RUTVIK PATEL

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OBJECTIVE

Versatile Computer Science MSc holder with strong skills in data science, and machine learning. Demonstrated success with innovative technology solutions, with over 1.5 years of experience. Seeking full-time roles related to Data Science and Data Analysis.

TECHNICAL SKILLS

- **Programming Languages & Tools:** Python, C, C++, Java, HTML, JavaScript, CSS, MATLAB, Shell, Git, Docker, ETL (Power Query)
- **Database Management, Visualization & Cloud:** SQL, NoSQL, MongoDB, Hadoop, Power BI, Looker Studio, Lucid Chart, Azure Cloud
- **Python Libraries:** Pandas, SciPy, NumPy, Scikit-Learn, PySpark, LangChain, Keras, PyTorch, GPT4All, Sentence Transformers
- **Machine Learning Techniques:** Regression, Deep Learning, Decision Trees, Naive Bayes, Clustering, ML and DL Libraries

WORK EXPERIENCE

City of London | London, ON, Canada   *Oct 2023-Present*
Training & Information Intern – Housing Stability Services

- Designed a system for historical data storage and developed advanced **Power BI** dashboards by integrating data from **SQL Server**, **Dynamics CRM, Network Folders** and a **REST API** to support decision-making and homelessness strategy reporting.
- Created a dashboard to examine the link between weather patterns, shelter availability, and CSR communications using **CRM** and **historical weather data**, enhancing reporting and decision-making, while saving up to 10% of the time.
- Engineered **automation scripts** that reduced staff time by **60%** for process execution and monthly reporting.
- Collaborated on creating process flowcharts, digital presentations, and public informative videos using **Synthesia**, an **AI video creation** tool, and improved training materials, increasing organizational efficiency and public access to government program information.

Vosyn Inc. | Toronto, ON, Canada   *Sept 2023-Feb 2024*
Machine Learning Engineer

- Contributed towards development of personalized **AI chatbot**, focusing on prompt engineering for user-aligned interactions.
- Facilitated the implementation of **audio segmentation** module in a voice cloning and translation framework, to enable use of the framework in multi-speaker scenarios.
- Supported the testing of **Large Language Model (LLM)** based product for text-based interactions, utilizing tools such as Langchain, Hugging Face, Sentence Transformers, and GPT4All.

Hiloni Stock Broking Pvt. Ltd. | Ahmedabad, GJ, India   *Mar 2021-Aug 2021*
Data Science Intern

- Designed personalized, client-centric dashboards in **Power BI** for premium clients, updated daily with data from **SQL Server** and **Market Data API**, enhancing client engagement and investment tracking.
- Utilized **K-Means** clustering to categorize 200 clients into 6 groups for assignment to advisors and stockbrokers based on needs and brokerage packages, optimizing service quality and operational costs.

EDUCATION

The University of Western Ontario | London, Ontario, CA   *Sep 2021-Feb 2023*
Master of Science in Computer Science (Specialization in Artificial Intelligence)   **GPA: 3.90/4.00**
Pandit Deendayal Energy University | Gandhinagar, Gujarat, IN   *July 2017-June 2021*
Bachelor of Technology in Information and Communication Technology   **GPA: 9.38/10.0**

PROJECTS

Comprehensive Retail Product Analytics using Power BI: Sales, Sizes, and Pricing Insights

- Conducted comprehensive **Power BI** analysis on **250,000+** retail entries, identifying top SKUs and optimizing MSRPs, complemented by the creation of visual tools such as market share pie charts, MoM comparisons, and sales pattern bubble charts to aid inventory and pricing decisions.
- Aggregated insights from diverse data to spotlight the top 10% of SKUs, identify competitively priced products by weight, and emphasize the potential of specific product types.

Database Management for a Product Manufacturing Company

- Developed a **MySQL** database system for consumer product manufacturing, enhancing schema design and data integration for efficiency.
- Demonstrated over **50%** time savings compared to manual entry and paper-based order searches, emphasizing the system's efficiency.

Twitter Data Analysis: FIFA 2022

- Scraped **5M tweets** with 53 hashtags (14GB) using **SNScraper**, then cleaned and pre-processed data using **NLTK** and **Textblob** for sentiment analysis, revealing insights into FIFA 2022's public perception.
- Used **SparkMLlib** to train **Logistic Regression** and **Naïve Bayes** models for sentiment classification, achieving **F1 scores** of 0.9 and 0.73.

Stock Price Movement Prediction Using Deep CNN and Other Deep Learning Models

- Implemented a **CNN**-based **classification** strategy with automated technical analysis using **candlestick charts** to predict stock price trends, achieving over **81% accuracy** in the top 10 Indian stocks on the NSE, complemented by scripts for automatic chart generation.
- Utilized **LSTM**, **RNN**, and **GRU** models for forecasting stock prices in time-series data, with outperforming others with a MER under 14%.

CERTIFICATIONS AND ACHIEVEMENTS

- **Pursuing** Data Engineering Essentials using SQL, PySpark (Udemy), and Azure Data Scientist certification
- **Ranked** in the 89th percentile among more than 55,000 participants in TCS Codevita Coding Competition
- **Completed** online courses on Machine Learning (deeplearning.ai), SQL (Stanford Online), & Agile Software Dev. (University of Minnesota)