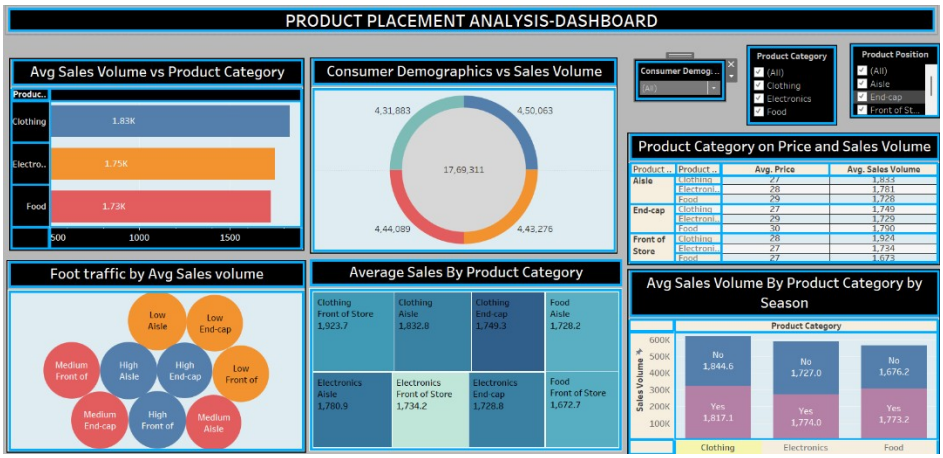
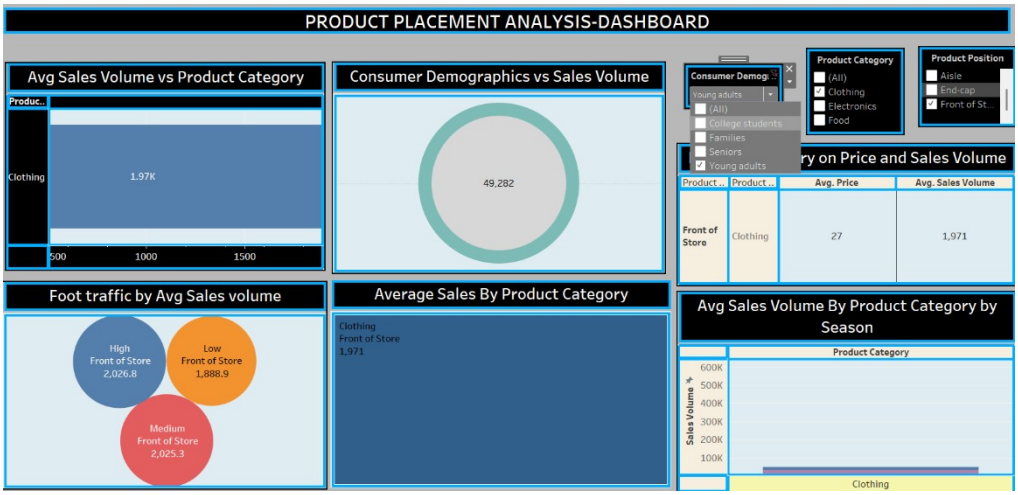
Project Development Phase
Model Performance Test

Date	24 june2025
Team ID	LTVIP2025TMID47723
Project Name	Strategic Product Placement Analysis: Unveiling Sales Impact with Tableau Visualization
Maximum Marks	4 marks

Model Performance Testing:

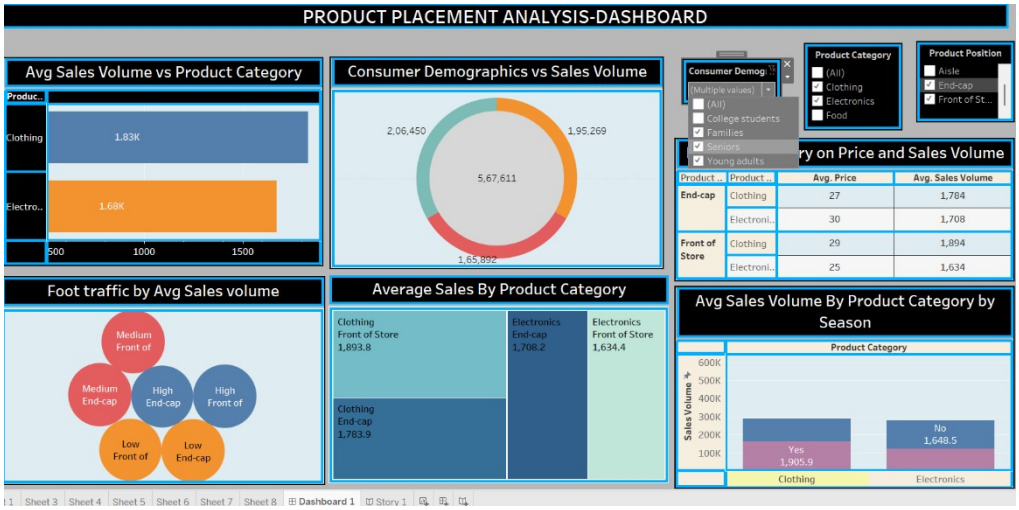
Project team shall fill the following information in model performance testing template.

