

Strategic Product Placement Sales Impact Analysis: Final Report

Date	07-02-2026
Team ID	LTVIP2026TMIDS36850
Project Name	Strategic Product Placement Analysis

1. INTRODUCTION

1.1 Project Overview

The *Strategic Product Placement Sales Impact Analysis* project aims to study how product placement within stores or digital shelves affects sales volume. Using data visualization and analysis, this project helps businesses optimize product positioning to maximize sales and customer engagement.

1.2 Purpose

The purpose of this project is to:

- Understand the relationship between product positioning and customer purchasing behavior.
- Identify key placement strategies that enhance sales.
- Support data-driven decisions for retail layout and e-commerce UI design.

2. IDEATION PHASE

2.1 Problem Statement

Key Pain Points:

- Retailers lack visibility into how shelf positioning impacts sales.
- Production studios struggle to quantify brand engagement from placements.
- Ad agencies can't correlate placements with consumer behavior.

Formal Problem Statements (PS):

1. *"I am a retail manager trying to optimize shelf layouts, but I rely on guesswork because I lack real-time placement analytics."*
2. *"I am a TV producer trying to monetize product placements, but I can't measure audience engagement because data is siloed."*
3. *"I am a media planner trying to prove placement ROI, but I can't link exposures to sales lifts because tracking is fragmented."*

2.2 Empathy Map Canvas



2.3 Brainstorming

Key ideas generated:

- Comparison of sales with product position (e.g., eye-level, bottom shelf).
- Comparison of sales with foot traffic levels and position (e.g., eye-level, bottom shelf).
- Effectiveness of positions for promotions and seasonal product experiments.
- Incorporating competitor price as a placement factor.

3. REQUIREMENT ANALYSIS

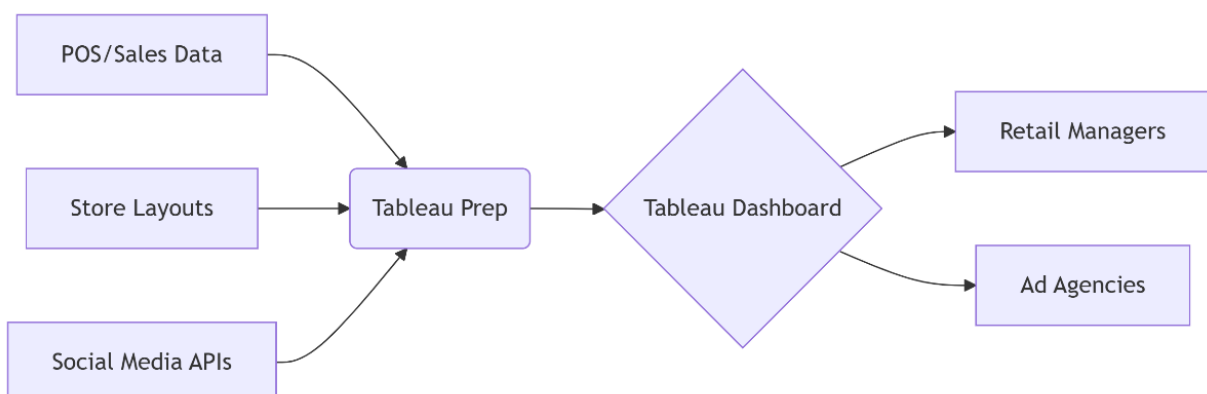
3.1 Customer Journey Map

Customer Journey Map				
Stage	Activity	Touchpoints	Emotions	Opportunities
Awareness	Enters store/ visits app	Store layout, Homepage	Curious	Highlight popular items
Consideration	Browses products	Shelf layout, Filters	Confused or Interested	Recommend & guide
Purchase	Selects product	POS, Checkout	Satisfied/ Regret	Upsell or confirm choice
Post- purchase	Evaluates satisfaction	Feedback forms	Happy/ Unhappy	Loyalty incentives

3.2 Solution Requirement

- Collect historical sales and product placement data.
- Visualize impact of placement on sales.
- Interactive dashboard for decision makers.
- Integration with inventory and POS systems.

