

# Superstore Sales Analysis & Data Visualisation

**Title:** Superstore Sales Analysis Dashboard

**Subtitle:** Data Visualization and Storytelling using Power BI

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**Dataset:** Superstore.csv

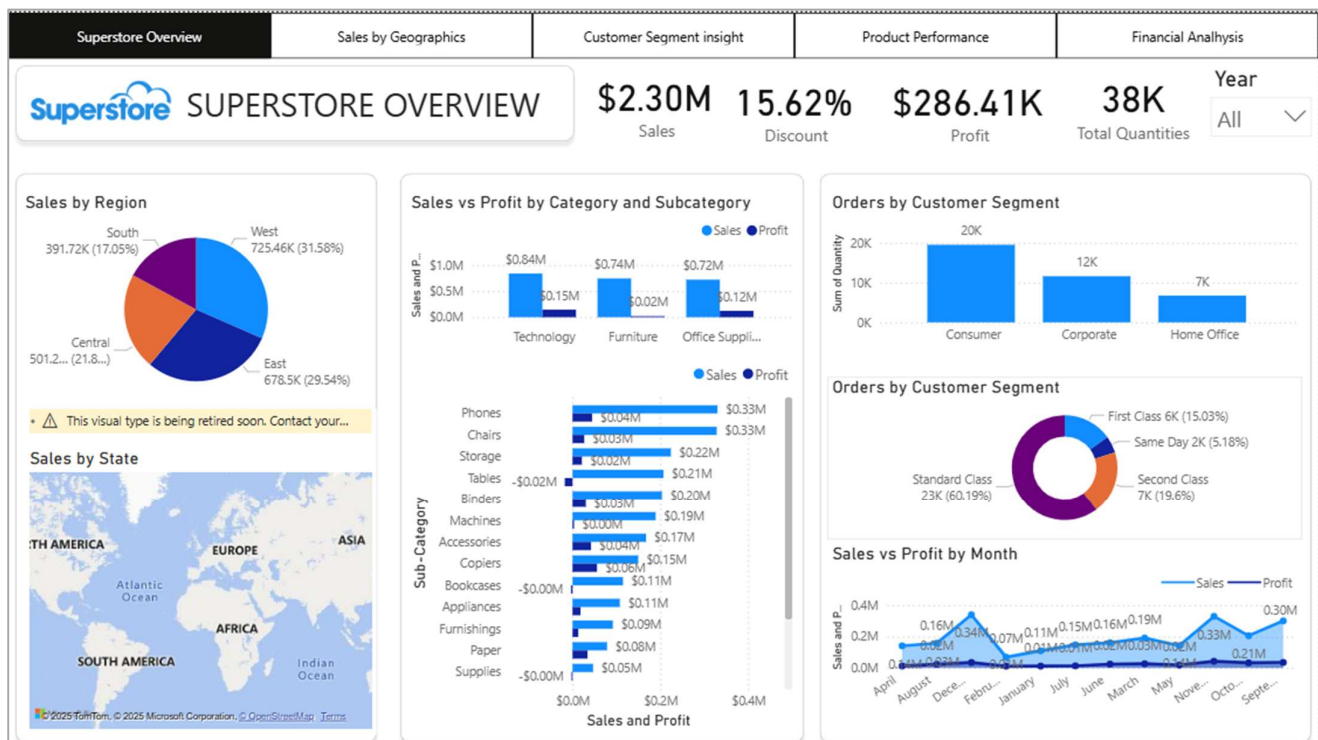
## Business Questions:

- Which states and cities are generating the highest revenue?
- Which product category is both the best-selling and the most profitable?
- Which product sub-categories and specific products are top performers as well as those that are underperforming?
- Are there products that are frequently bought together?
- Which customer segment is bringing in the most profit?
- What is the most preferred shipping mode among our customers?
- How has the company's performance trended over recent months?
- What are the KPIs?

**DATASET:** Superstore.csv

The original dataset is obtained from the Kaggle which contains 9993 sales transactions that occurred from 2019 to 2022. This dataset encompasses a wide range of information, including order specifics, geographical data, and product-related data. There are no missing values or any irrelevant data types and values. During the inspection process, a duplicate entry was identified and removed for accuracy.