<table>
<tr><th>S.No.</th><th>Parameter</th><th>Screenshot / Values</th></tr>
<tr><td>1.</td><td>Data Rendered</td><td>1. Data Rendered
Values:
The showing a structured table with product sales, shelf position, and performance data.
<table>
<tr><th>Product Category</th><th>Product Name</th><th>Shelf Position</th><th>Sales</th><th>Performance</th></tr>
<tr><td>Beverage</td><td>Cola</td><td>Eye-Level</td><td>500</td><td>High</td></tr>
<tr><td>Snacks</td><td>Chips</td><td>Bottom</td><td>320</td><td>Medium</td></tr>
<tr><td>Personal Care</td><td>Shampoo</td><td>Top</td><td>200</td><td>Low</td></tr>
</table></td></tr>
<tr><td>2.</td><td>Data Preprocessing</td><td>. Data Preprocessing
Values:
From the Product Positioning.csv file, preprocessing might include:
• Null Checks: Ensuring no missing values.
• Standardization: Formatting columns (e.g., consistent casing).
• Categorical Encoding: Converting Shelf Position and Performance into numeric values if used for modeling.
• Normalization: Applied to Sales for modeling purposes.</td></tr>
</table>

3.	Utilization of Filters	1.Applied All FILTERS: The dashboard analyzes product placement effectiveness using interactive filters for consumer demographics, product category, and product position. It displays average sales volumes, price comparisons, seasonal impacts, and foot traffic across clothing, electronics, and food. All visuals update based on filter selection to provide quick insights into product performance by placement and time.  2. **Title: Product Placement Analysis - Young Adults, Clothing, Front of Store** The dashboard is filtered by the demographic **Young adults**, **Clothing** category, and **Front of Store** position. All visuals update accordingly, showing that young adults purchase mainly clothing placed at the front of the store, with an average sales volume of **1,971** and price of **27**. Foot traffic is mostly high or medium in this position, and other categories and positions are excluded from view.  3. **Title: Product Placement Analysis – Seniors & Young Adults, Clothing &**

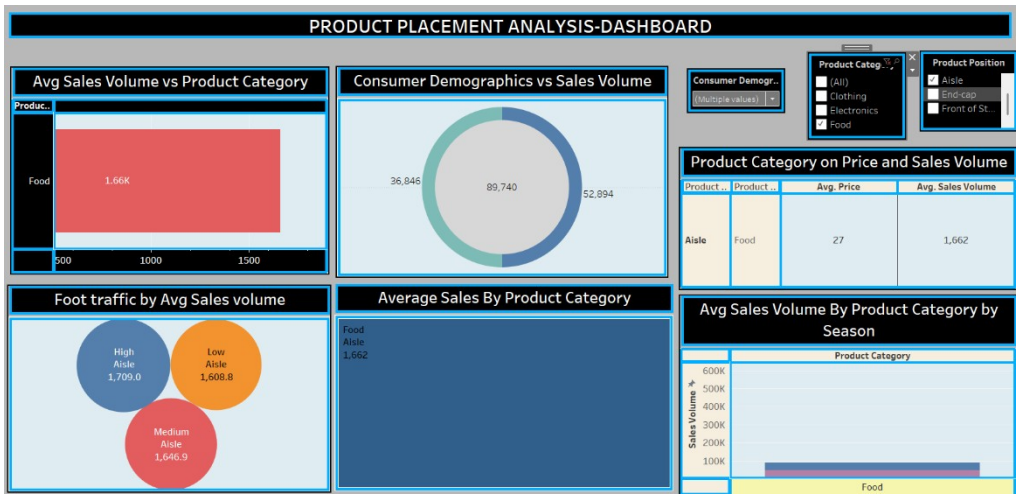
Electronics, End-cap & Front of Store

The dashboard is filtered by the demographics **Seniors** and **Young adults**, product categories **Clothing** and **Electronics**, and positions **End-cap** and **Front of Store**. Clothing shows higher average sales volume, especially at the front of the store. Electronics perform better on end-caps. Seasonal comparison indicates stronger clothing sales in both seasons.



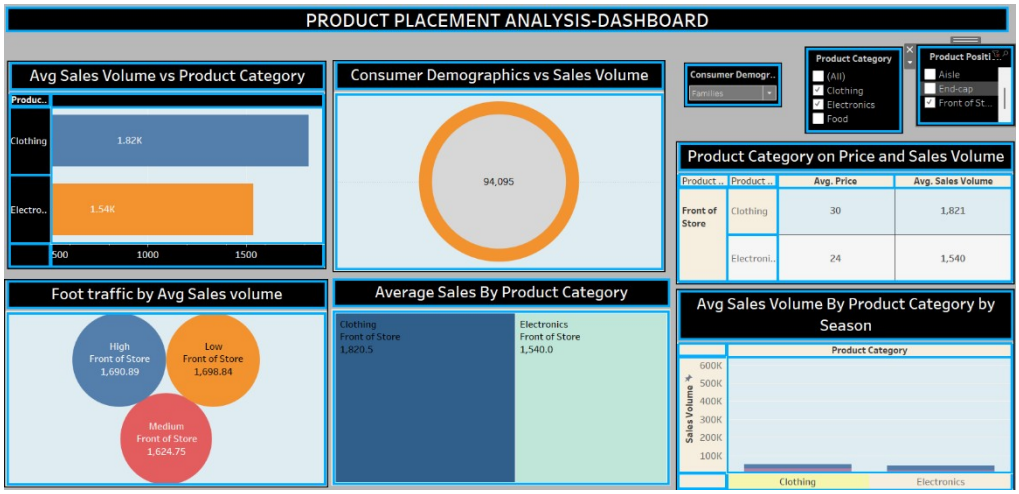
4. **Title: Product Placement Analysis – Food, Aisle**

