

Smith & Robbins Superstore



Sales Performance Analysis

The Goal

In light of the competitive landscape, Smith & Robbins Stores seeks to evaluate its performance. The company has tasked us with developing automated sales performance dashboards that deliver quick and up-to-date insights to support data-driven decision-making, enhance customer relationships, improve financial performance, and facilitate informed strategic planning. Additionally, we will provide future projections for sales, profit, and quantity over the next three years.

The sales performance dashboards will include: the Sales Dashboard, the Customer Dashboard, and the Seasonality and Forecast Dashboard.

Executive Summary

These automated (functional and dynamic) sales performance dashboards offer a comprehensive analysis of Smith & Robbins' sales performance from 2020 to 2023. The primary objective is to uncover insights into sales performance and profitability, enabling the identification of patterns, key trends, performance gaps, customer behavior, seasonality, and three-year projections. Additionally, these insights will highlight areas for improvement, ultimately enhancing sales performance, fostering better customer relationships, improving profitability, and supporting informed strategic business decisions.

Contents

1. The Task: Sales Performance Dashboards.
2. Approach, Analysis and Technical Challenges
3. Dashboard Components
4. Success Criteria
5. Final Report

Sales Performance Dashboards

Introduction

Smith & Robbins Stores have outlined the specifications for developing three dashboards in Tableau. These dashboards are designed to assist stakeholders, including the Sales, Marketing, and Customer Service teams, as well as executives, in analyzing sales performance, customer insights, and projections.

Sales Dashboard | Requirements

Dashboard Purpose

The purpose of the Sales Dashboard is to provide an overview of sales metrics and trends, enabling users to analyze year-over-year sales performance and gain insights into sales trends.

Key Requirements

KPI Overview

- Provide a summary of total sales, profit, and quantity for both the current year and the previous year.

Sales Trends

- Present the data for each Key Performance Indicator (KPI) on a monthly basis for both the current and previous years.
- Highlight the months with the highest and lowest sales to ensure they are easily recognizable.

Product Subcategory Comparison

- Analyze the sales performance across various product subcategories for both the current and previous years.
- Include a comparison of sales figures alongside profit margins.

Weekly Trends for Sales and Profits

- Present weekly sales and profit data for the current year.
- Show the average weekly sales and profit values.
- Highlight the weeks that exceed and fall below the average to emphasize variations in sales and profit performance.

Customer Dashboard | Requirements

Dashboard Purpose

The Customer Dashboard is designed to offer a comprehensive overview of customer data, trends, and behaviors. It will assist the marketing and sales teams, as well as management, in understanding customer segments and enhancing customer satisfaction.

Key Requirements

KPI Overview

- Provide a summary of the total number of customers, total sales per customer, and total number of orders for both the current year and the previous year.

Customer Trends

- Show monthly data for each Key Performance Indicator (KPI) for both the current year and the previous year.
- Clearly highlight the months with the highest and lowest sales to ensure they stand out.

Customer Distribution by Number of Orders

- Visualize the distribution of customers according to the number of orders they have placed. This will provide valuable insights into customer behavior, loyalty, and engagement.

Top 10 Customers by Profit

- Display the top 10 customers who have contributed the highest profits to the company.
- Include additional details such as rank, number of orders, current sales, current profit, and the date of their last order.

Seasonality and Forecast Dashboard | Requirements

Dashboard Purpose

The Seasonality and Forecast Dashboard is designed to provide insights into the seasonality and trends of sales, profit, and quantity, along with moving averages. It will project sales, profit, and quantity for a minimum of the next three years.

Key Requirements

Monthly Trends and Seasonality for Sales, Profit and Quantity

- Illustrate trend lines for monthly sales, profit, and quantity.
- Present the average monthly values.
- Include a three-month moving average for sales, profit, and quantity.

Forecast for Sales, Profit and Quantity

- Provide projections for sales, profit, and quantity over a minimum of the next three years.

Design & Interactivity | Requirements

Dashboard Dynamics

- The dashboard should enable users to explore historical data by providing the flexibility to select any desired year.