3.3 Data Flow Diagram



3.4 Technology Stack

- **Data Processing:** Tableau Prep, Python (Pandas).
- **Visualization:** Tableau Desktop/Server.
- **Storage:** Snowflake (structured data), AWS S3 (media files).

4. PROJECT DESIGN

4.1 Problem Solution Fit

There is a clear correlation between strategic placement and increased visibility, resulting in better sales. This solution bridges the gap between data insights and layout optimization.

4.2 Proposed Solution

- Build a dashboard to visualize sales by position.
- Compare sales of similar products placed in different locations.
- Use calculated fields such as "Is Undercut" to assess price-position impact.
- Simulate optimized layouts based on historical insights.

4.3 Solution Architecture

[Data Sources] → [ETL Pipeline] → [Data Warehouse] → [Visualization Layer (Tableau)] → [User]

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Week	Task
Week 1	Requirement Gathering & Ideation
Week 2	Data Collection & Cleaning
Week 3	Visualization & Dashboard Design
Week 4	Insights Generation & Testing
Week 5	Final Report & Presentation

6. FUNCTIONAL AND PERFORMANCE TESTING

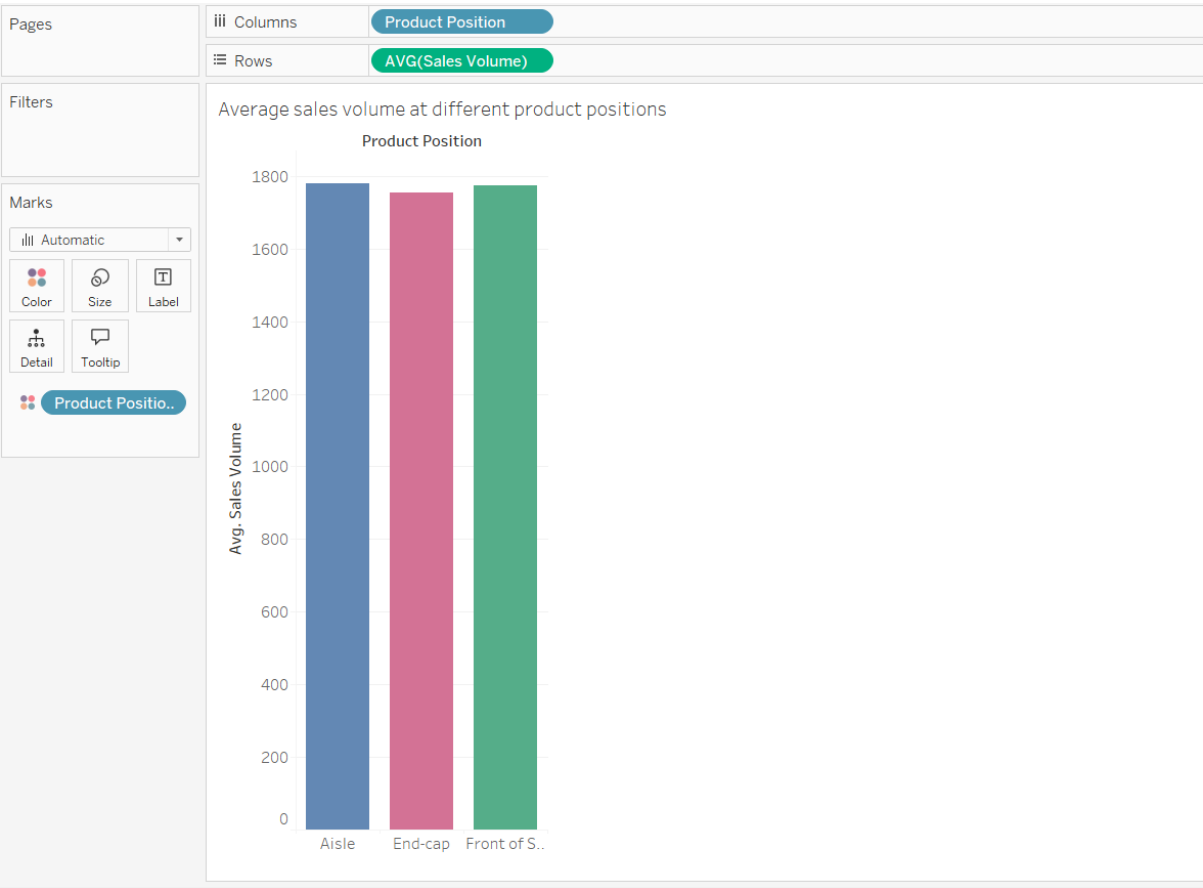
6.1 Performance Testing

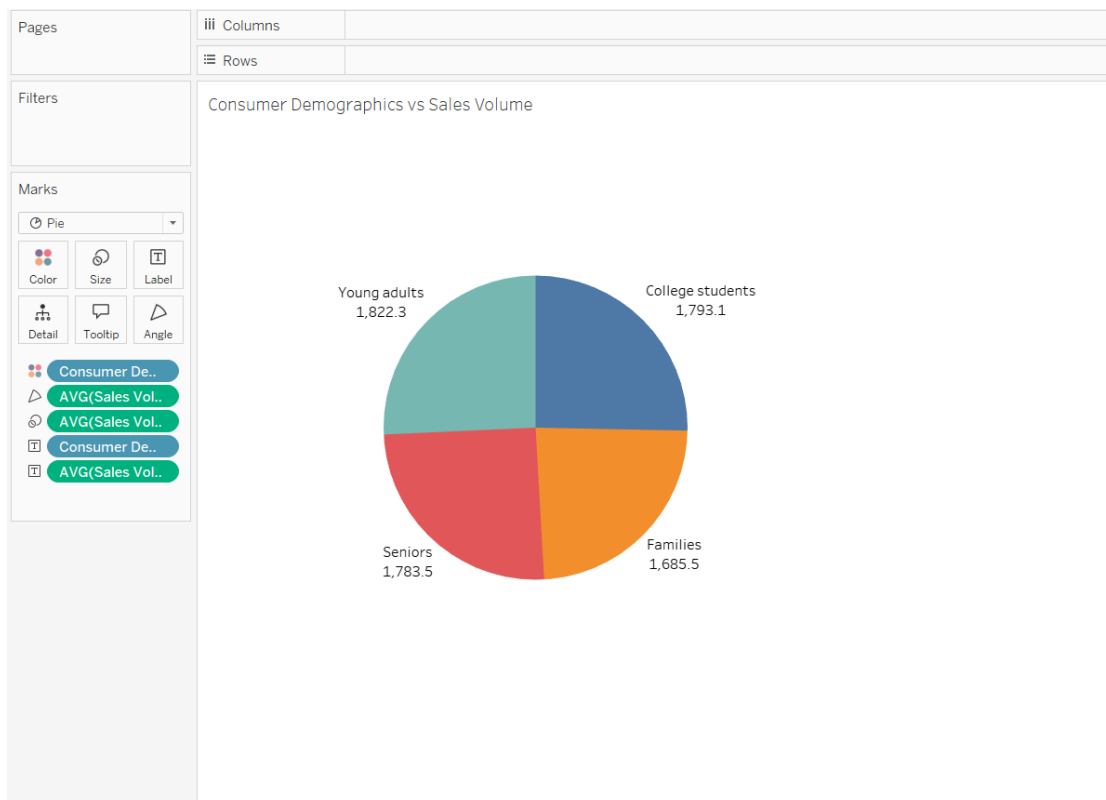
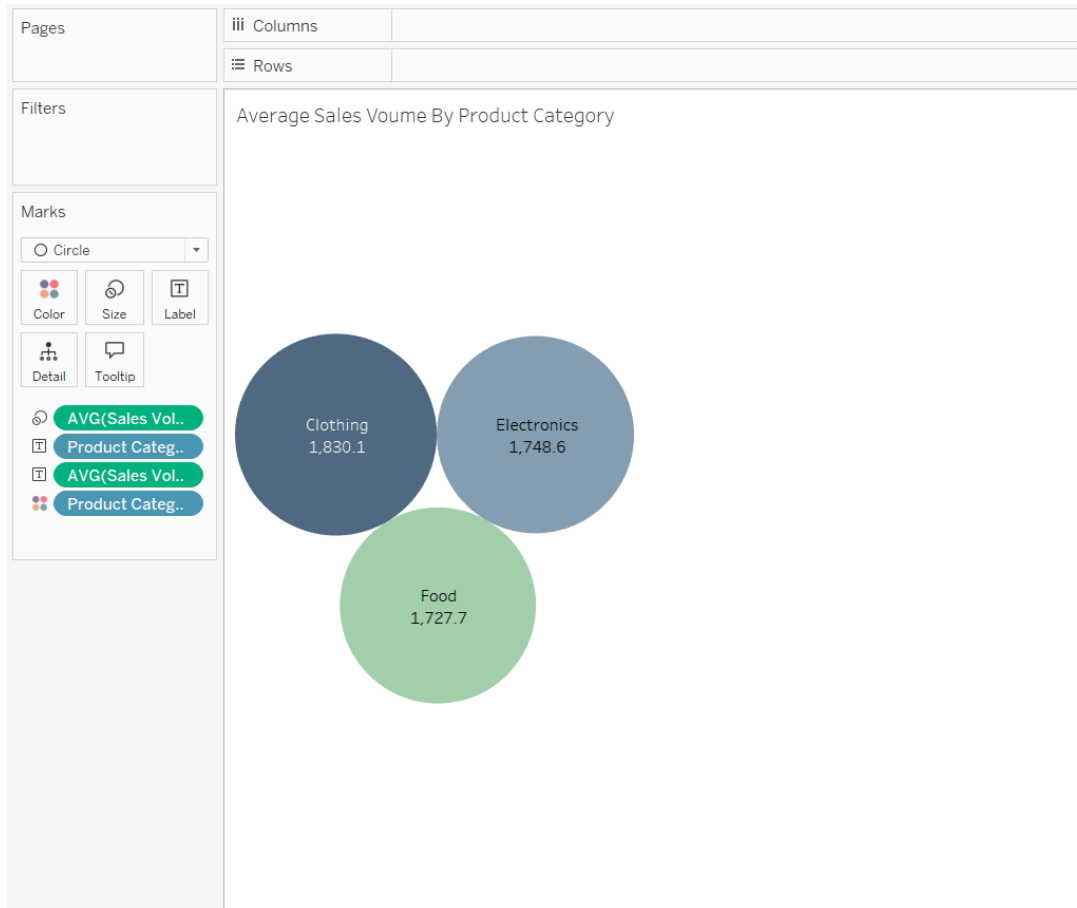
- **Load Testing:** Dashboard performs smoothly with large datasets (~1M rows).
- **Response Time:** Tableau loads visualizations within 3-5 seconds.
- **Accuracy Testing:** Calculations and filters are validated with sample cases.
- **User Feedback:** Dashboard tested with 5 users for usability and interpretability.