The dashboard is filtered by the **Food** product category and **Aisle** position. It shows an average sales volume of **1,662** with a price of **27**. Most traffic occurs in high-aisle areas, and demographic segments contribute moderately to total sales volume. Other categories and positions are excluded.



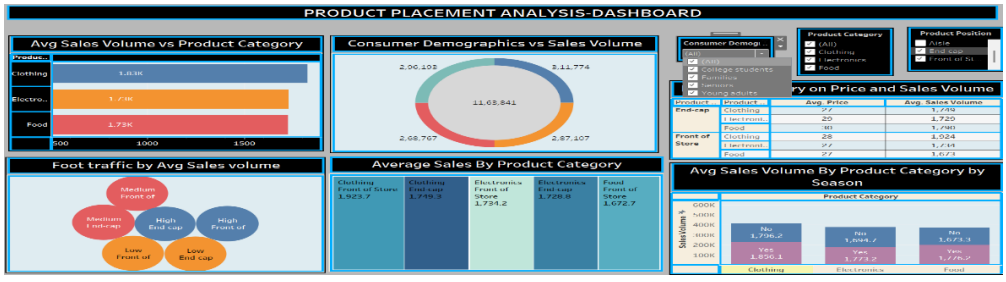
5. **Title: Product Placement Analysis – Families, Clothing & Electronics, Front of Store**

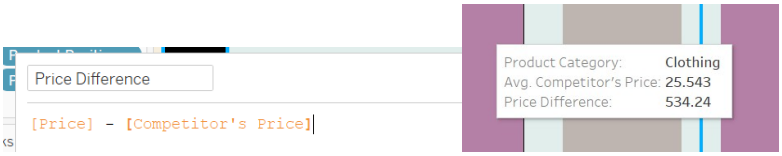
The dashboard is filtered by **Families** as the consumer demographic, **Clothing** and **Electronics** categories, and **Front of Store** placement. Clothing leads in sales volume (1,821) with a higher average price (30), while electronics show lower sales (1,540) and price (24). All insights focus on front-of-store performance for family shoppers.

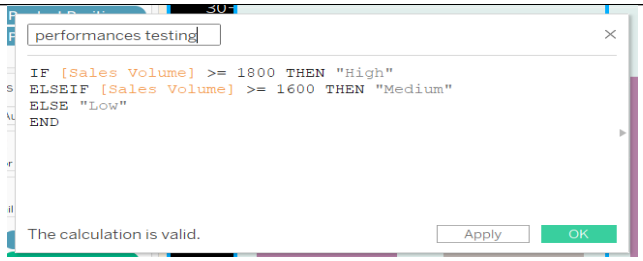


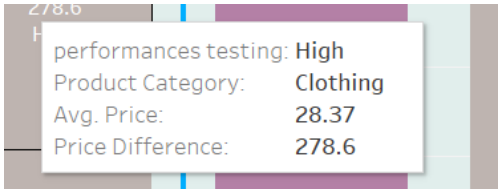
6. **Title: Product Placement Analysis – All Demographics, All Categories, End-cap & Front of Store**

The dashboard includes **all consumer demographics**, **clothing, electronics, and food** categories, and **End-cap** and **Front of Store** positions. Clothing leads with the highest average sales (1,924 at front), while food and electronics show similar performance. Sales vary by foot traffic and season, with stronger seasonal sales in clothing and food.



4.	Calculation fields Used	**No Of Calculation Fields: 3** • **Price** – Base selling price of each product from the dataset. • **Competitor's Price** – Derived or assumed for comparative pricing analysis. • **Sales Volume** – Total or average sales volume used to measure performance across positions and demographics. These calculated fields help analyze price sensitivity, competitive impact, and effectiveness of placement strategies using Tableau. Let me know if you want the calculated formulas used in Tableau. **1. Price** If it's directly in the dataset. **2. Competitor's Price Difference** If you have a Competitor_Price field, you can create a new calculated field for price comparison:  **Name:** Price Difference **Formula:** [Price] - [Competitor'sPrice] This shows whether your product is priced higher or lower than competitors. **3. Sales Volume (Total or Average)** You can calculate total or average sales volume based on your analysis need. **A. Total Sales Volume** **Name:** Total Sales Volume **Formula:** SUM([Sales Volume]) **B. Average Sales Volume** **Name:** Average Sales Volume **Formula:** AVG([Sales Volume]) **BONUS: Sales Performance Category**