## DASHBOARDS:



## **KPIs:**

- Over the past four years, Superstore generated \$2.3 million in revenue but only had a gross profit of \$286.41K. The company's average discount stood at 15.62%, suggesting that the discounting strategy might have influenced the profit margin. A detailed breakdown of the profit margin within the discount category will be explored later in the Financial Analysis dashboard.

## **Sales by Region and state:**

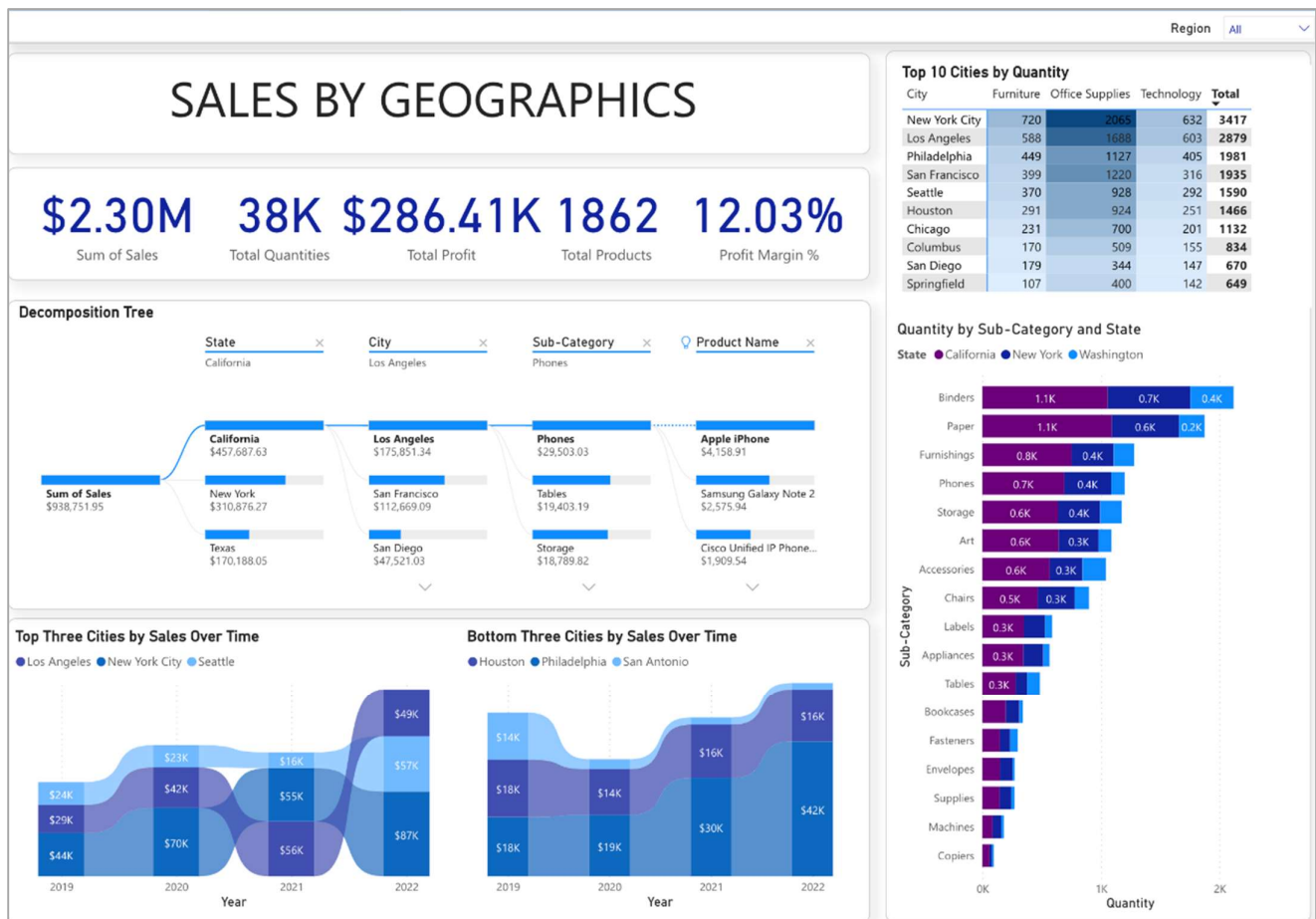
- The West region boasted the highest revenue, with sales amounting to \$725K, followed by the East region with sales of \$678K. Within those two regions, California, Washington, and New York were the top states that contributed the most revenue to the company. Therefore, the company should focus on marketing efforts and optimizing inventory in those states to further increase sales.
- The Central region with sales of \$501K, and the South with sales of \$392K, represented two regions that might have had untapped potential worth exploring.