- Ensure easy navigation across the dashboard for users.
- Make charts and graphs interactive, allowing users to filter and explore data directly through them

Data Filters

- Allow users to filter data based on product details such as category and subcategory, as well as location information including region, state, and city.

Approach, Analysis and Technical Challenges

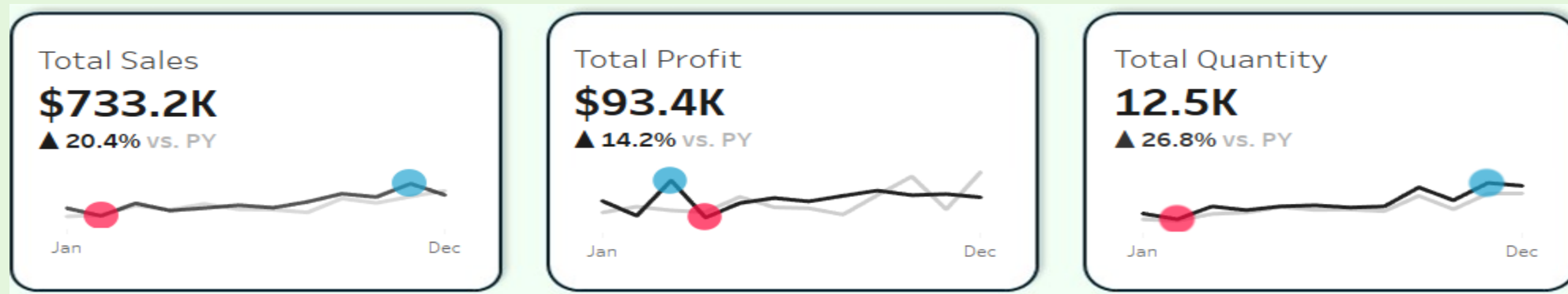
1. Collected data tables from the Management team.
2. Established data relationships (as a unified dataset), then formatted, compiled, and cleaned the data.
3. Renamed fields/tables and changed data types as needed.
4. Created calculated fields.
5. Built charts and tables.
6. Developed automated (functional and dynamic) dashboards. The designs were created in PowerPoint, with added icons, filters, and interactive features.

To see the functionality and dynamic nature of the dashboard: Go to
<https://public.tableau.com/app/profile/olumide.balogun1/vizzes>