Name: Performance Category

Formula:

tableau

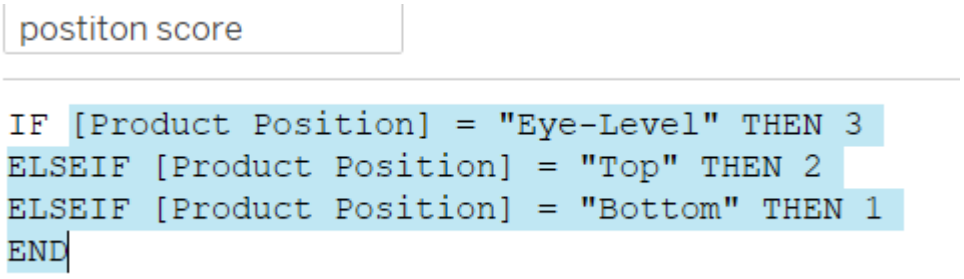
IF [Sales Volume] >= 1800 THEN "High"

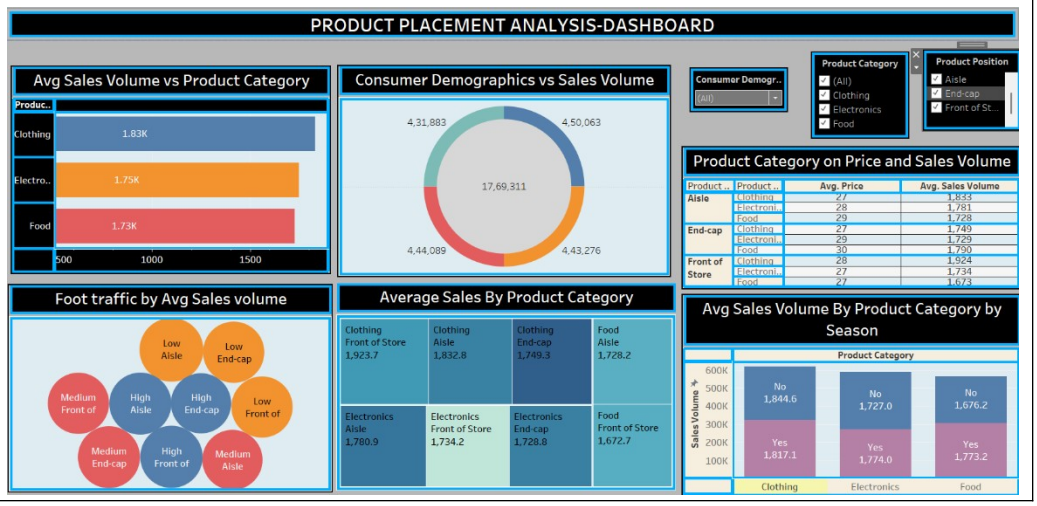
ELSEIF [Sales Volume] >= 1600 THEN "Medium"

ELSE "Low"

END

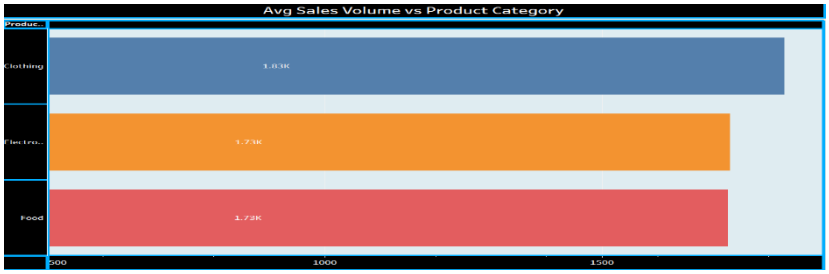
Postiton score:



5.	Dashboard design	No of Visualizations / Graphs – 

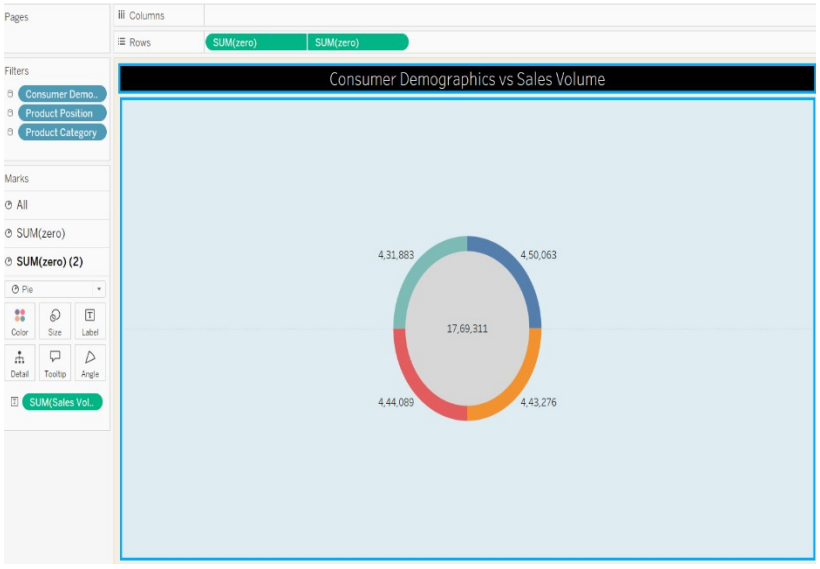
1.Avg Sales Volume vs Product Category (Top-left)

- **Purpose**: Shows average sales volume across three product categories.
  - **Clothing** has the highest average sales volume (~1.83K).
  - **Electronics** and **Food** are tied (~1.73K).
  - Indicates clothing is the best-performing product category in terms of average sales.



