Sales Analysis Dashboard Report

Introduction

- The Sales Analysis Dashboard project is designed to provide deep insights into a company's sales performance, customer behavior, product trends, and regional profitability.
- Using Power BI, various visualizations and analyses were developed to support data-driven decision-making.
- The dataset includes details such as sales amount, profit, discounts, quantity sold, shipping modes, and customer demographics.

Methodology

The following steps were involved in creating the Sales Analysis Dashboard:

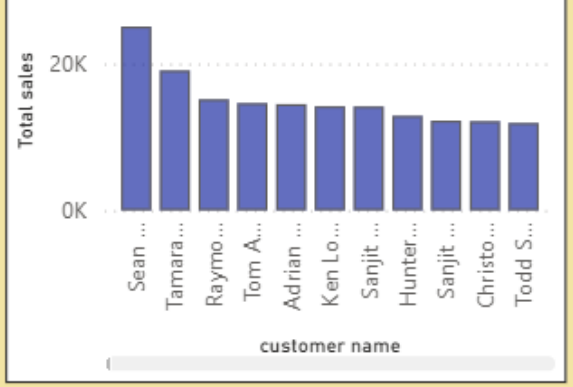
1. **Data Loading**: Imported the dataset into Power BI Desktop.
2. **Data Cleaning**: Used Power Query to remove duplicates, filter records (e.g., orders from 2019), and split columns like Customer Name.
3. **Data Transformation**: Added calculated columns and measures such as Total Sales, Total Profit, Discount %, and Profit Margin.
4. **Data Modeling**: Established relationships between tables for accurate visualization.
5. **Visualization**: Created interactive charts to analyze sales, profit, customer, and regional trends.
6. **Insights Generation**: Interpreted data patterns to derive actionable business insights.