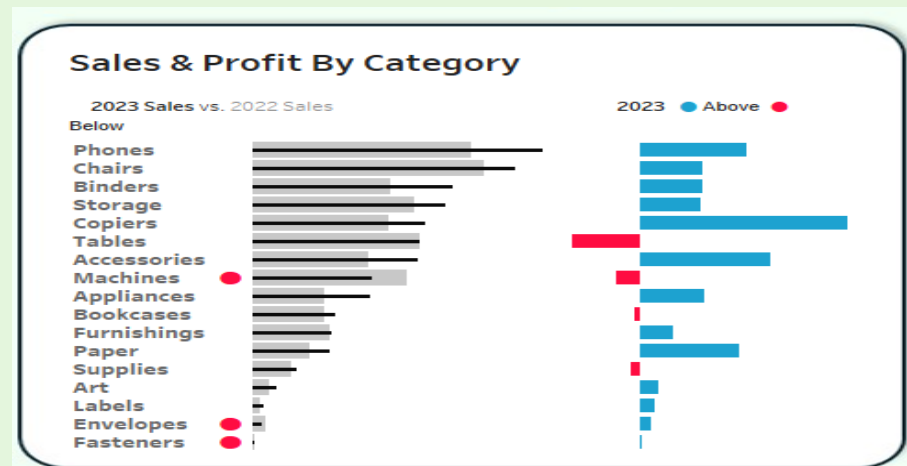
Sales Performance Dashboards Components

Sales Dashboard Components - Key Requirements

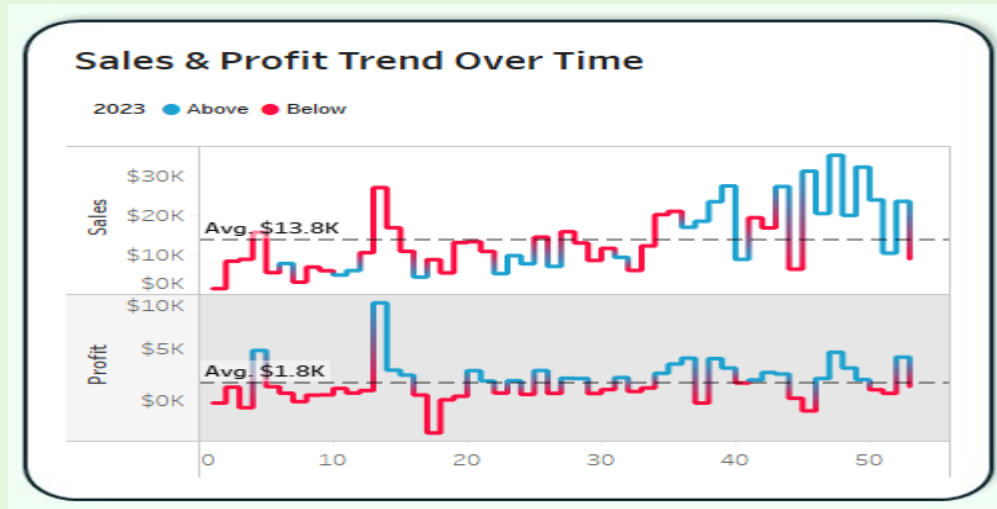
1. KPI's and Sales Trends - Using BANs for the KPIs and Sparklines for the Sales Trends