2. Consumer Demographics vs Sales Volume

- **Purpose**: Shows how different consumer groups contribute to total sales volume.
  - **Young adults** are the top contributors (~1.16 million).
  - Followed by **College students** (~3.11L), **Families** (~2.87L), and **Seniors** (~2.68L).
  - Suggests marketing efforts may best target young adults.

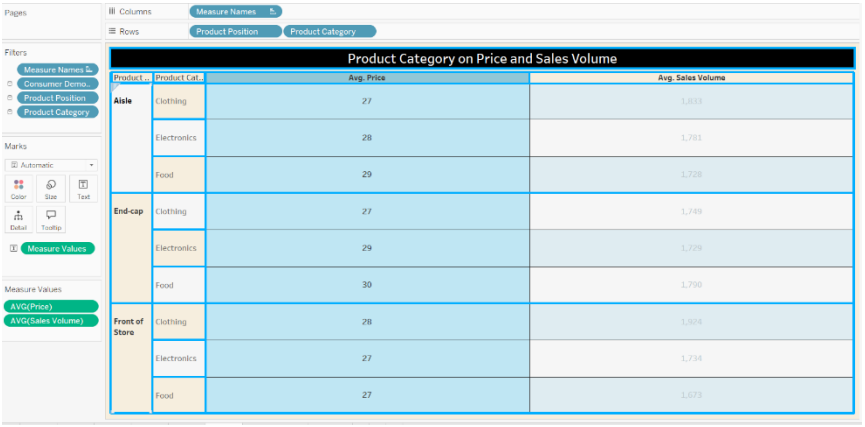


3. Impact of Category on Price and Sales Volume

Purpose: Compares average price and sales volume for each product category by

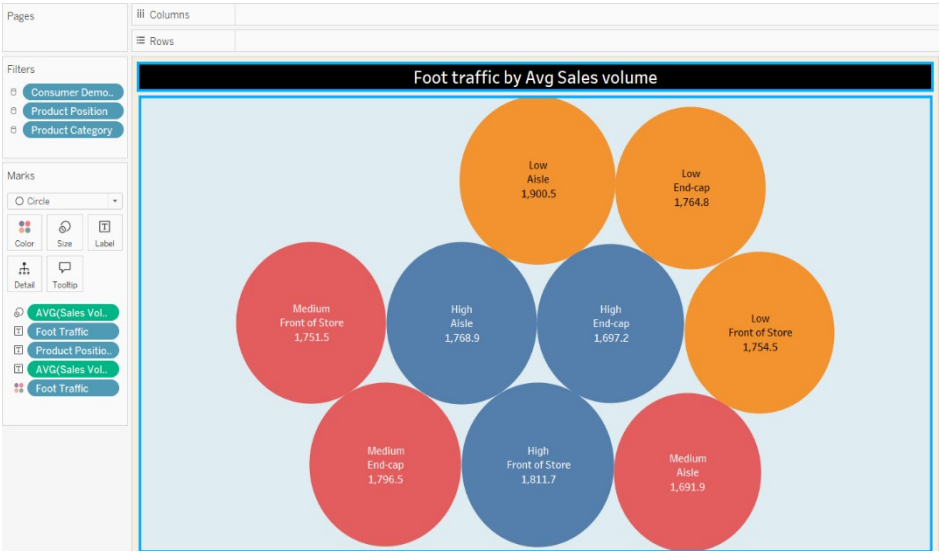
store position.

- **Clothing at the front of the store** has the highest sales volume (1,924).
- **Food at front** has the lowest (1,673).
- Prices vary slightly but do not seem to affect volume as much as position.



4. **Foot Traffic by Avg Sales Volume**

- **Purpose**: Visualizes sales volume in relation to foot traffic (low, medium, high) and position.
  - **High traffic areas (Front & End-cap)** result in higher average sales.
  - **Medium traffic** positions show moderate sales.
  - **Low traffic areas** produce the least sales.
  - Placement matters more than product type.