SALES ANALYSIS DASHBOARD

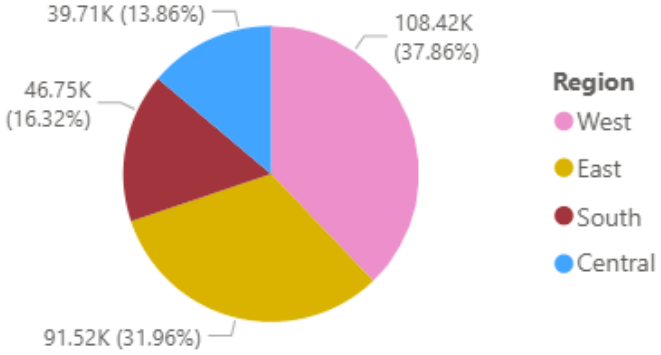
Total sales
2.30M

Total Profit
286.4K

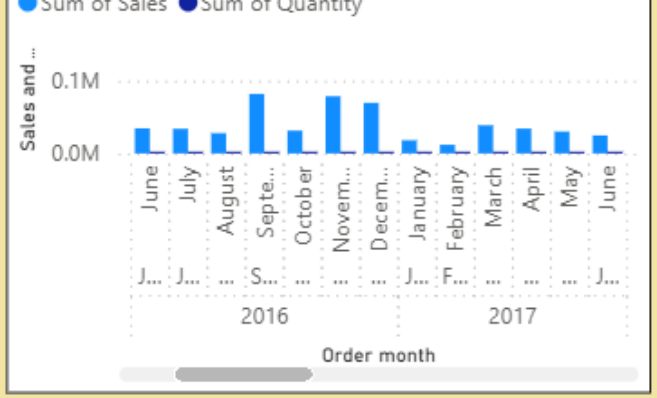
Total Sales by each Customer



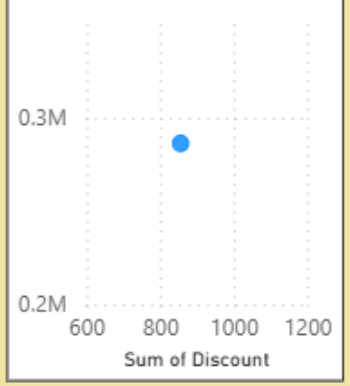
total profit for each region



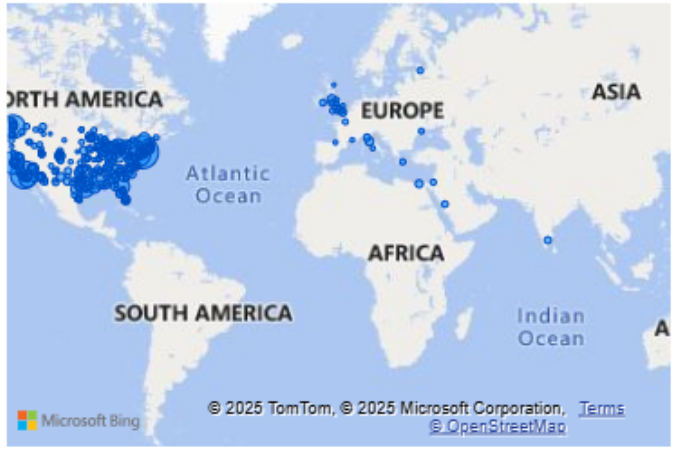
Sales and quantity sold by order date



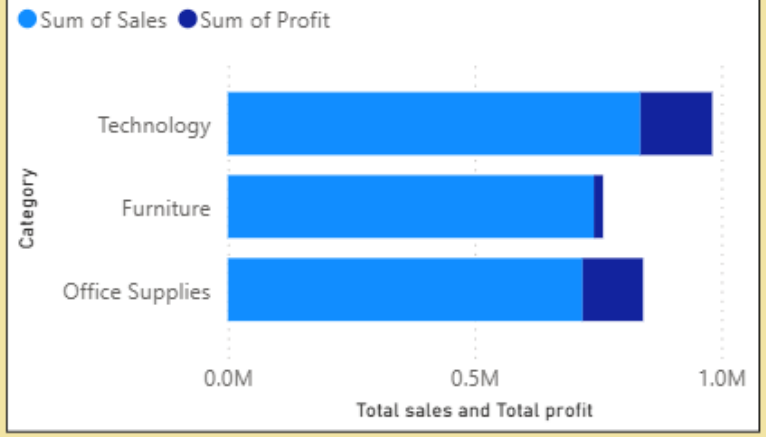
Relationship between discount and profit



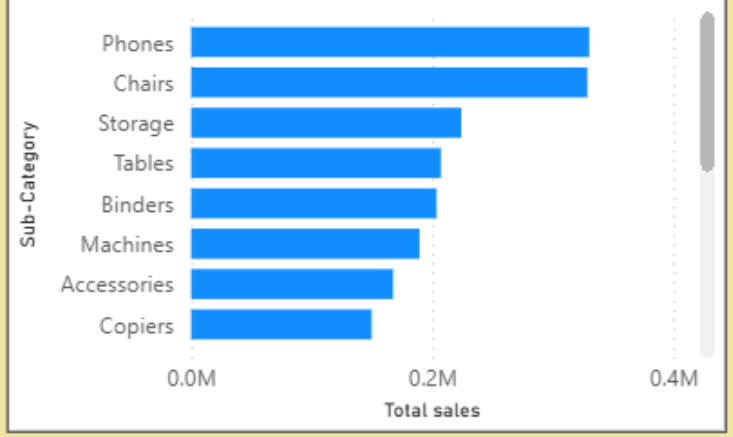
Sum of Sales by City



Total sales and total profit for each product category



Total sales for each product sub-category



Key findings and Visualizations

The dashboard contains the following visual elements representing the core KPIs:

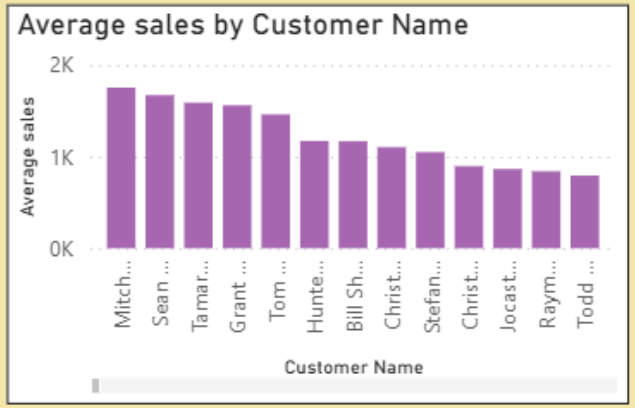
- **Total Sales by Customer:** Identified top customers driving maximum revenue.
- **Monthly Sales Trend:** Analyzed sales performance across months and years to identify growth and seasonality.
- **Sales by Ship Mode:** Displayed the proportion of sales by different shipping methods to evaluate logistics performance.
- **Profit by Region:** Compared profit levels across regions to identify high and low-performing areas.
- **Sales & Profit by Category:** Highlighted categories with high sales and profit margins for better product focus.