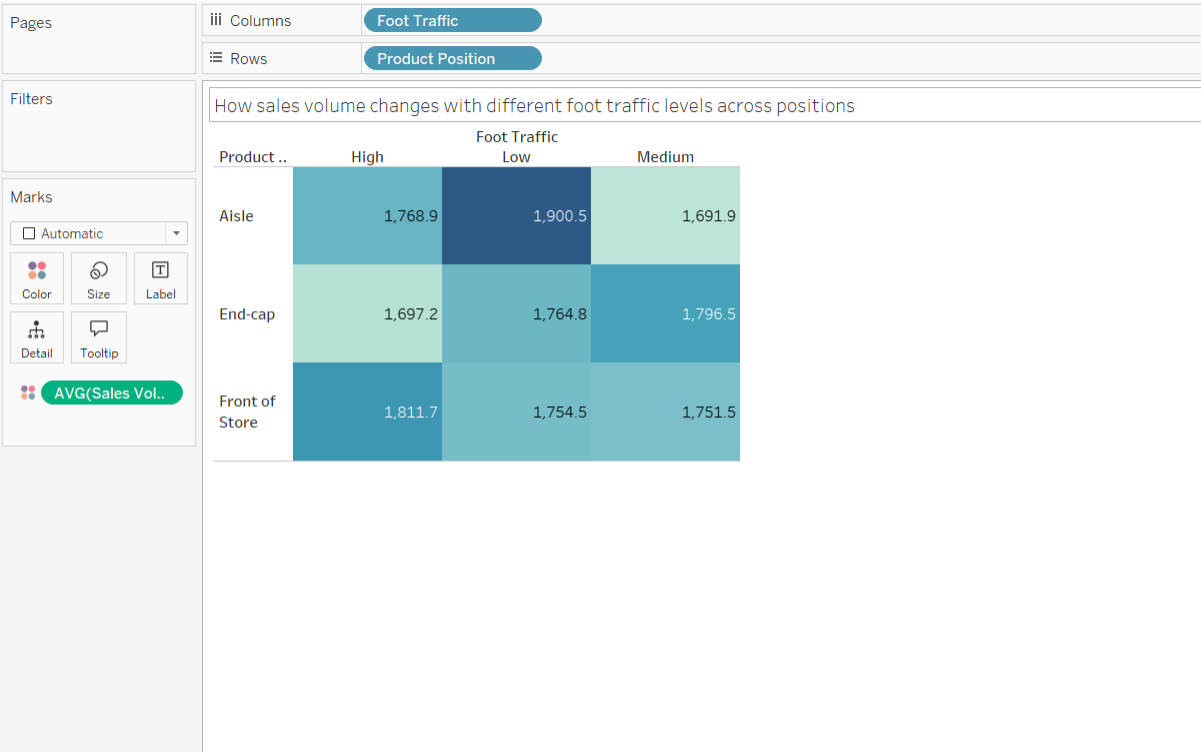