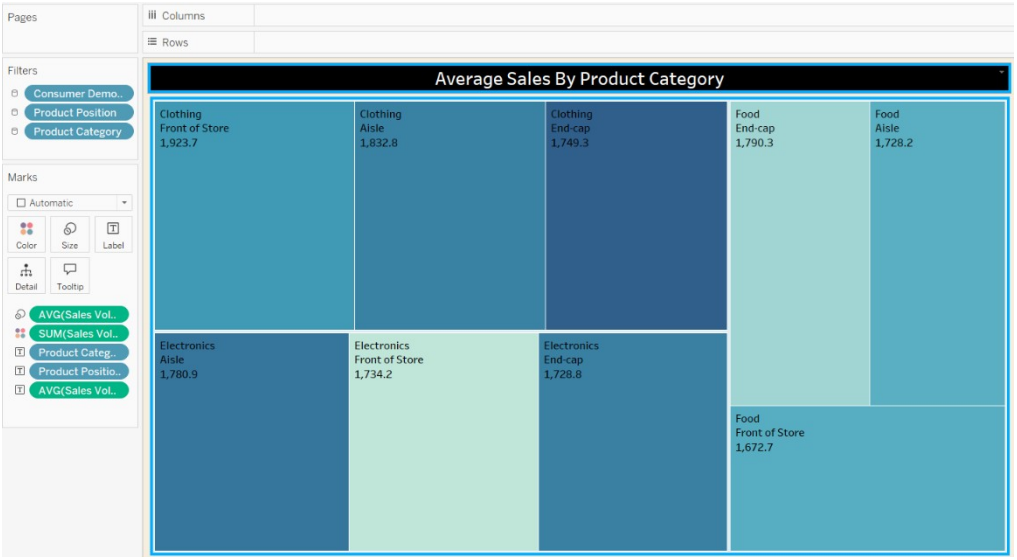


4. **Average Sales By Product Category**

Purpose: Gives a color-coded breakdown of average sales per category and

position.

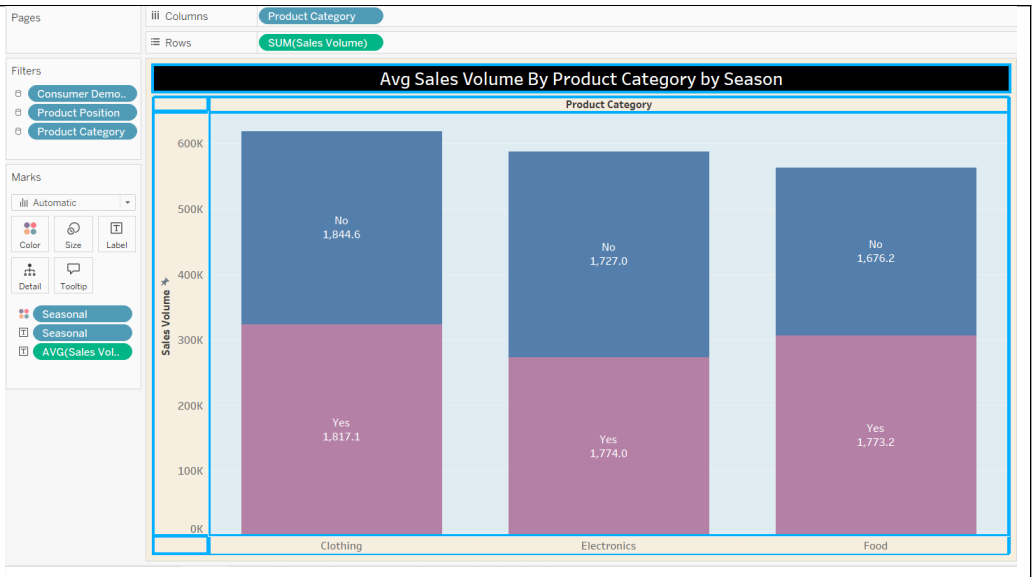
- Confirms earlier data: **Clothing at the front** leads in average sales.
- **Food at the front** is lowest.
- Each category performs better in **front-of-store** placement than on end-caps.



6. Avg Sales Volume by Product Category by Season (Bottom-right)

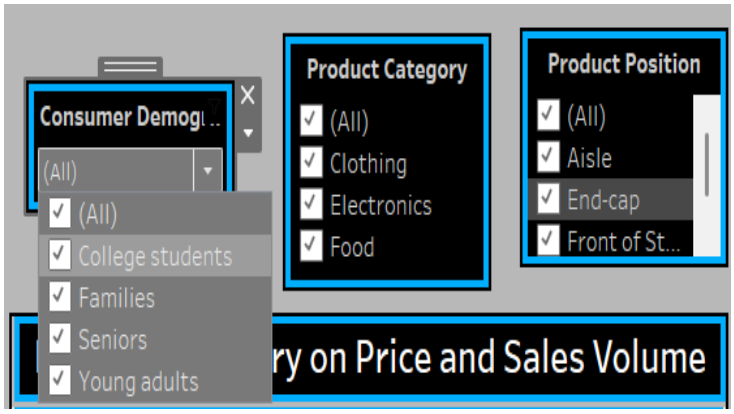
- **Purpose**: Compares seasonal and non-seasonal sales for each product category.

  - **Food** and **Clothing** show a slight increase in sales during seasonal times.
  - **Electronics** performs slightly better in non-seasonal times.
  - Suggests promotions during seasonal periods can boost sales, especially for food and clothing.

