Data Analytics Project Report: Superstore Sales Dashboard

# 1. Introduction

This report documents the steps taken to build a complete data analytics project from scratch, using a sample Superstore dataset. The process involved creating a dataset, loading it into SQL for querying, analyzing it in Excel, and building an interactive dashboard in Power BI.

# 2. Problem Statement

The goal was to analyze sales, profit, and delivery performance to identify areas of improvement. Key objectives included calculating profit margins, understanding delivery times, and identifying trends by region, category, and ship mode.

# 3. Data Creation

A Superstore-like dataset was created with columns: Order\_ID, Order\_Date, Ship\_Date, Region, Category, Sub\_Category, Sales, Quantity, Discount, Profit, Ship\_Mode, Customer\_ID, and Product\_ID. The dataset was saved in CSV format for further use.

# 4. Loading Data into SQL

Steps to load data into SQL:  
- Created a table using the CREATE TABLE statement with appropriate data types.  
- Imported the CSV file into the SQL database.  
- Verified the data using SELECT queries.  
- Performed basic queries like total sales, total profit, and filtering by region or category.

# 5. Data Analysis in Excel

The dataset was opened in Excel to perform preliminary analysis:  
- Cleaned and reviewed the data for consistency.  
- Created PivotTables to summarize sales and profit by category, region, and ship mode.  
- Added filters and slicers for interactive exploration.

# 6. Power BI Dashboard

The dataset was imported into Power BI for advanced visualization:  
- Loaded the CSV file using 'Get Data'.  
- Used Power Query to add calculated columns, such as delivery\_days (difference between Order\_Date and Ship\_Date) and profit\_margin (Profit / Sales).  
- Created measures for Total Sales, Total Profit, Average Profit Margin, and Average Delivery Days using DAX.  
- Built visuals: KPI cards, bar charts for category-wise performance, regional maps, and tables with filters.  
- Formatted visuals and added a professional title to the dashboard.

# 7. Insights and Findings

The analysis revealed the following insights:  
- Average delivery time was approximately 4 days.  
- Certain categories and regions contributed the most to profit.  
- Discounts impacted profit margins significantly.  
- Ship Mode choice affected delivery speed.

# 8. Conclusion

This project demonstrated the full workflow of a data analytics project: from dataset creation, SQL analysis, Excel exploration, and Power BI dashboard development. The resulting dashboard provides actionable insights into sales performance, profitability, and operational efficiency.