

PRIYADARSHINI MOHAPATRA

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Skills

- **Languages:** Java | Python
- **Tools:** Git | GitHub | MySQL
- **Frameworks/Libraries:** Pandas | NumPy | Matplotlib | Seaborn | Tkinter | Scikit-learn
- **Soft Skills:** Teamwork | Curious | Flexible | Growth Mindset
- **Core Concepts:** Data Structures and Algorithms | Data Visualization | Machine Learning

Projects

Multi-City Traffic Prediction and Peak Hour Analysis



Jul'2025 - Nov'2025

- Cleaned & engineered a combined dataset of 48,000+ hourly traffic records, integrating weather data from four major Indian cities and creating time-based features (Hour, DayOfWeek, Month, Weekend, Holiday)
- Applied advanced preprocessing, including forward-filling missing weather values, merging multi-city datasets, and creating lag-based features (Lag_1, Lag_24) to capture short-term and daily temporal dependencies
- Conducted extensive Exploratory Traffic Analysis, generating traffic heatmaps, peak-hour profiling, weekday vs weekend trends, weather–traffic correlations, and city-level congestion metrics across Delhi, Kanpur, Bengaluru, and Pune
- Built and evaluated multiple models including Gradient Boosting, ARIMA, and LSTM, achieving MAE as low as 2.64 with Gradient Boosting and running time-series cross-validation for model reliability
- Implemented model refinement using GridSearchCV and analyzed feature importance, identifying lag features as strongest predictors; visualized Actual vs Predicted outputs for performance comparison

Tech: Python, Pandas, NumPy, Scikit-learn, TensorFlow(LSTM), Matplotlib, Seaborn, StatsModels

Shoe Price Prediction using Machine Learning



Mar'2025 - May'2025

- Performed data preprocessing & feature engineering (handled missing values, converted categorical variables, scaled numerical features)
- Analyzed and visualized brand, gender, size, and price trends in a shoe sales dataset using Matplotlib, Seaborn, and Plotly, uncovering key patterns to support pricing and marketing insights
- Trained and evaluated multiple regression models (Linear, Ridge, Lasso, Random Forest, Gradient Boosting) on a 1000+ record shoe sales dataset, comparing performance using MSE, RMSE, MAE, and R² to identify the most accurate pricing model
- Optimized the Gradient Boosting Regressor with hyperparameter tuning, achieving R² score of 0.81, improving prediction accuracy significantly
- Built a prediction pipeline that estimates shoe prices based on brand, type, gender, size, and material

Tech: Python, Pandas, NumPy, Scikit-learn, Seaborn, Matplotlib, Plotly

Exploratory Data Analysis & Clustering on Airline Satisfaction Data



Sep'2024 - Nov'2024

- Preprocessed 129,880 airline customer records, handling 98% of missing values using mean, median, and mode imputation to improve data integrity
- Generated 15+ exploratory data analysis (EDA) visualizations using Seaborn, Matplotlib, and Pandas to evaluate customer satisfaction, flight delays, and travel class insights
- Engineered a Total Delay feature, reducing redundancy and enhancing delay analysis accuracy by 30%
- Applied K-Means clustering on scaled numerical data, segmenting customers into three distinct groups based on travel behavior
- Visualized results with heatmaps, box plots, pair plots, and count plots, revealing correlations above 0.7 between delays and satisfaction

Tech: Python, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn

Certifications

- Static Routing Configuration Using Packet Tracer (*Coursera*) Apr'2024
- The Bits and Bytes of Computer Networking (*Coursera*) Apr'2024
- Python for Data Science and Machine Learning Bootcamp (*Udemy*) Dec'2022

Academic and Extracurricular Achievements

- Secured 2nd place in an inter-school badminton tournament at Lovely Professional University, representing the Computer Science team among 5+ participating schools Oct'2022
- Earned the “Canva 50 design Milestone Badge” for achieving a significant design milestone on Canva May'2023

Education

Lovely Professional University

Bachelor of Technology (B.Tech) in Computer Science and Engineering | CGPA: 8.43

Phagwara, India

Aug'2022 - Jul'2026

Kendriya Vidyalaya Highgrounds

CBSE (Class XII), Aggregate: 90.4%

Chandigarh, India

Apr'2020-Mar'2021

Kendriya Vidyalaya Highgrounds

CBSE (Class X), Aggregate: 96.4%

Chandigarh, India

Jul'2018 - Mar'2019