# Mahimna Darji

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#### **EDUCATION**

# **Indiana University Bloomington**

Bloomington, Indiana, USA

Master of Science in Data Science: GPA: 3.73/4

Aug 2023 – May 2025

 Courses: Applied Machine Learning, Data Mining, Data Visualization, Advanced Database Concepts, Usable Artificial Intelligence, Statistics, Social Media Mining, Software Engineering

Indus University Ahmedabad, Gujarat, India

Bachelor of Technology in Computer Science: GPA: 3.93/4

Jul 2019 - Apr 2023

 Courses: Database Management System, Machine Learning, Data Structures & Algorithms, Object Oriented Programming, Operating Systems, Computer Networks, Soft Computing, Cloud Computing

### SKILLS SUMMARY

Programming Languages: Python, SQL, R, JavaScript, C, C++

Database & Cloud Platforms : Google Cloud Platform, Amazon Web Services, Azure SQL, MySQL, PostgreSQL, MongoDB, BigQuery

Data Engineering & ETL: PySpark, Apache Spark, IBM DataStage, Pandas, Docker, Git, REST APIs

Data Visualization : Tableau, Power BI, Streamlit, Plotly, Matplotlib, Seaborn, Gephi

Machine Learning & AI : TensorFlow, Neural Networks, LLMs, NLP, CNN

## **EXPERIENCE**

Data Scientist Jan 2025 – Present

Project 990 Inc.

Lewis Center, Ohio, USA

• Build ETL pipelines to collect, clean, and standardize financial grant data from 7 sources across 53 nonprofit organizations spanning 2013 to 2021, reducing processing time by 40% and enabling structured analysis using PySpark, SQL, and Python.

- Transform over 130,000 records for time-series and geospatial analysis to identify grant distribution patterns and funding trends across regions.
- Create Tableau dashboards to highlight donation trends and funding disparities. **Collaborate with executive leadership to define KPIs**. Document the data pipeline, regression testing logic, and version control through Git to ensure reproducibility.

Machine Learning Intern May 2024 – Aug 2024

ManekTech Ahmedabad, Gujarat, India

- Engineered a Python-based backend for real-time AQI forecasting using cloud-native infrastructure and automated ingestion from REST APIs.
   Developed CI/CD workflows using Git for streamlined deployment.
- Improved model accuracy by 7.6% through hyperparameter tuning and feature selection using scikit-learn and NumPy. Optimized preprocessing logic across 4 supervised learning models including regression and decision trees, enabling more reliable predictions.
- **Deployed the final model into a real-time pipeline** with custom monitoring scripts using Docker containerization. Enabled early alerts for hazardous conditions through data modeling techniques.

## **Data Science and Business Analytics Intern**

Jul 2022–Sep 2022

Start Tech Academy

Ahmedabad, Gujarat, India

- Implemented an image classification model using CNNs and applied NLP techniques to analyze 2,000 image-text pairs from educational materials. Enabled multimodal analysis and improved prediction accuracy by 11% through model optimization using TensorFlow frameworks and Transformers for text classification tasks.
- Built backend-to-frontend data pipelines to track model performance and deliver insights. Deployed Power BI dashboards with interactive visualizations and user-friendly views to support stakeholder decision-making.

#### **PROJECTS**

# **Supply Chain Optimization Platform**

May 2025 - Jun 2025

- Designed an interactive supply chain analytics platform using Python and **simulated logistics across 50,000 shipment records** from a US-based warehouse network. Built demand forecasts using Prophet, performed delay detection using Z-score trends and shipment heatmaps using Folium.
- Created Stability Score and Efficiency Index to flag risky SKUs. Developed Tableau dashboards to visualize cost and delivery anomalies. Enabled decision-makers to compare vendor tradeoffs. Improved on-time delivery predictions by 15% compared to baseline heuristic methods through forecasting techniques and data modeling.

## **Los Angeles Police Department Crime Detection**

Aug 2024 - Dec 2024

- Developed **scalable predictive models on 900,000** LAPD crime records using stratified sampling, time series modeling, and spatial clustering in PyTorch and Spark. **Improved hotspot detection accuracy by 18%** and extracted key patterns from unstructured geospatial data.
- Visualized risk zones, victim demographics, and crime trends across weeks and months using heatmaps and clustering techniques. Created a Streamlit dashboard to display visualizations, supporting location-based intelligence and behavioral trend analysis for strategic planning.

#### **Book Recommendation System**

Jan 2023 – Apr 2023

- Built a full-stack content-based recommendation system using Python and Flask that suggests books based on genre, author and user interactions. **Provided personalized recommendations for 31 book genres** through a clean UI with secure login, genre filters, and dynamic pages.
- Tracked user activity to refine recommendation logic based on browsing behavior and preferences. **Logged over 500 interactions and improved recommendation accuracy by 12%**, ensuring recommendations aligned with user interests across different genres.

#### **CERTIFICATIONS**