

# Superstore Data Analytics (DA) Report

## 1. Problem Statement

The Superstore business wants to analyze its historical sales data to understand overall performance, identify profit and loss areas, evaluate customer and regional trends, and support data-driven decision-making. The main objective is to improve profitability by optimizing product categories, regions, and customer segments while controlling discounts and operational costs.

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## 2. Dataset Overview

The Superstore dataset contains transactional sales data with the following key fields: - Order Details: Order ID, Order Date, Ship Date, Ship Mode - Customer Details: Customer ID, Customer Name, Segment - Geographic Details: Country, Region, State, City - Product Details: Category, Sub-Category, Product Name - Sales Metrics: Sales, Quantity, Discount, Profit

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## 3. Data Preprocessing Steps

The following preprocessing steps were performed before creating the report: - Removed duplicate records - Checked and handled null or blank values - Converted Order Date and Ship Date into proper date format - Created a Date hierarchy (Year, Quarter, Month) - Verified data types for Sales, Profit, Quantity, and Discount - Standardized column names for consistency

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## 4. Sheets / Pages Created in the Report

### 4.1 Executive Overview Dashboard

**Purpose:** High-level view of overall business performance - Total Sales - Total Profit - Total Orders - Profit Margin - Sales and Profit Trend by Year/Month

### 4.2 Regional Performance Analysis

**Purpose:** Identify top and bottom performing regions and states - Sales by Region - Profit by State - Region-wise Profit Margin - Map visualization for geographic insights

### 4.3 Category & Sub-Category Analysis

**Purpose:** Analyze product performance - Sales by Category - Profit by Sub-Category - Top 10 Products by Sales - Loss-making Sub-Categories

## 4.4 Customer & Segment Analysis

**Purpose:** Understand customer behavior and segment contribution - Sales by Customer Segment - Top Customers by Sales and Profit - Segment-wise Profitability

## 4.5 Discount & Profitability Analysis

**Purpose:** Evaluate the impact of discounts on profit - Discount vs Profit analysis - High discount-low profit products - Average discount by category

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# 5. DAX Measures Used

## 5.1 Basic Measures

```
Total Sales = SUM(Superstore[Sales])

Total Profit = SUM(Superstore[Profit])

Total Quantity = SUM(Superstore[Quantity])
```

## 5.2 Derived Measures

```
Total Orders = DISTINCTCOUNT(Superstore[Order ID])

Profit Margin = DIVIDE([Total Profit], [Total Sales], 0)
```

## 5.3 Time Intelligence Measures

```
Sales YoY Growth =
CALCULATE(
    [Total Sales],
    SAMEPERIODLASTYEAR(Superstore[Order Date])
)
```

## 5.4 Ranking Measures

```
Rank Products by Sales =
RANKX(
    ALL(Superstore[Product Name]),
    [Total Sales],
    ,
```

DESC

)

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## 6. Key Insights & Findings

- Technology category generates the highest sales and profit.
- Furniture category has lower profit margins, mainly due to high discounts.
- The West region is the most profitable, while certain states show consistent losses.
- High discounts negatively impact profit, especially in Office Supplies.
- A small group of customers contributes significantly to total sales.

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## 7. Final Assumptions & Business Recommendations

### Assumptions

- Data provided is accurate and represents real transactional records.
- No seasonal external factors (festivals, economic changes) were considered.
- Shipping costs and returns data are not included in the analysis.

### Recommendations

- Reduce excessive discounts on low-margin products.
- Focus marketing efforts on high-profit regions and customer segments.
- Review pricing strategy for loss-making sub-categories.
- Encourage sales of high-margin products through bundling or promotions.

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## 8. Final Conclusion (DA Report Summary)

The Superstore Data Analytics report provides actionable insights into sales performance, profitability drivers, and customer behavior. By leveraging interactive dashboards and DAX-driven measures, the business can identify problem areas and growth opportunities. Implementing the recommended strategies can significantly improve overall profitability and operational efficiency.

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**End of Report**