

Problem Statement Justification - Superstore Analytics Project

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Problem Statement Summary:

The business required data cleaning, regional analysis, discount impact study, Power BI dashboard, and ML-based profitability prediction.

1. Data Cleaning & Preparation

Files: cleaned.sql, cleaned.csv

- Removed nulls, duplicates, inconsistent categories.
- Converted date fields and standardized formats.

Telugu: ?? ?????? ??????????, ??????????? ??????, ??? ?????????????? ??????????.

Outcome: Reliable dataset for analytics.

2. Exploratory Data Analysis (EDA)

Files: Superstore_EDA.ipynb, EDA report.docx

- Analyzed sales, profit, category, and discounts.
- Found Technology most profitable, Furniture least.

Telugu: ??????????, ???????????, ??????? ??????? ?????????? ????????

Outcome: Clear profit/loss trends identified.

3. SQL Business Analysis

File: cleaned sql file.sql

- Created KPIs: Sales, Profit, Orders, Avg Delivery.
- Analyzed feedback, regions, and segments.

Telugu: SQL ?????? ???????, ????????, ??????? ?????????????? ??????????????.

Outcome: Supports data-driven decisions.

4. Power BI Dashboard

File: superstore.pbix

- Dashboard with filters (Region, Category, Segment).

- KPIs visualized with drill-downs and maps.

Telugu: Power BI?? ???????? KPIs?? ???????? ?????? ?????? ?????? ?????? ??????.

Outcome: Interactive executive summary.

5. Predictive Modeling (ML)

Files: Superstore_EDA.ipynb, EDA report.docx

- Model: Random Forest Classifier (94 percent accuracy).

- Predicted Profitable vs Non-Profitable orders.

Telugu: ?????? ???????? ???????? ???????? ?????? ?????? ?????????? ??????.

Outcome: Predictive insights for business.

6. Documentation

Files: Problem Statement.docx, Cleaned Data, SQL, EDA, PBIX

- Full pipeline from cleaning to dashboard to ML model.

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Outcome: Complete analytical workflow.

Conclusion (???????????)

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