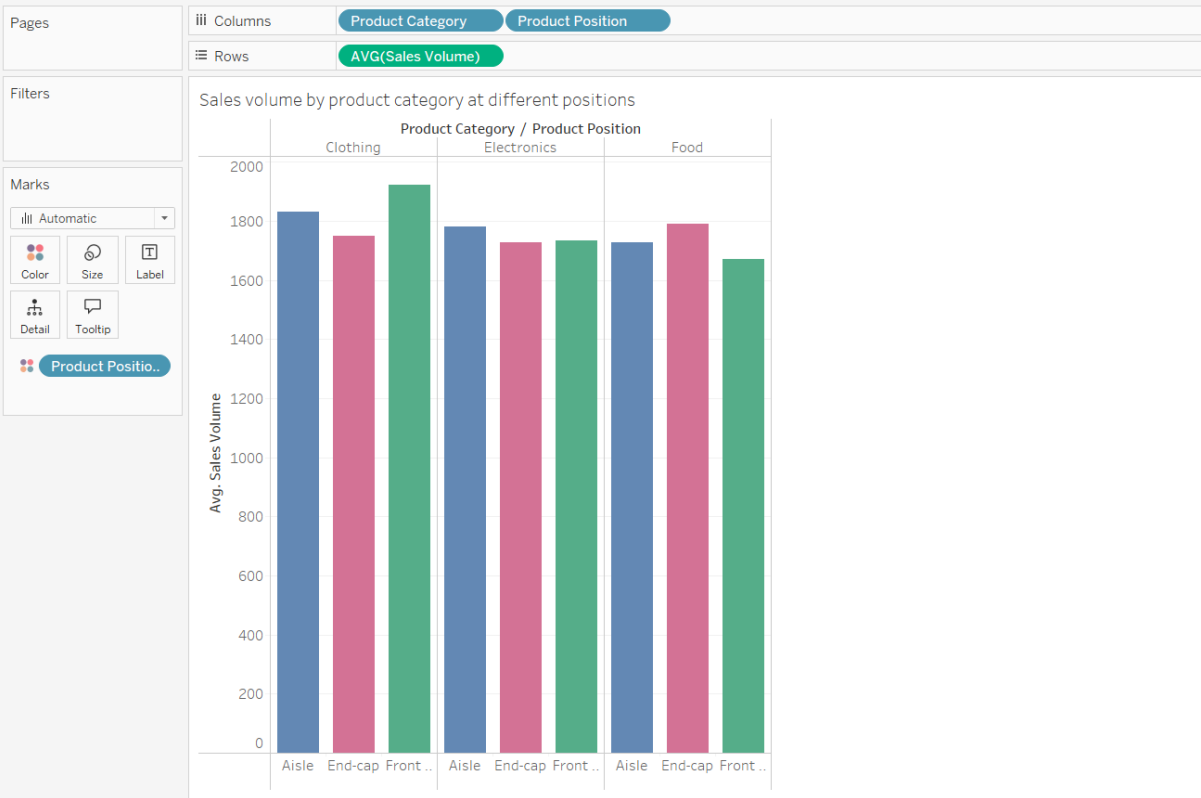
Conclusion