2. Product Subcategory Comparison - Using Bar - in - Bar

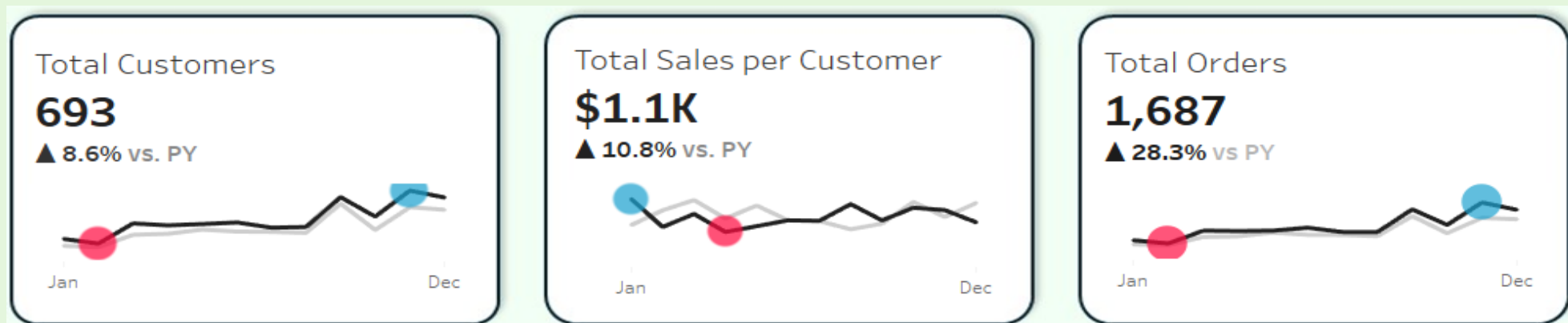


3. Weekly Trends for Sales and Profit - Using Line Chart.

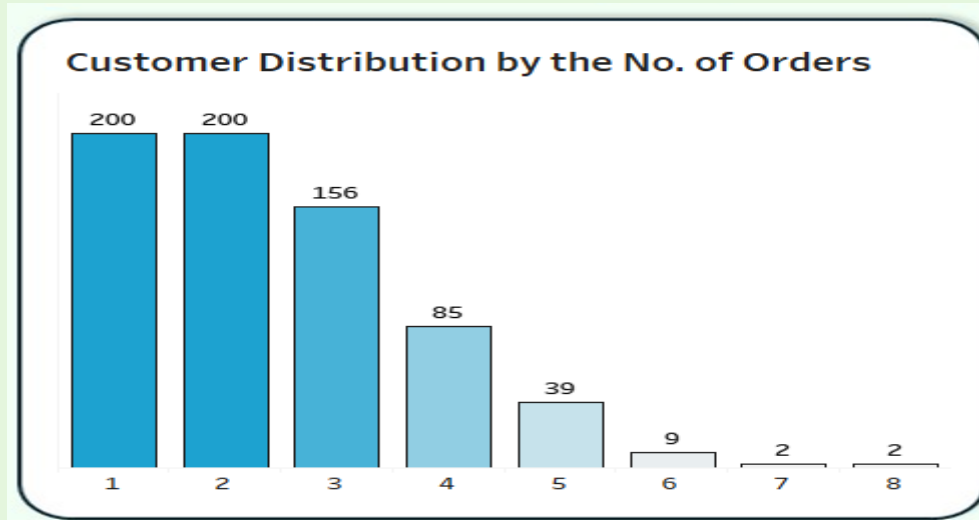


Customer Dashboard Components - Key Requirements

1. KPI's and Customer Trends - Using BANs for the KPIs and Sparklines for the Sales Trends



2. Customer Distribution by Number of Orders - Using Histogram.

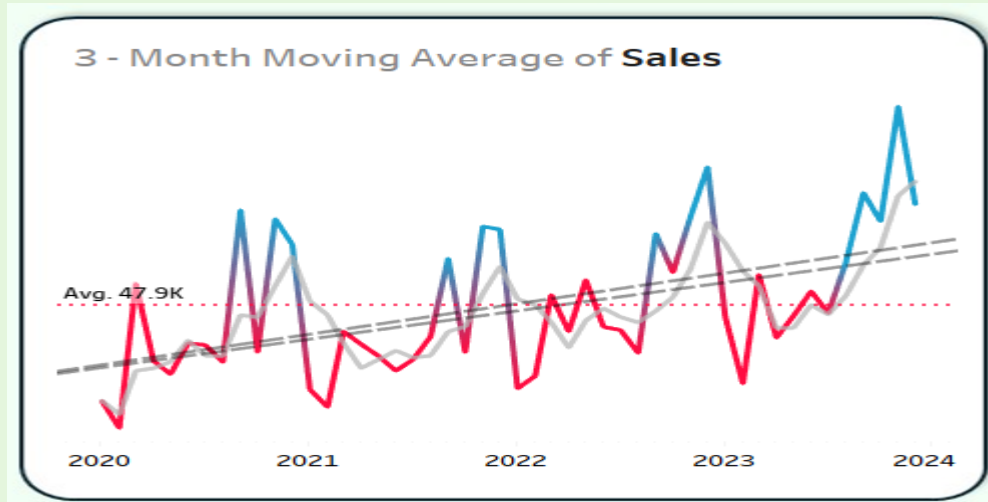


3. Top 10 Customers by Profit - Using Table.

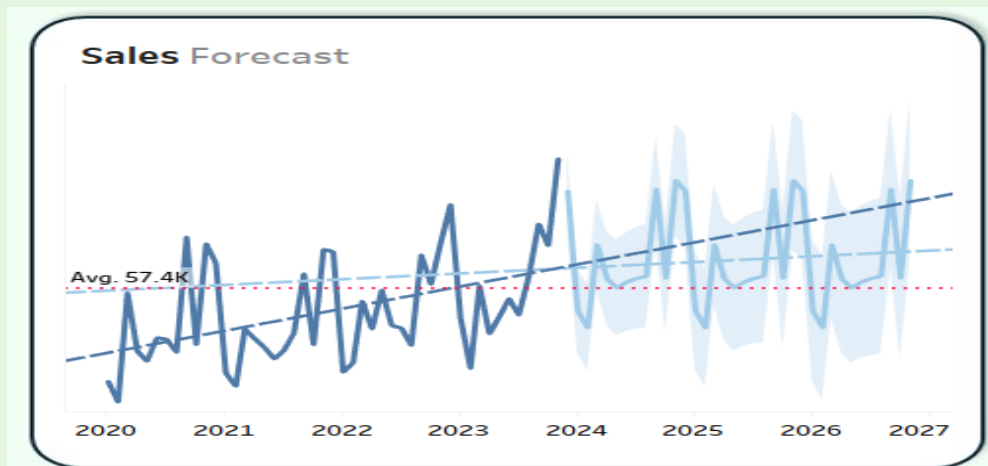
Top 10 Customers by Profit					
Rank	Customer	Last Order	2023 Profit	2023 Sales	No of Orders
#1	Raymond Buch	25/09/2023	\$6,781	\$14,203	3
#2	Hunter Lopez	17/11/2023	\$5,046	\$10,523	2
#3	Tom Ashbrook	22/10/2023	\$4,599	\$13,723	2
#4	Andy Reiter	24/12/2023	\$2,608	\$5,821	2
#5	Jane Waco	18/11/2023	\$1,953	\$5,385	4
#6	Helen Wasserman	04/09/2023	\$1,947	\$8,166	5
#7	Brian Moss	27/11/2023	\$1,938	\$5,683	5
#8	Alan Dominguez	01/12/2023	\$1,867	\$5,434	4
#9	Jim Epp	12/11/2023	\$1,704	\$4,074	4
#10	Steven Roelle	17/06/2023	\$1,676	\$3,506	1

