



VIREN VAVIYA

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📍 **Home:** Frankfurt am Main (Germany)

ABOUT ME

Self-motivated and detail-oriented Data Analyst with a strong foundation in data visualization, statistical analysis, and SQL. Passionate about leveraging AI and machine learning to transform raw data into actionable insights that drive strategic decision-making. Proficient in Python, Power BI, and modern AI frameworks, with hands-on experience in working with large datasets. Continuously exploring emerging technologies, including Generative AI and LLMs, to enhance analytical capabilities and develop innovative solutions. A fast learner with a problem-solving mindset, always eager to push the boundaries of data science.

WORK EXPERIENCE

Data scientist | Dev's Club

[10/06/2023 – 11/06/2024]

City: Surat | Country: India

- **Advanced Python Programming:** Expertise in Python for data science, leveraging Pandas, NumPy, Scipy, and Dask for efficient data preprocessing, feature engineering, and scalable analytics.
- **Data Visualization & Business Intelligence:** Proficient in Matplotlib, Seaborn, Plotly, and Power BI/Tableau to create interactive dashboards and visualize complex datasets for data-driven decision-making.
- **Machine Learning & Deep Learning:** Hands-on experience in Supervised and Unsupervised Learning, Neural Networks, CNNs, RNNs, LSTMs, GRUs, and Transfer Learning using TensorFlow, Keras, PyTorch, and Scikit-learn. Experience in model deployment with MLflow, FastAPI, Flask, and Docker.
- **Natural Language Processing (NLP) & Large Language Models (LLMs):** Experience with text preprocessing, tokenization, embeddings (Word2Vec, BERT, OpenAI GPT), Named Entity Recognition (NER), and Sentiment Analysis. Skilled in LangChain, Hugging Face Transformers, and vector database integration (FAISS, Chromadb).
- **Time Series Analysis & Forecasting:** Expertise in ARIMA, SARIMA, Prophet, Exponential Smoothing, and LSTMs for forecasting. Applied seasonal decomposition, stationarity tests (ADF, KPSS), and hypothesis testing to improve predictive performance.
- **Generative AI & Automation:** Worked on AI-driven automation using OpenAI APIs, LangChain, AutoML, and Reinforcement Learning for intelligent decision-making systems.
- **SQL & Databases:** Strong skills in SQL for data extraction, manipulation, and performance optimization.

PROJECTS

[01/01/2023 – 05/03/2023]

Stock Market Price Prediction | Dev's Club

- Built deep learning models (LSTM, GRU, CNN) using TensorFlow/Keras for stock price forecasting.
- Conducted ARIMA, SARIMA, and Prophet-based statistical modeling to analyze seasonal trends and market behavior.
- Engineered features using SQL & Pandas, handling large-scale financial datasets.
- Integrated Power BI for interactive financial dashboards, providing predictive analytics for investment strategies.

Link: https://github.com/Vvren2022/stoke_price_prediction

GrishaBot: AI-Powered News Research Tool

- Developed an AI-driven research assistant using OpenAI embeddings, LangChain, and FAISS for real-time semantic search.
- Implemented automated web scraping using LangChain's WebpageReader, BeautifulSoup, and Scrapy, extracting and preprocessing text data with NLTK, spaCy, and Hugging Face.
- Designed an interactive Streamlit UI, integrating LLMs (GPT, PaLM) and Retrieval-Augmented Generation (RAG) for accurate responses. Optimized document retrieval and knowledge management using vector databases (FAISS, ChromaDB) and SQL for efficient data processing.

Link: https://github.com/Vvren2022/research_tools_LLM

[12/07/2024 – 07/10/2024]

Grisha_Q: Intelligent FAQ-Based Question Answering System | personal project

- Developed an AI-powered FAQ system using LangChain, OpenAI, Google PaLM, Hugging Face embeddings, and FAISS for efficient similarity search.
- Transformed static FAQ data into a dynamic knowledge base with vector databases for real-time answer retrieval.
- Applied RetrievalQA techniques with OpenAI and Google’s models for accurate, conversational query resolution.
- Built a scalable system to automate customer interactions, enhancing user engagement and reducing manual effort.
- Delivered a seamless chatbot experience, improving efficiency and reducing the need for manual intervention.

Link: https://github.com/Vvren2022/grisha_Q_-_A

PROGRAMMING LANGUAGES

Python | SQL

TECHNOLOGY & TOOLS

Statsmodels | MySQL | POWER BI | Scikit-learn | TensorFlow | Keras | Matplotlib | Seaborn | Pandas | NumPy

SKILLS

Machine Learning | NLP | Data Preprocessing & Manipulation | LLM(Generative AI)

LANGUAGE SKILLS

Mother tongue(s): gujarati
Other language(s): German | English

EDUCATION AND TRAINING

Master's in High Integrity Systems

Frankfurt University of Applied Sciences [10/04/2024 – Current]

City: Frankfurt am Main | Country: Germany

Bachelor of Engineering (B.E.) – Information and Technology

GEC Gandhinagar [19/06/2019 – 16/06/2023]

City: gandhinagar | Country: India