

Elevate Labs Internship

Task 2: Data Visualization and Storytelling

GitHub Repository Link:

https://github.com/RaghunathSinghOfficial/Elevate_Labs_DA_Internship_Task2_Superstore_Visualization

Objective: To create compelling visualizations from the Superstore Sales data that convey a clear story and provide actionable business insights.

Tools Used: **Power BI Desktop**

Original Data Source: **Sample - Superstore.csv** (Downloaded from Kaggle)

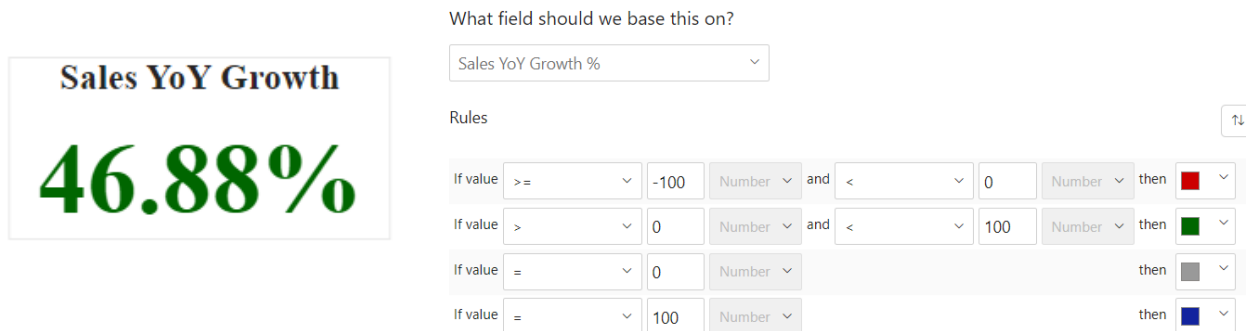
Used Dataset: **Task_1_Superstore_Sales_Data_Cleaned.xlsx** (cleaned dataset from Task 1)

Report Overview & Storyboard: A Journey Through Superstore Sales Performance

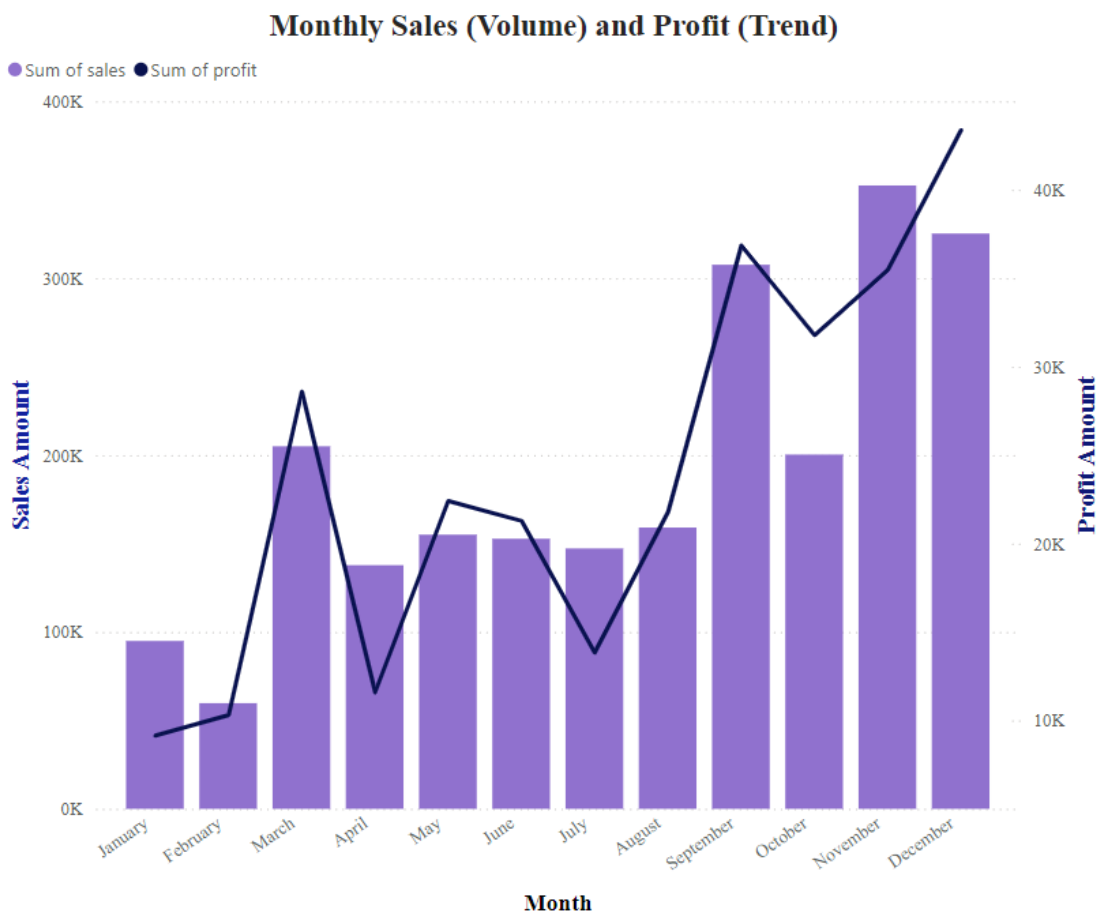
My Power BI report is designed to offer a comprehensive overview of Superstore's sales performance, guiding stakeholders from overall trends to specific breakdowns. The report is structured into key sections, each building upon the previous one to tell a cohesive story.