Seasonality & Forecast Dashboard Components - Key Requirements

1. Seasonality and Trends - Using Line Chart.



2. Projection - Using Line Chart.



SUPER STORE



Select Year

2023

..PRODUCT..

Category

(Multiple values)

Sub-Category

(Multiple values)

..LOCATION..

Region

(Multiple values)

State

(All)

City

(All)

Designed by - Olumide Balogun



Inspiration - Baraa Khatib

Sales Dashboard | 2023

2023 vs. 2022 ● Highest Month ● Lowest Month

Total Sales

\$733.2K

▲ 20.4% vs. PY



Total Profit

\$93.4K

▲ 14.2% vs. PY



Total Quantity

12.5K

▲ 26.8% vs. PY



Sales Summary

This Sales dashboard delivers key insights into sales metrics, trends, product popularity, and financial performance, making it ideal for various reporting needs.

Sales & Profit By Category

2023 Sales vs. 2022 Sales

Below

Phones

Chairs

Binders

Storage

Copiers

Tables

Accessories

Machines

Appliances

Bookcases

Furnishings

Paper

Supplies

Art

Labels

Envelopes

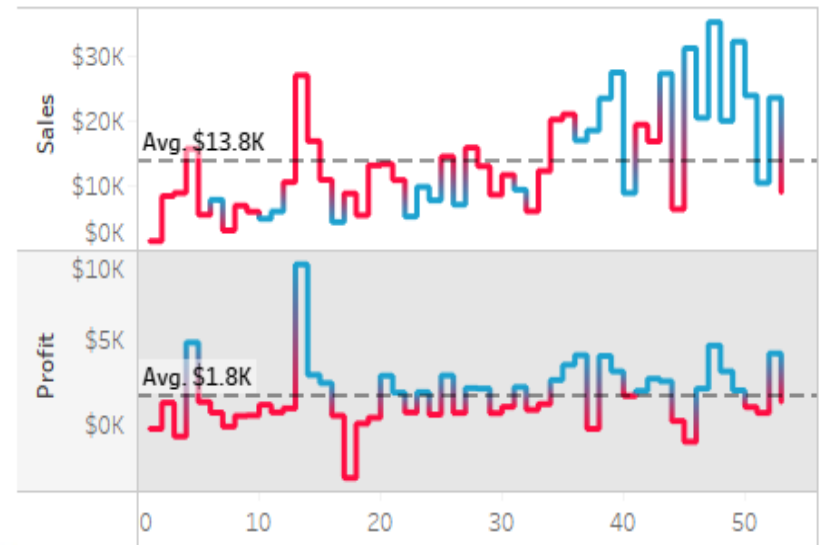
Fasteners

2023 ● Above ● Below



Sales & Profit Trend Over Time

2023 ● Above ● Below





Select Year

2023

.. PRODUCT ..