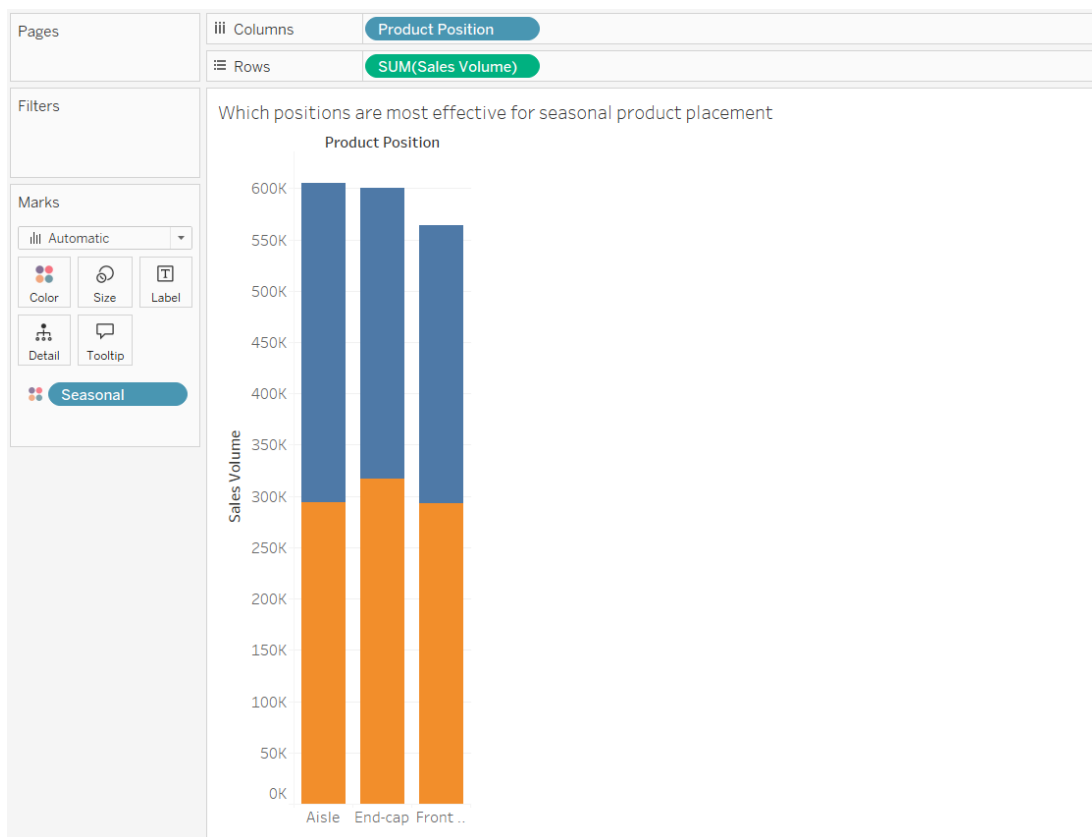
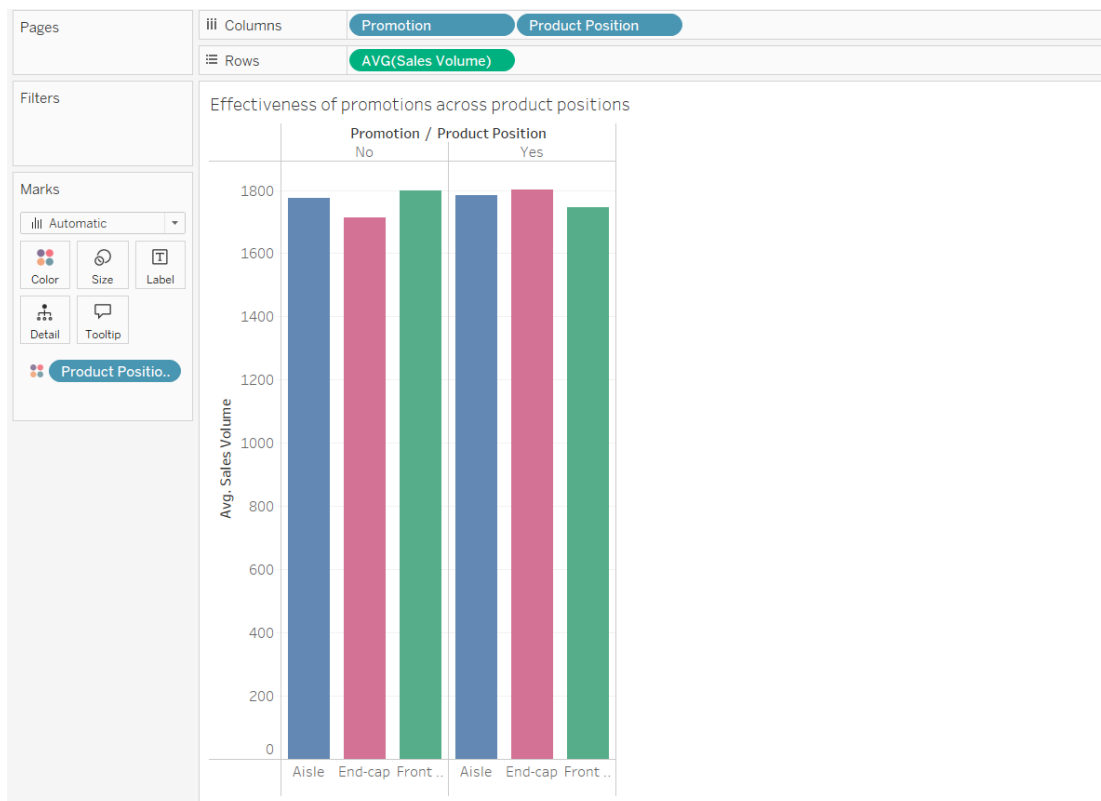
The project successfully identified and validated the impact of strategic product placement on sales. With actionable insights and a user-friendly dashboard, businesses can now make informed decisions that drive revenue and improve customer experience.