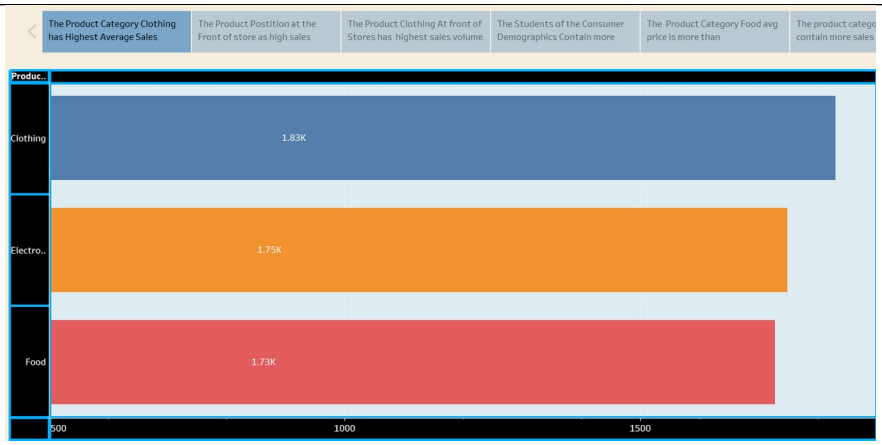
<table>
<tr>
<td></td>
<td></td>
<td>


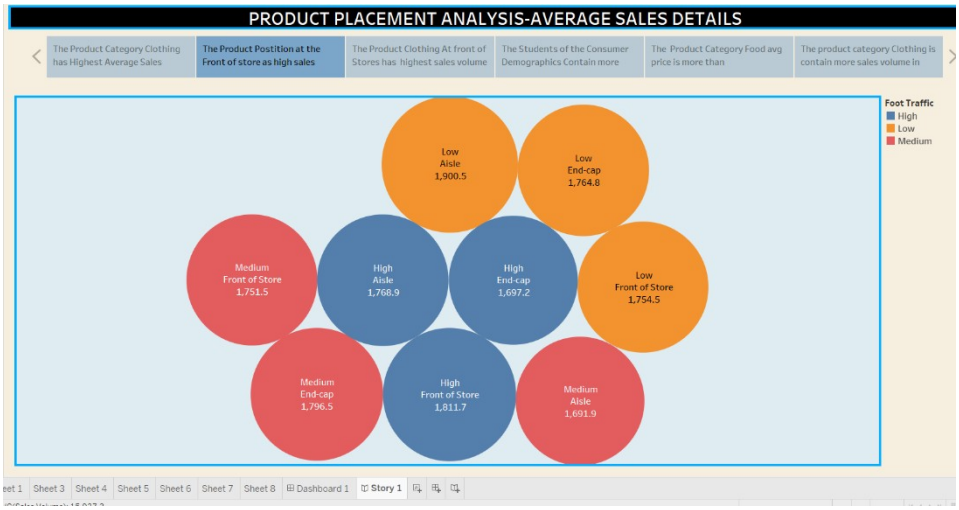
Filters

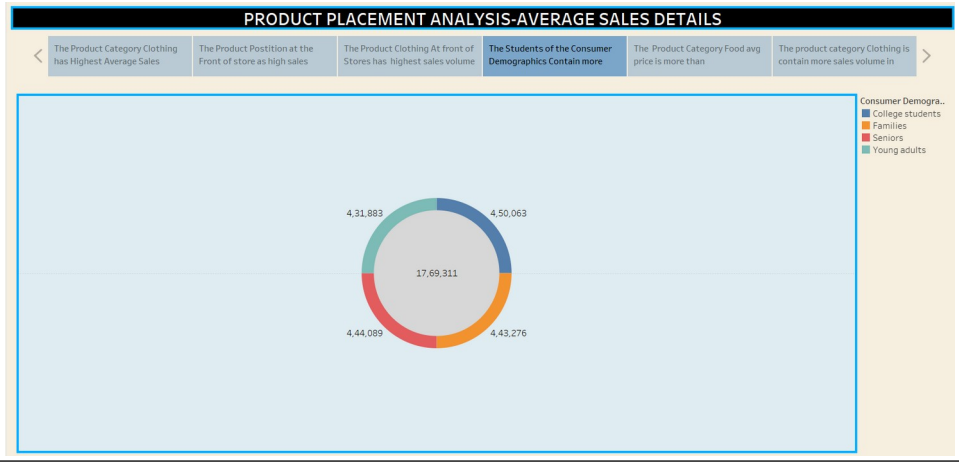
- Allow users to filter the dashboard by:
  - **Consumer Demographics** (e.g., College students, Families)
  - **Product Category**
  - **Product Position** (Aisle, End-cap, Front of Store)