## **Sales vs. Profit by Category and Sub-Category:**

- The Technology category emerged as the leading performer in both sales and profit. Within this category, the Phones sub-category stood out with impressive sales and profit figures. On the other hand, the Furniture category showcased significant sales but had a notably lower profit margin. Within the Furniture category, the Tables displayed decent sales but operated at a loss. Additionally, both Bookcases and Supplies resulted in a negative profit for the company. These observations raise concerns, suggesting potential issues with the cost structure or pricing strategy, especially for the Tables, Bookcases, and Supplies subcategories.

## **Customer Segments and Preferences**

- Orders by Customer Segment: The Consumer segment was the largest customer base. Superstore should create tailored marketing campaigns targeting this segment to increase sales. The Corporate and Home Office segments with smaller customer bases, present growth opportunities with focused B2B strategies.
- Orders by Shipping Preferences: Most customers preferred Standard Class shipping, indicating that they might prioritize cost savings over faster delivery.
- Top Three Customers by Order: Raymond Buch, Sean Miler, and Tamara Chand were the most frequent shoppers with a max of 6 orders for the past 4 years. This pattern suggests a potential gap in customer loyalty. To address this, Superstore could introduce exclusive offers and a loyalty program, adjust pricing for regular customers, and actively seek their feedback to refine the shopping experience. Engaging customers through educational content on social media, newsletters, and tailored content for different segments could further foster loyalty and retention.



### Top Three Cities by Sales Over Time:

- Los Angeles and New York City have consistently led in sales, but while Los Angeles saw a slight decline in 2022, New York City surged. Seattle, on the other hand, experienced a significant rebound in 2022.