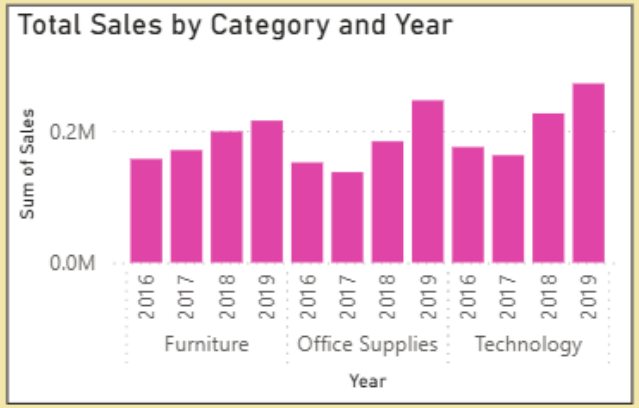
- **Sales by Sub-Category:** Revealed sub-category performance to support inventory and marketing strategies.
- **Sales & Quantity Over Time:** Examined the relationship between sales volume and revenue to understand demand patterns.
- **Top 10 Products:** Identified the most sold products to prioritize stock and promotions.
- **Sales by City (Map):** Mapped total sales geographically to highlight key markets and potential expansion zones.
- **Discount vs. Profit (Scatter Plot):** Showed how excessive discounts reduce profits, aiding pricing strategy optimization.

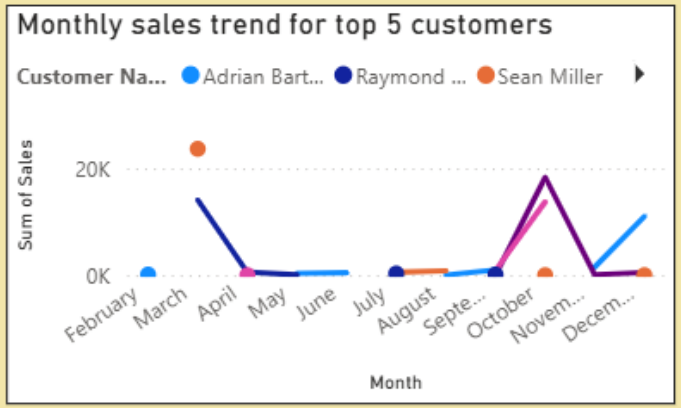
Analysis & Insights

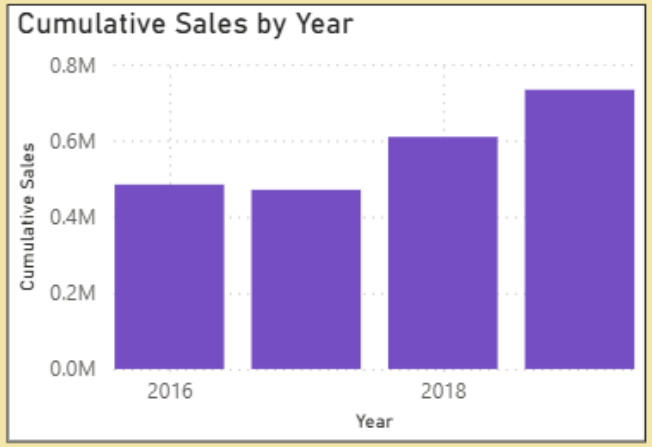
- **Monthly Sales Trend (Top 5 Customers):** Tracked sales behavior of major customers, revealing seasonal buying patterns.
- **Sales Contribution by Region:** Compared sales percentages across regions to identify strong and weak markets.
- **Total Profit by Month:** Displayed monthly profit variations to monitor business performance cycles.
- **Average Quantity by Category:** Analyzed how product demand differs across categories.
- **Sales by Customer Segment (Column Chart):** Compared sales contribution of Consumer, Corporate, and Home-Office segments.
- **Average Sales by Customer:** Displayed each customer's average spending to identify key buyers and loyalty potential.
- **Cumulative Sales Over Time:** Illustrated total sales growth trajectory, showing consistent increase in revenue.
- **Sales by Year & Category:** Compared annual performance across product categories to spot trends.
- **Top 5 Products by Profit:** Highlighted most profitable items driving overall business profit.
- **Average Profit by Sub-Category:** Evaluated profit efficiency of each sub-category for better product management.

