

■ Task 1 Report: Business Sales Dashboard from E-commerce Data

1. Objective

The purpose of this task was to analyze e-commerce sales data and design an interactive Power BI dashboard that highlights best-selling products, sales trends, and high-revenue categories. This dashboard enables data-driven decision-making by providing clear insights into customer segments, product categories, and overall business performance.

2. Data Preparation

Dataset Used: Superstore e-commerce dataset.

Steps Performed:

- Cleaned and standardized product categories and customer records.
 - Removed duplicates and null values.
 - Established relationships between tables (Orders, Products, Customers, Regions, and Dates).
- Modeling: Star schema with Orders as the fact table and supporting dimension tables.

3. Dashboard Design & Key Metrics

KPIs:

- Total Sales: 2.30M
- Total Profit: 286.40K
- Total Orders: 5009
- Returns: 296

Visuals Included:

- Top 5 Products & Sub-Categories (Bar Chart)
- Sales by Category & Segment (Donut & Pie Charts)
- Monthly Sales Trends (YoY) (Line/Area Chart)
- Geographic Insights (Sales by City Map)
- Forecasting Visual (Predicted Sales for next months)

Filters: Year, Region, and Segment for interactivity.

4. Insights Derived

- Consumer Segment is the highest contributor (1.16M sales).
- Technology is the leading category (836K sales), followed by Furniture (742K).
- Phones & Chairs are the most profitable sub-categories.
- Sales trend peaks in Q4 months, reflecting seasonal buying behavior.
- Returns are low compared to total orders, indicating strong product-market fit.

5. Forecasting & Predictive Insights

Power BI Forecasting predicts steady growth into 2015.

Seasonal fluctuations remain consistent with prior years.

Sales expected to rise gradually in early months, with peaks during festive/holiday seasons.

6. Business Impact

- Helps identify top products and categories for targeted marketing.
- Enables better inventory planning during peak demand.
- Assists leadership in tracking profitability and segment-wise contributions.
- Improves business storytelling with interactive insights.

7. Deliverable

- ✓■ An interactive Power BI dashboard that showcases key KPIs, trends, and forecasts.
- ✓■ A detailed report summarizing findings and actionable insights.