### Bottom Three Cities by Sales Over Time

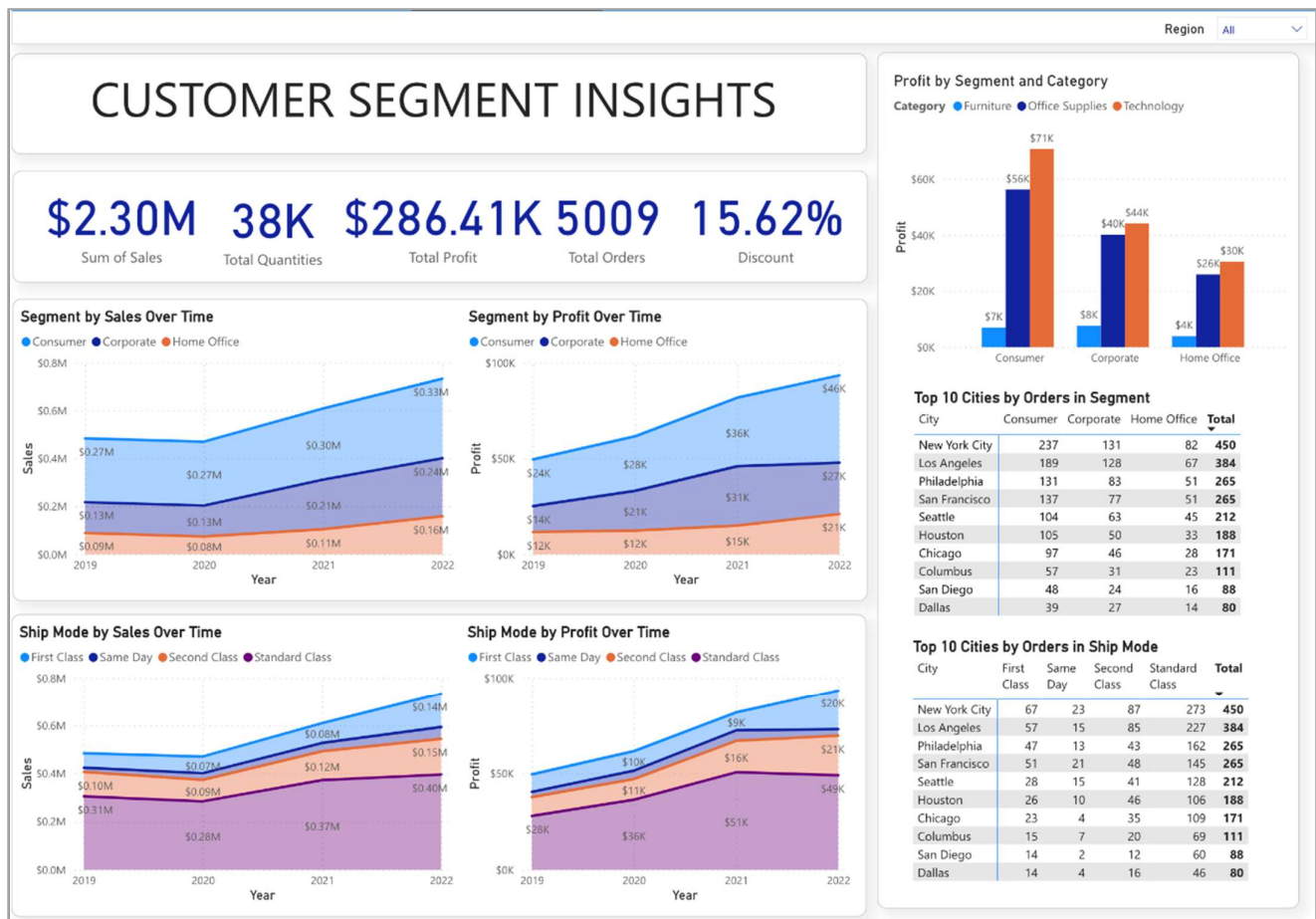
- Philadelphia shows a promising upward trajectory, contrasting with the relatively stagnant sales in Houston and San Antonio.

### Top 10 Cities by Quantity

- New York City and Los Angeles dominate in product quantities across all categories.

### Quantity by Sub-Category and State

- Binders, Paper, and Furnishings are consistently popular across California, New York, and Washington



### Segment by Sales and Profit Over Time:

- Sales across all segments had increased year-over-year, with the Consumer segment leading the growth. The Home Office segment was smaller, yet it showed a significant increase in sales in 2022. Profit trends mirror the sales trends, but it's noteworthy that the Corporate segment's profit in 2022 didn't grow proportionally to its sales.