Executive Summary & Key Performance Indicators (KPIs)

- Year-over-Year Sales Growth (KPI Card):** Prominently displayed, this crucial indicator shows the percentage change in sales compared to the previous year, with conditional formatting (e.g., green for positive growth, red for negative) to highlight performance.



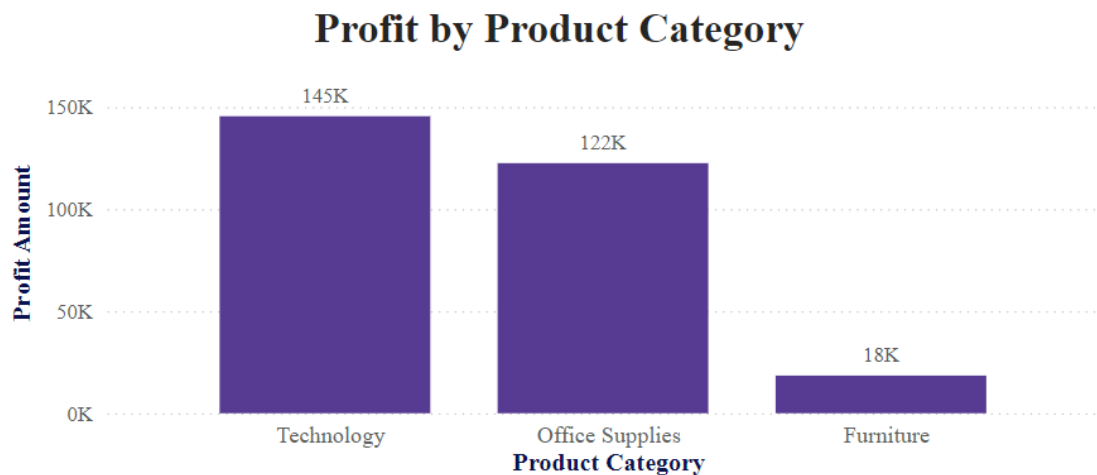
- Sales & Profit Trends Over Time (Line and Clustered Column Chart):** This combined chart illustrates how sales and profit have evolved over time (by year, quarter, month). It helps identify seasonal patterns, growth periods, or declines, offering a historical context for performance.