Category

(Multiple values)

Sub-Category

(Multiple values)

.. LOCATION ..

Region

(All)

State

(All)

City

(All)

Designed by - Olumide Balogun



Inspiration - Baraa Khatib

Customer Dashboard | 2023

2023 vs. 2022 ● Highest Month ● Lowest Month

Total Customers

693

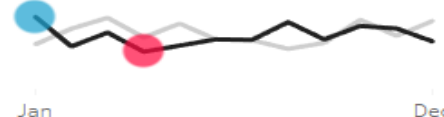
▲ 8.6% vs. PY



Total Sales per Customer

\$1.1K

▲ 10.8% vs. PY



Total Orders

1,687

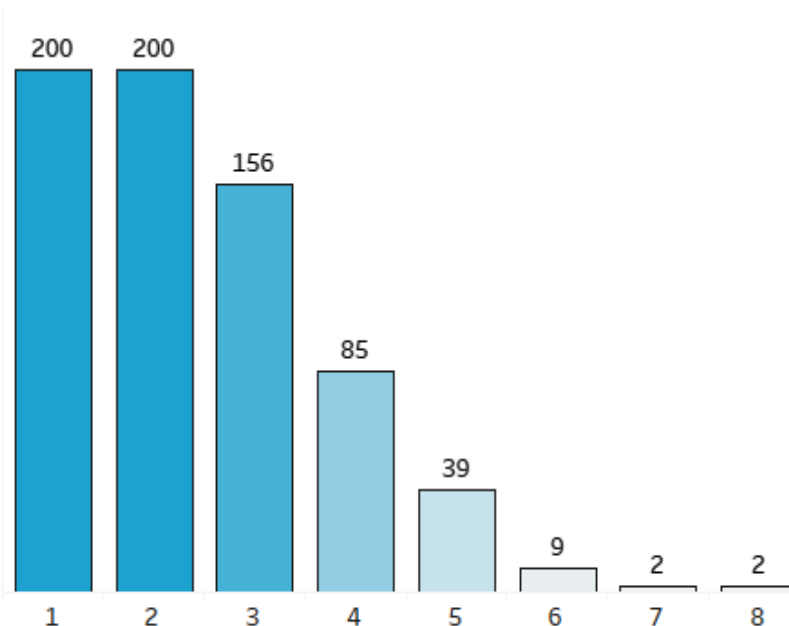
▲ 28.3% vs PY



Customer Summary

This Customer dashboard highlights key metrics, trends, and behaviors, enabling marketing teams and management to better understand customer segments and improve satisfaction.

Customer Distribution by the No. of Orders



Top 10 Customers by Profit

Rank	Customer	Last Order	2023 Profit	2023 Sales	No of Orders
#1	Raymond Buch	25/09/2023	\$6,781	\$14,203	3
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Select Year

2023

.. M.A & FORECAST ..

Select Measure

Sales

Monthly Moving Average

3

..PRODUCT..

Category

(Multiple values)

Sub-Category

(Multiple values)

..LOCATION..

Region

(All)

State

(All)

City

(All)

