall performance with agents, prompting, and chains**. Collaborated with a cross-functional team to build an interface with FastAPI and React.Js.
- **Data Science Intern**
  Gliese.AI, Toronto, Canada — Nov 2022 - Feb 2023
  - **Solved complex data mining challenges, upheld data privacy standards, established an automated ETL data pipeline in Python**, and **stored more than 100GBS unstructured data in MongoDB without human intervention.**
  - Constructed sentiment analysis to assist with predictive modeling, constantly ensuring fairness, ethical considerations, and **evaluating models for potential biases, resulting in a 5% boost in back-testing accuracy.**
- **Software Developer**
  Infosys Limited, Bengaluru, India — Oct 2020 - Dec 2021
  - **Making web applications 6 times faster** using angular6, Asp.net, SQL, advanced complex queries, store procedures, and caching.
  - Detected bugs for the live project and remedied them with **40% less time than initially projected time.**
  - Hosted and maintained applications, models, and data in **Azure** cloud servers.

## Skills

- **Data Science & Analysis:** SQL, Python, Tableau, R programming, Machine learning Algorithms, Data Analysis & Visualization, Excel, Big Data, SSIS, MongoDB, Spark, HDFS, Hive, Oracle, ETL tools, Data Warehouse, AWS Sagemaker
- **Artificial Intelligence:** Deep Learning, Transformers, NLP, LLMs, Langchain, Generative AI, Object Detection, Computer Vision, Text to image Generation, Diffusion Models, Tensorflow-Keras, Pytorch, Fine Tunning
- **Software Development:** Asp.net, AngularJS, Express.JS, TypeScript, Flask, Docker, Azure Server, Jira, Gitlab, Agile

## Projects

- **Trainify: Machine Learning Toolkit [ Python, Steamlit, Machine Learning, Analysis, scikit-learn, Pandas]**
  - Deployed ML toolkit where users can complete pre-processing tasks, generate graphs, **and execute various ML tasks, from classification to regression**. **As a result, decreased repetitive time-consuming tasks by half.**
- **Olympic Sports Analytics [ Data Analysis, Data Visualization, Tableau, SQL, Python, KPI, Dashboard, Scorecard]**
  - Created **10+ Visualizations, dashboards, and scorecards depending on distinct KPIs on the 120-year Olympics data set in Tableau**, using techniques like Pareto charts, Correlation, and Python Calculation fields.
- **Soccer Twitter Big Data [ NOSQL, SSIS, MongoDB, Spark, Tableau, Data Transformation]**
  - **Managed Database of 2 million+ records in MongoDB**, which is scraped live from soccer clubs' Twitter handles. **In SSIS, integrated structured data and unstructured data** and transformed it into flat files. And then, sent these files to **Spark** for processing all files at once and then to Tableau for better visualizations and getting insights.
- **Telecom Churn Prediction [Data Cleaning, Data Analysis, Python, Smote, PCA, Machine Learning, Deep Learning]**
  - Applied machine learning algorithms on an unbalanced data set **by balancing it through "Smote"** and PCA for dimensionality reduction and carried out advanced analysis techniques. Designed different neural networks using Keras and PyTorch **to minimize loss and get better accuracy.** As a result, **accuracy increased from 79% to 91%.**
- **Pothole Detection AI System [ Deep Learning, Object Detection Models, YOLO, R-CNN, Docker, Flask, AWS Server]**
  - Developed a pothole detection system for self-driving cars utilizing flask and object detection models**, reducing false negative cases by 20%.** Generated Docker Image and deployed this AI system **in the AWS server.**