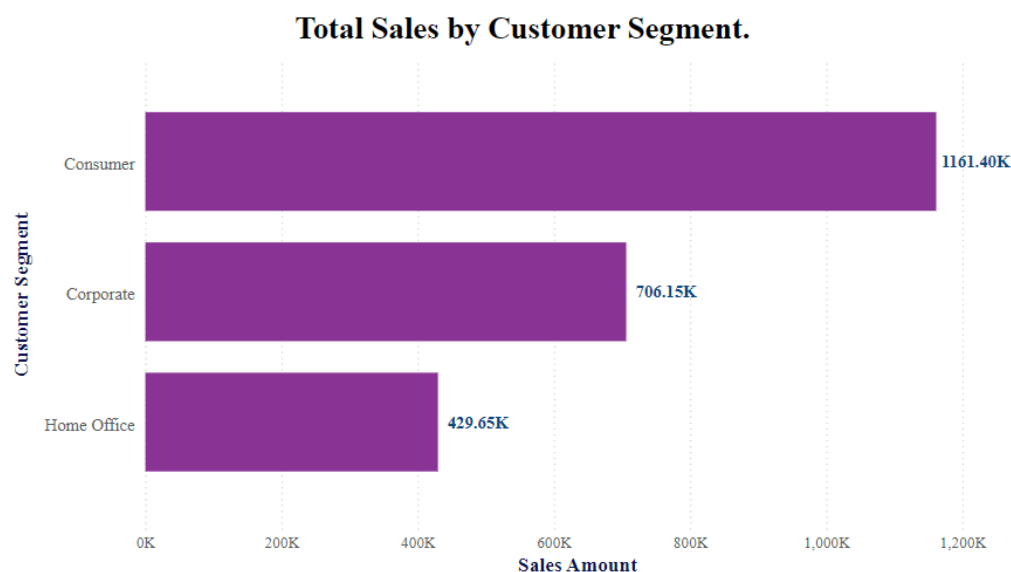
Detailed Performance Analysis & Profitability Drivers

This drills down into specific areas to uncover the underlying factors influencing sales and profit.

- **Profit by Product Category (Clustered Column Chart):** This visual clearly shows the profitability performance across different major product categories. It helps in quickly identifying which categories are the most (and least) profitable for the business.



- **Sales by Customer Segment (Clustered Bar Chart):** This chart breaks down total sales by different customer segments (e.g., Consumer, Corporate, Home Office). It highlights which customer groups are contributing most significantly to the total revenue, aiding in understanding the core customer base.



Key Business Insights Uncovered:

Through these visualizations, I identified several critical insights into Superstore's performance:

- **Exceptional Year-over-Year Sales Growth:** The most striking insight is the **strong 46.88% Year-over-Year Sales Growth**. This indicates a robust and accelerating expansion in the business's overall revenue performance.
- **Positive Sales Trend with Distinct Seasonality:** Sales show a clear and consistent upward trend across the years (2021-2024), demonstrating sustained business growth. There's also a noticeable and consistent seasonal pattern, with sales typically peaking towards the end of each year (Q4), likely due to holiday demand. Profit generally follows this sales trend, though with some fluctuations.
- **Critical Profitability Issue in Furniture:** A major finding is that the **Furniture category consistently operates at a significant loss, heavily impacting overall profitability**. In stark contrast, **Technology and Office Supplies are the primary profit drivers** for the business. This highlights an urgent need to investigate pricing, costs, or operational inefficiencies within the Furniture category.
- **High Sales, Low/Negative Profit Transactions Identified:** The scatter plot of Sales vs. Profit reveals that while most sales are profitable, there are numerous instances of **high-value sales transactions that result in little to no profit, or even substantial losses**. This suggests that simply increasing sales volume does not guarantee profitability, and there may be specific products, deep discounting strategies, or high associated costs on certain large orders that need immediate review.
- **Consumer Segment Dominates Revenue:** The Consumer segment is the largest contributor to total sales, indicating it forms the core and largest customer base driving the majority of the revenue. The Corporate segment is the second largest, while Home Office contributes the least. This insight is crucial for tailoring sales and marketing strategies effectively to each customer group.

Visualization Choices & Design Principles:

My visual choices were guided by the principles of clarity, context, and focus on business insights:

- **Chart Selection:** I selected chart types that are best suited for the data and questions (e.g., Bar Charts for categorical comparisons, Line/Column Combo for trends, Cards for KPIs, Scatter Plot for relationships).
- **Avoiding Clutter:** I focused on a clean layout, minimizing unnecessary elements, and ensuring sufficient whitespace.
- **Adding Context:** Each chart has a clear, descriptive title. Axes are appropriately labeled with units and currency formatting. Data labels are used where they add value to provide immediate detail.
- **Highlighting Key Takeaways:** Conditional formatting on the Sales Growth KPI immediately signals performance. The sorting of bar/column charts highlights top performers or problematic areas at a glance.

Thank you.