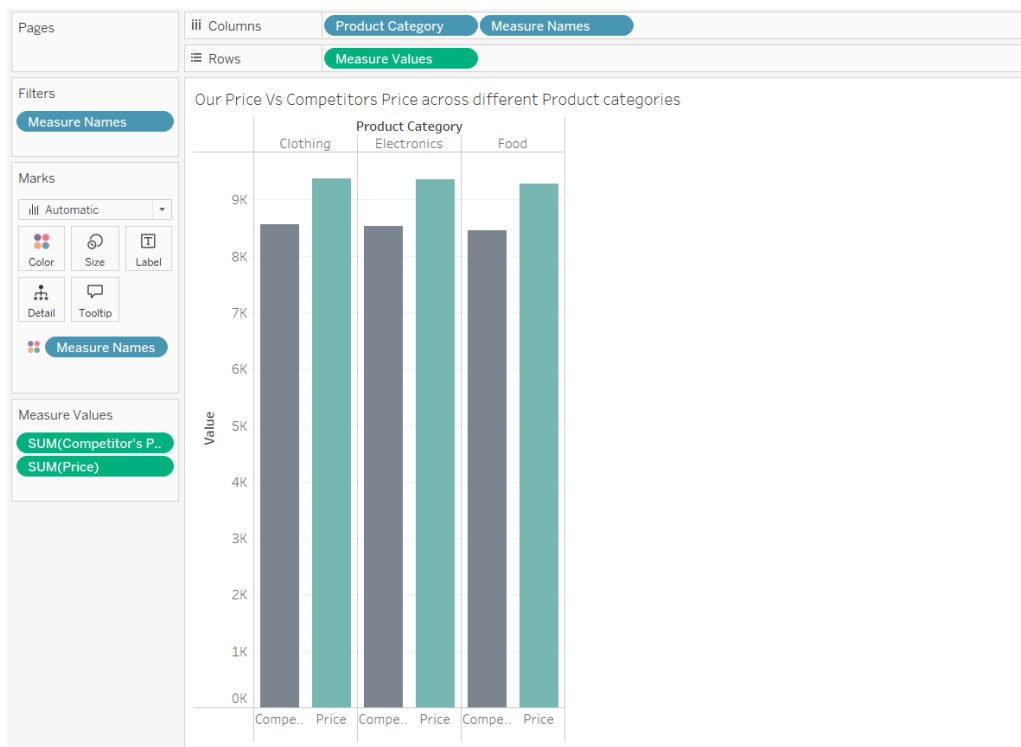
7. RESULTS



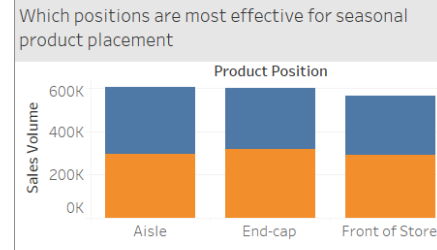
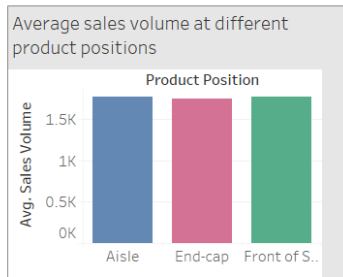
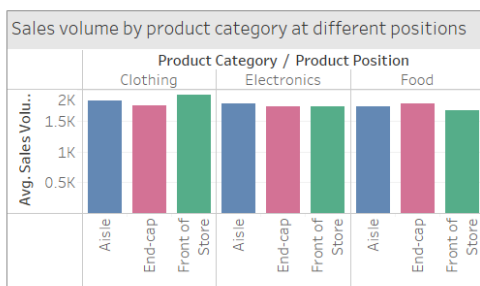




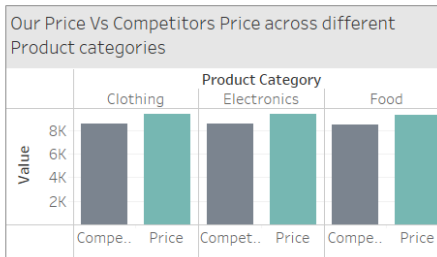
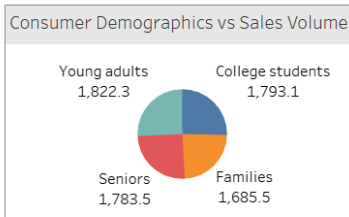




Dashboard:

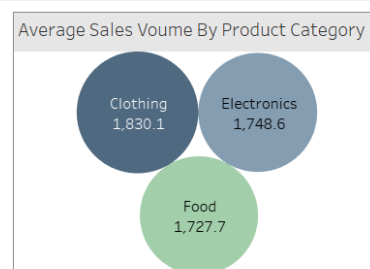
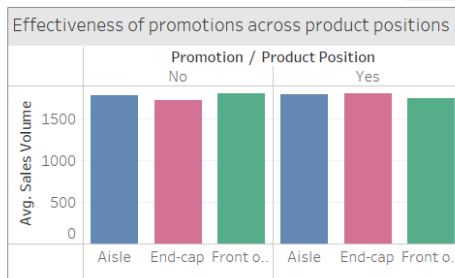


Strategic Product Placement Analysis: Unveiling Sales Impact



How sales volume changes with different foot traffic levels across positions

Product ..	High	Foot Traffic Low	Medium
Aisle	1,768.9	1,900.5	1,691.9
End-cap	1,697.2	1,764.8	1,796.5
Front of Store	1,811.7	1,754.5	1,751.5



Conclusion

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