### Ship Mode by Sales and Profit Over Time:

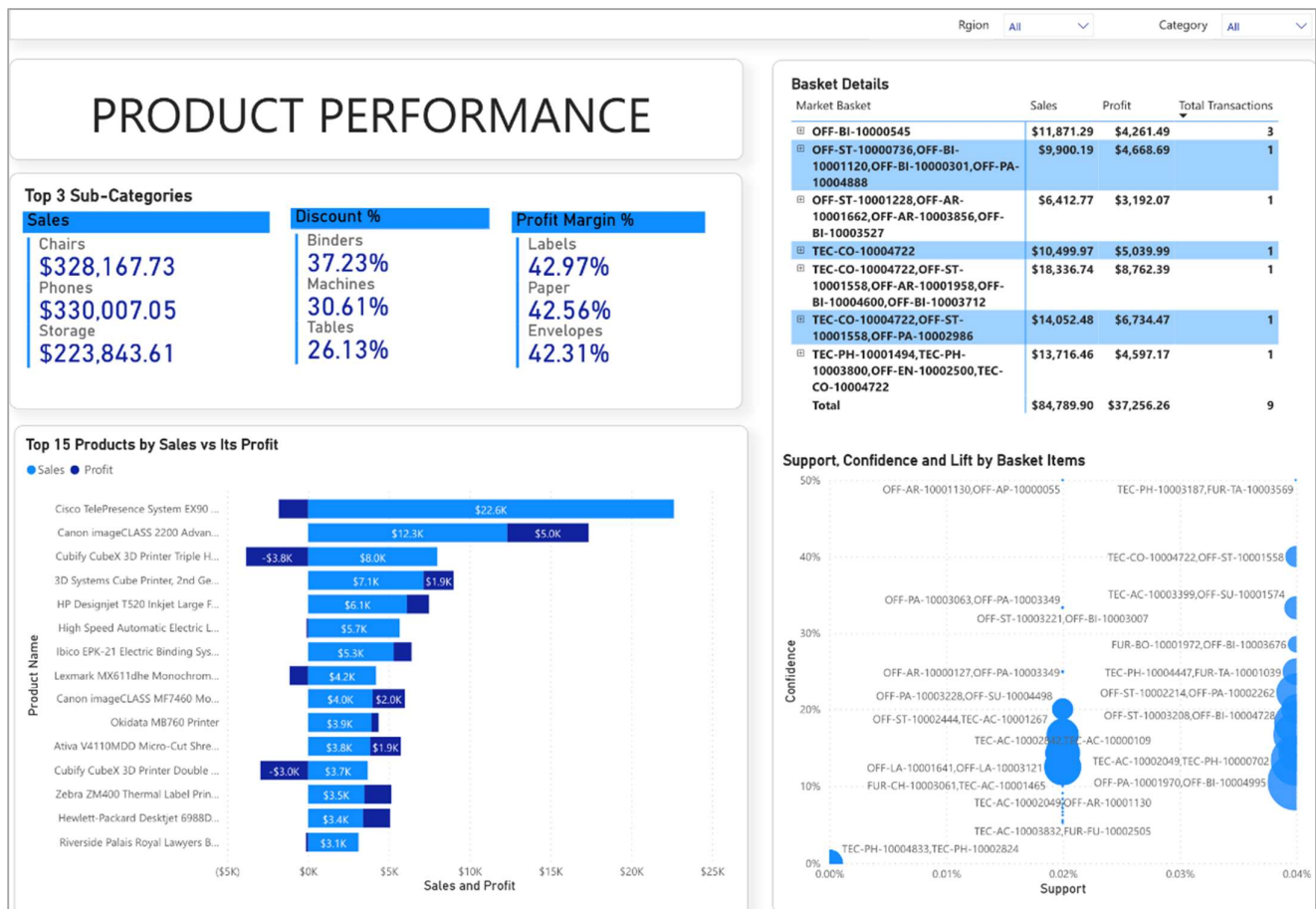
- Standard Class remains the dominant shipping mode in terms of sales and profit, However, while sales for Standard Class increased in 2022, its profit decreased. First Class and Second Class have seen substantial growth in 2022.

### Profit by Segment and Category:

- The Consumer segment dominates in profit in Technology. This suggests that consumer-oriented tech products might be the most profitable items. Furniture is the least profitable category across all segments, indicating potential areas for cost optimization or pricing adjustments.

### Top 10 Cities by Orders:

- New York City and Los Angeles had the most orders, highlighting their importance to Superstore's overall sales success.