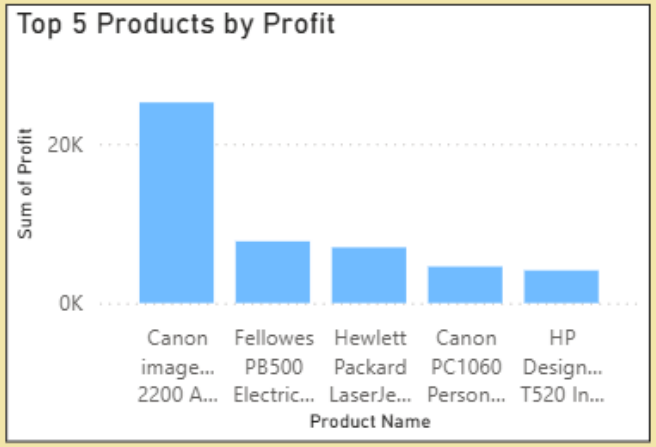
Analysis and Insights

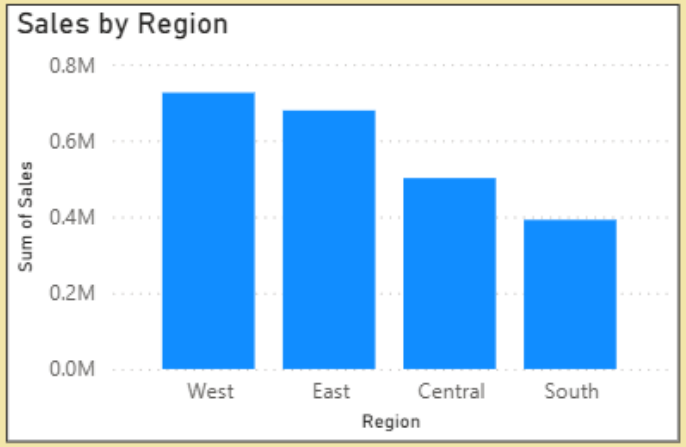












Other Parameters

- Several additional analyses were conducted using Power Query transformations and DAX calculations:
- Added a sales tax column (10% of sales) to analyze tax contributions per product category.
- Grouped orders by year to calculate average annual sales.
- Created a custom column to categorize sales as 'High' (Sales > 100) and 'Low' otherwise.
- Filtered and compared sales data with and without discounts.

Insights from Charts and Dashboards

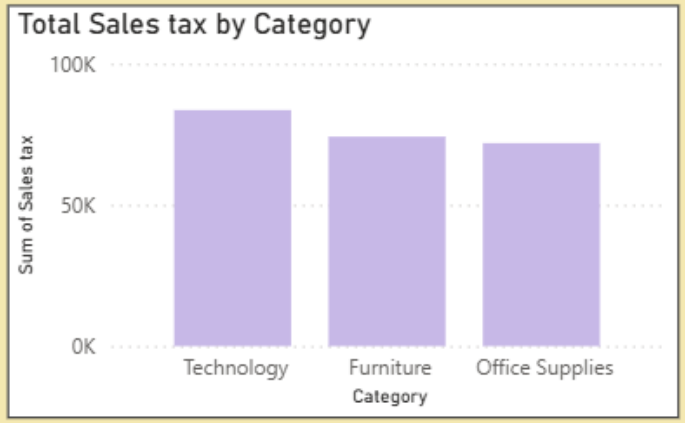
- Total sales show an increasing trend year-over-year, indicating business growth.
- The Technology category contributes the highest profit margin, followed by Office Supplies.
- Central and West regions outperform others in terms of total revenue and profit.
- The Standard Class shipping mode is the most frequently used, accounting for the majority of sales.
- Discounts above 30% significantly reduce profitability, showing the need for controlled discounting.

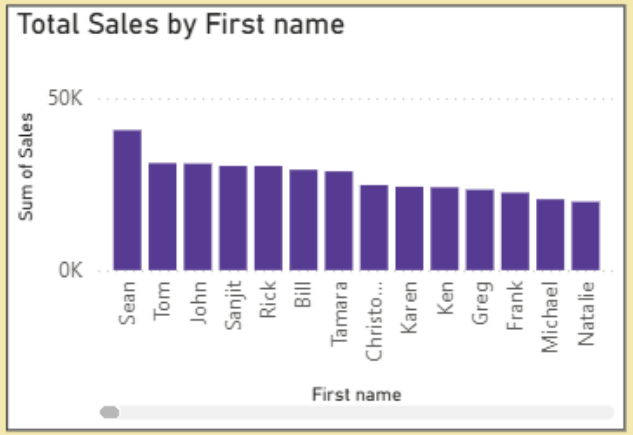
- A small number of high-value customers account for a large portion of sales (Pareto Principle).
- Certain subcategories like Phones and Chairs show the highest individual sales values.
- Sales during the end of the year (November–December) show peaks due to festive demand.
- The relationship between discount and profit is negative higher discounts lead to lower profits.
- Year-over-year analysis shows a steady increase in both sales and customer base.

