

# Problem Statement Justification - Superstore Analytics Project

## Problem Statement Justification - Superstore Analytics Project

### 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.

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

Outcome: Complete analytical workflow.

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

? ?????????????? ?????????? Problem Statement?? ?????????? ?????????? ??????????.

????? ?????????????????? ??????? Power BI ?????????????????? ?????? ?????? ?? ?????????? ?????????????? ??????????????  
?????????????????.

????????? ?????????? ?????????????????? ?????????????? ??????? ?????? ?????????????? ??????????????.