## PVM by Category:

**Profit PY:** This represents the profit from the previous year.

**Price:** This shows the impact on profit.

**Volume:** This indicates the impact on profit due to changes in the quantity sold..

**Mix:** This shows the impact on profit due to changes in the sales mix of products.

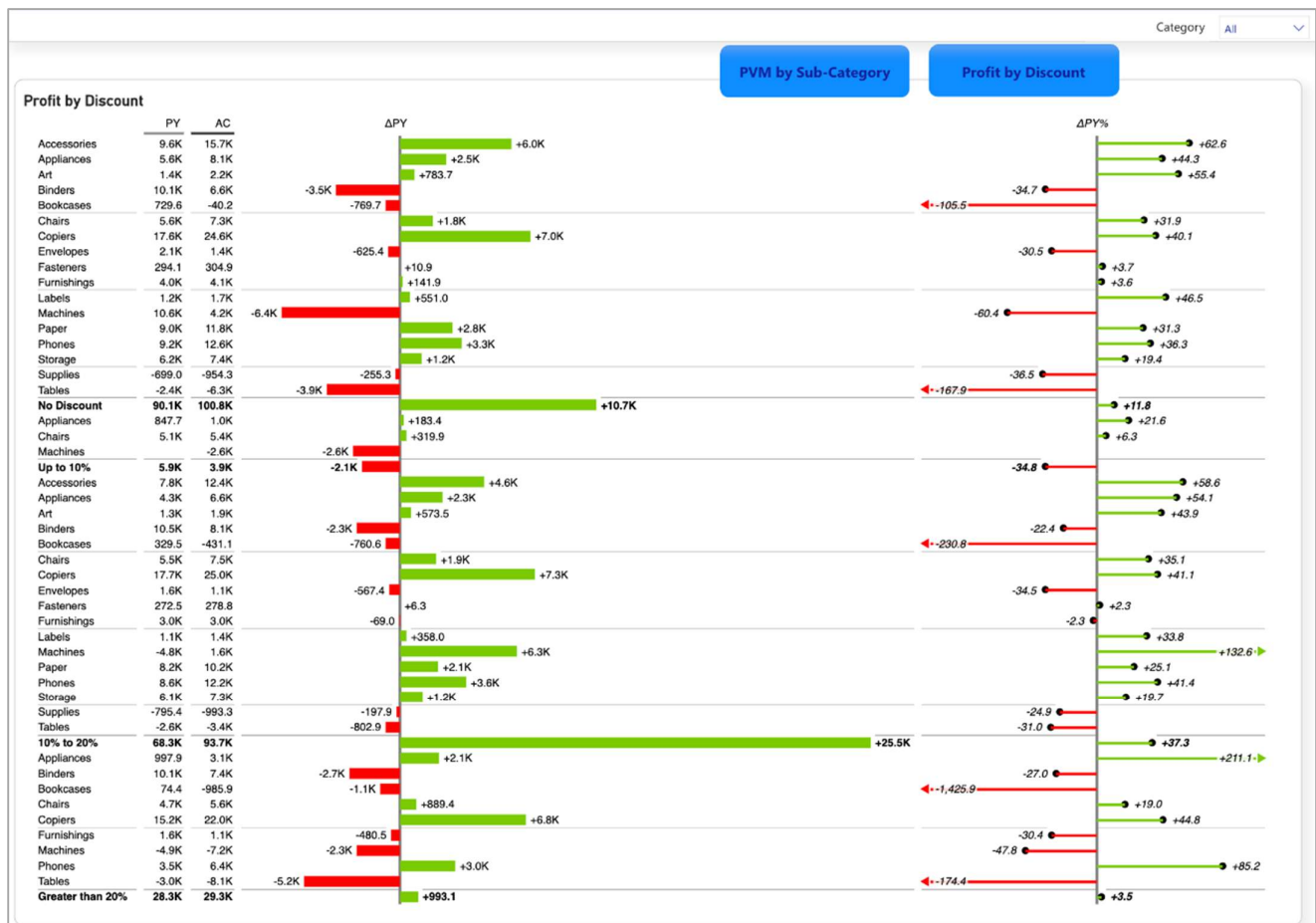
**New Products:** This represents the profit impact from introducing new products.

**Discontinued Products:** This shows the profit impact from discontinuing certain products.

**Profit AC:** This represents the profit for the current year.

- The Copiers sub-category consistently performed well across most factors, especially in terms of profit.
- The Machines sub-category faced challenges, particularly with new products and discontinued products, leading to significant losses.
- The Binders sub-category had a mixed performance, with significant negative impacts on profit but positive impacts from mix changes.





The plot provides a breakdown of profits for various product sub-categories based on the discounts applied to them. The profits are presented for the current year (denoted as "AC") and the previous year (denoted as "PY").

### Profit by Discount

- The Copiers sub-category consistently performed well across all discount categories in the current year.
- The Machines, Bookcase, and Tables sub-categories faced losses in multiple discount categories.
- Some sub-categories like Phones and Paper had profits in the "No Discount" and "10% to 20%" categories but were absent in the "Up to 10%" discount category.