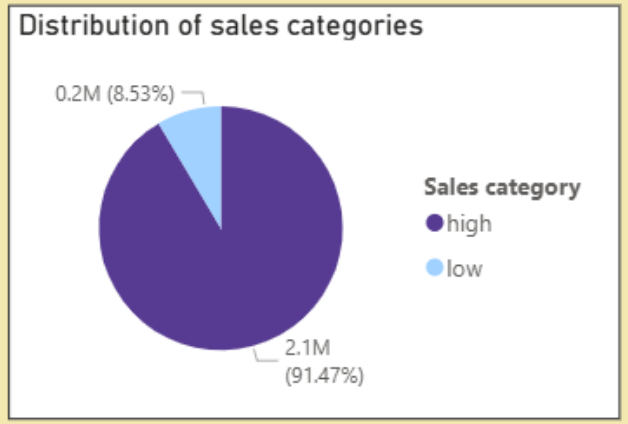
Insights from Charts and Dashboard

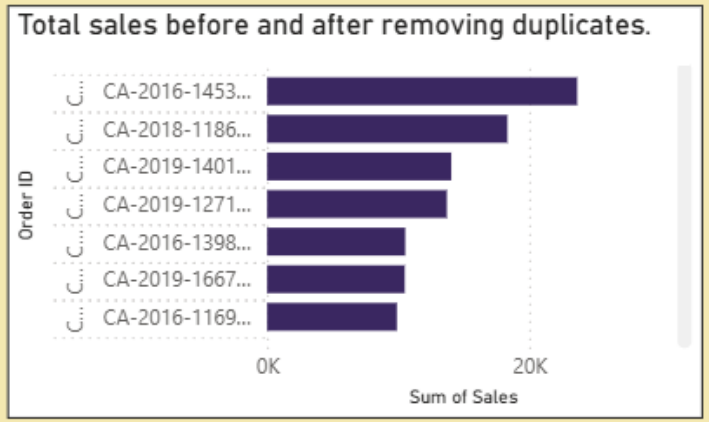
Total sales in 2019

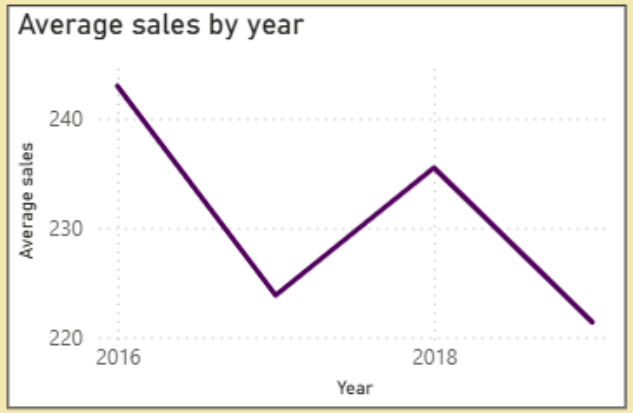
733K

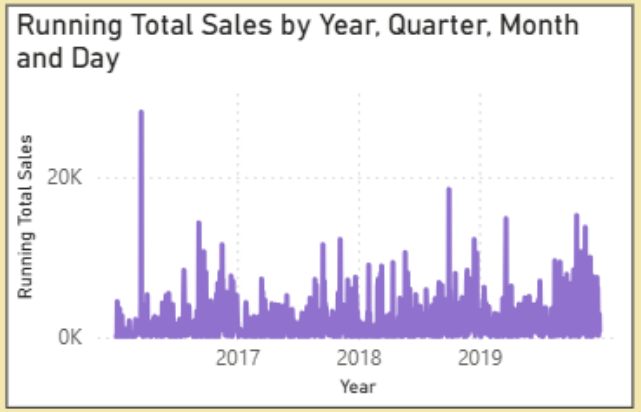












Conclusion

- The Sales Analysis Dashboard effectively highlights key trends in sales, profitability, and customer behavior.
- It allows the organization to make data-driven decisions to improve product performance, customer targeting, and discount strategies.
- The integration of Power BI visualizations enables easy monitoring of KPIs and identification of business opportunities.
- Through this analysis, the company can enhance its strategic planning and achieve sustainable growth.