

# Sarthak Shandilya

Data Scientist | Python | SQL | Applied Machine Learning | Analytics & Visualization

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## Summary

- Data scientist with strong foundations in Python, SQL, and data analysis, experienced in working with real-world datasets to derive insights through statistical analysis, predictive modeling, and machine learning.
- Hands-on experience across the data science lifecycle, including feature engineering, supervised learning, ensemble methods, validation workflows, and metric-driven model evaluation with a focus on interpretability and reliability.

## Projects

### DemandIQ - Retail Demand Forecasting & Risk Insights

- Built and deployed a retail demand forecasting system on 1M+ sales records using time-series models (Naive, ARIMA, SARIMA, Prophet), reducing forecast error by ~60% and translating predictions into inventory planning, demand risk insights, scenario simulations, and anomaly detection through a production Streamlit application optimized with Parquet-based data pipelines.

🔗 <https://demandiq.streamlit.app>

### SpaceX Launch Dashboard

- Engineered an end-to-end data pipeline integrating the SpaceX API with external datasets, automating data ingestion, cleaning, transformation, and feature engineering, and built, evaluated, and deployed predictive models and interactive dashboards that improved model performance by 12% (F1-score: 0.89) while delivering real-time insights via Streamlit and Plotly

🔗 <https://spacex-launch-dashboar...>

### Resume Screening System (ATS Simulation)

- Built and deployed an end-to-end NLP-based resume screening system simulating ATS logic, using TF-IDF and BERT embeddings to evaluate resume-job relevance and perform explainable skill gap analysis, with a reproducible Streamlit application ensuring consistent inference and transparent matching outputs

🔗 <https://resume-screening-ai.stre...>

## Skills

### Technical Skills

- Python, SQL, Pandas, NumPy, Scikit-Learn
- TensorFlow, PyTorch
- Matplotlib, Seaborn, Plotly, Streamlit
- Git & GitHub, REST APIs
- MongoDB, Excel, Power BI, Tableau, Jupyter Notebook, VS Code
- Hadoop, Apache Spark
- Azure Machine Learning (Azure ML)

### Data Science, ML & GenAI

- Data Cleaning, EDA, Statistics & Statistical Modeling, Feature Engineering, Data Pipelines (ETL)
- Classification, Regression, Clustering, PCA, Random Forests, XGBoost
- Model Evaluation (Precision, Recall, F1, ROC-AUC), Model Deployment
- Deep Learning: ANN, CNN, RNN, LSTM
- NLP: Tokenization, Embeddings, Text Classification
- GenAI & LLMs: Transformers (BERT, GPT), Large Language Models, Prompt Engineering, Text Generation

## Certifications

### Applied Data Science Lab WorldQuant University

- Applied machine learning techniques to real-world datasets with a focus on model evaluation, validation, and data-driven decision making using iterative experimentation, including managing unstructured data with MongoDB.

### Data Science Professional Certificate IBM

- Completed an industry-aligned data science curriculum with hands-on labs and capstone projects covering Python, SQL, statistical analysis, machine learning, APIs, data visualization, and end-to-end model development.

### Machine Learning & AI with Python

HarvardX (edX)

- Implemented and evaluated supervised learning models in Python, with a strong focus on ensemble methods (Bagging, Random Forests, Gradient Boosting, AdaBoost), bias-variance tradeoffs, and metric-driven model selection.

## Education

### Bachelor of Arts — Sociology & History | CGPA: 8.15

Dr. Harisingh Gour Central University (2020–2023)