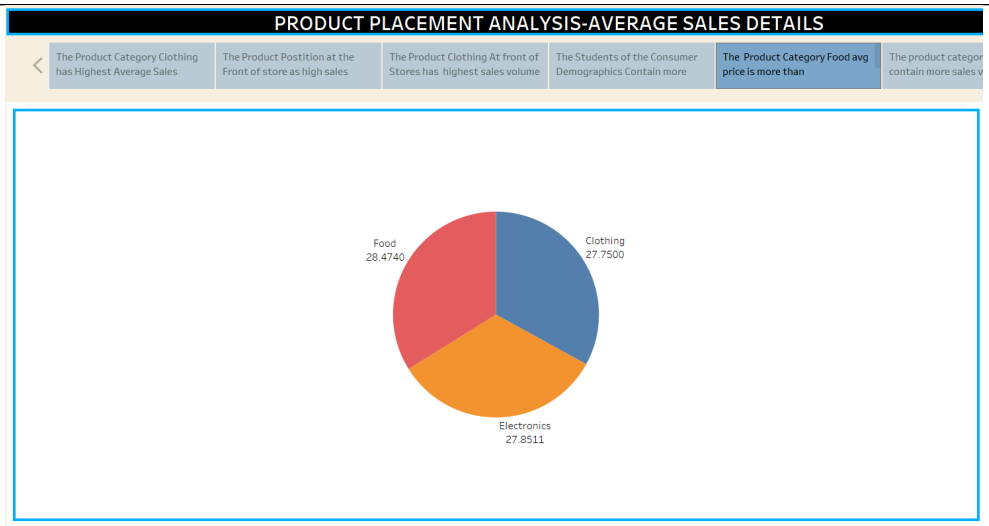


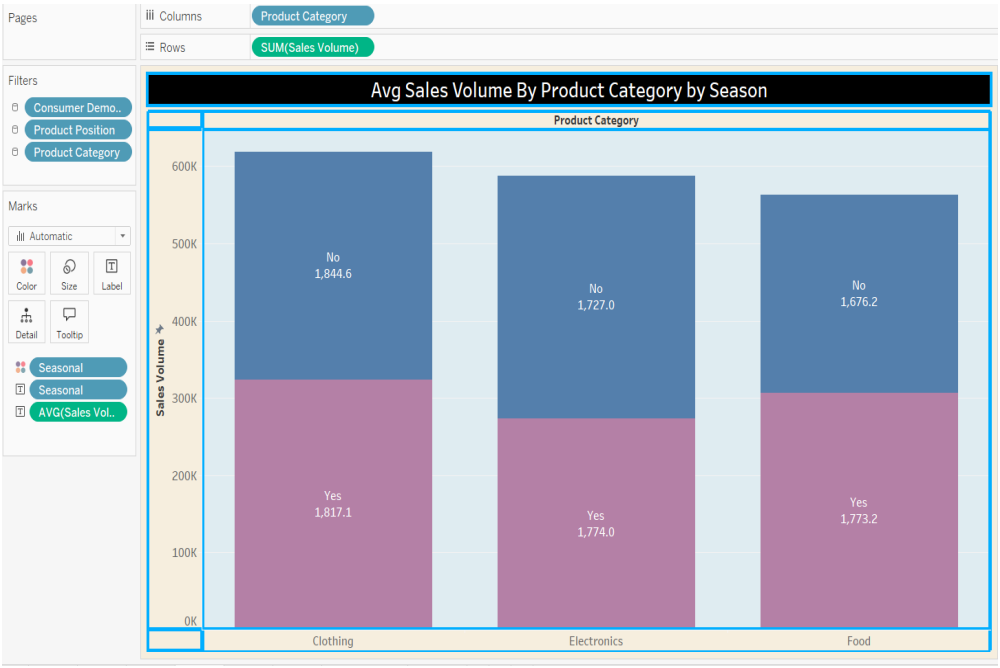
</td>
</tr>
<tr>
<td>6</td>
<td>Story Design</td>
<td>No of Visualizations / Graphs –</td>
</tr>
</table>


The Product Category Clothing has Highest Average Sales
The Product Postition at the Front of store as high sales
The Product Clothing At front of Stores has highest sales volume
The Students of the Consumer Demographics Contain more
The Product Category Food avg price is more than
Produc..
Clothing
1.83K
Electro..
1.75K
Food
1.73K
500
1000
1500


PRODUCT PLACEMENT ANALYSIS-AVERAGE SALES DETAILS
The Product Category Clothing has Highest Average Sales
The Product Postition at the Front of store as high sales
The Product Clothing At front of Stores has highest sales volume
The Students of the Consumer Demographics Contain more
The Product Category Food avg price is more than
The product category Clothing is contain more sales volume in
Foot Traffic
High
Low
Medium
Low Aisle 1,900.5
Low End-cap 1,764.8
Medium Front of Store 1,751.5
High Aisle 1,768.9
High End-cap 1,697.2
Low Front of Store 1,754.5
Medium End-cap 1,796.5
High Front of Store 1,811.7
Medium Aisle 1,691.9
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Sheet 8
Dashboard 1
Story 1


PRODUCT PLACEMENT ANALYSIS-AVERAGE SALES DETAILS
The Product Category Clothing has Highest Average Sales
The Product Postition at the Front of store as high sales
The Product Clothing At front of Stores has highest sales volume
The Students of the Consumer Demographics Contain more
The Product Category Food avg price is more than
The product category Clothing is contain more sales volume in
Consumer Demogra..
College students
Families
Seniors
Young adults
4,31,883
4,50,063
17,69,311
4,44,089
4,43,276


PRODUCT PLACEMENT ANALYSIS-AVERAGE SALES DETAILS
The Product Category Clothing has Highest Average Sales
The Product Postition at the Front of store as high sales
The Product Clothing At front of Stores has highest sales volume
The Students of the Consumer Demographics Contain more
The Product Category Food avg price is more than
Food 28.4740
Clothing 27.7500
Electronics 27.8511


Pages
Columns
Product Category
Rows
SUM(Sales Volume)
Filters
Consumer Demo..
Product Position
Product Category
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Seasonal
Seasonal
AVG(Sales Vol..
Avg Sales Volume By Product Category by Season
Product Category
Sales Volume
600K
500K
400K
300K
200K
100K
0K
No 1,844.6
Yes 1,817.1
No 1,727.0
Yes 1,774.0
No 1,676.2
Yes 1,773.2
Clothing
Electronics
Food