Seasonality & Forecast | 2023

2023 vs. 2022 ● Highest Month ● Lowest Month

Total Sales

\$733.2K

▲ 20.4% vs. PY



Total Profit

\$93.4K

▲ 14.2% vs. PY



Total Quantity

12.5K

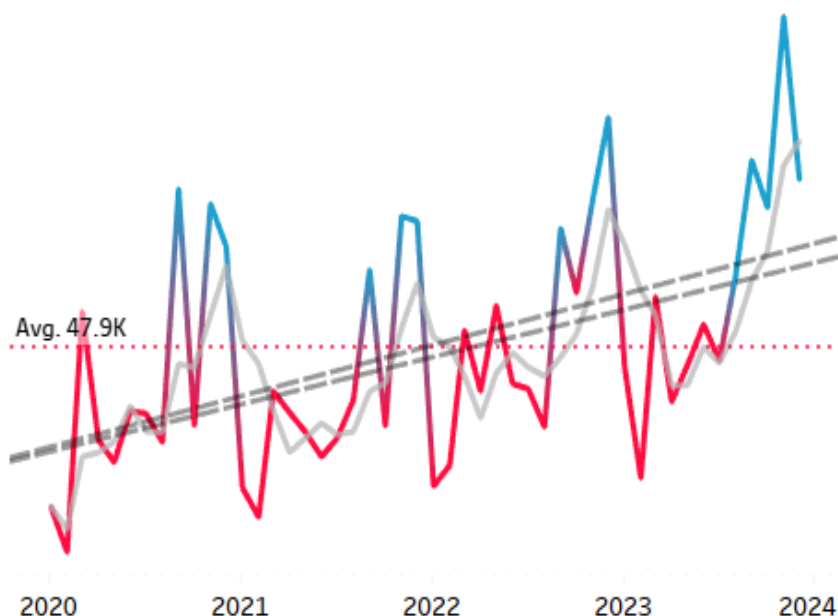
▲ 26.8% vs. PY



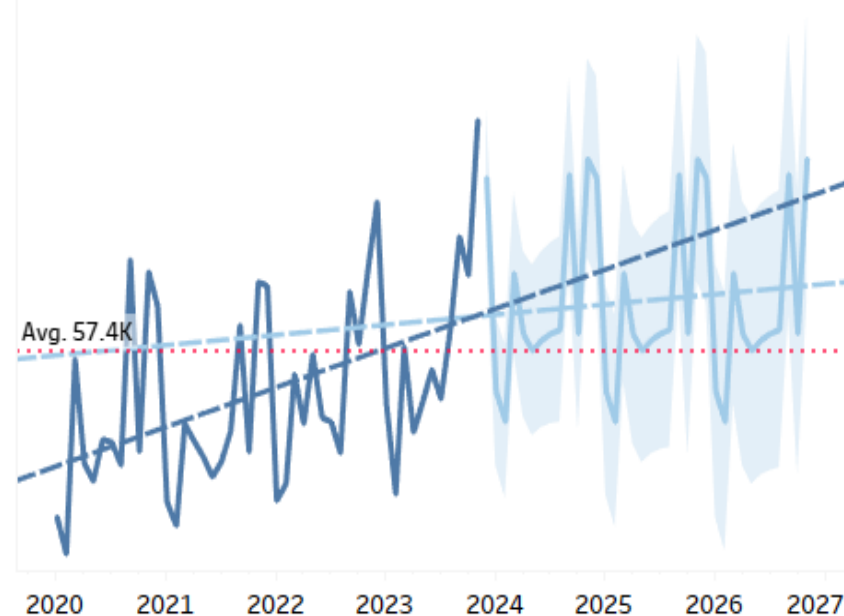
Seasonality & Forecasting Summary

This Seasonality and Forecasting dashboard provides insights into sales, profit, and quantity seasonality, highlighting trends. The forecast projects performance over the next three years, offering a clear outlook for planning.

3 - Month Moving Average of Sales



Sales Forecast



Success Criteria

After this Sales Performance Dashboards:

- Strategic business decisions will be made to reduce costs by 15% to 20%.
- The sales team will make more informed decisions, improve customer relationships, and reduce marketing expenses by 10%.
- Sales analysts will automate data gathering, saving 20% of their time to focus on higher-value activities.
- The executive team will make better financial decisions and develop informed strategic plans, leading to a 15% to 20% increase in profit.

To see the functionality and dynamic nature of the dashboard: Go to <https://public.tableau.com/app/profile/olumide.balogun1>

Final Results

1. Is there a significant year-on-year difference in Sales, Profit, and Quantity?

Hypothesis: Yes, there is a clear and significant year-on-year difference.

2. Is there a significant year-on-year difference in the Number of Customers and Orders?

Hypothesis: Yes, there is a clear and significant year-on-year difference.

3. Do the Profit and Quantity trends mirror the Sales trend?

Hypothesis: Yes, they do.

4. Which months show notable seasonality in Sales, Profit, and Quantity?

Answer: September, November, and December stand out.

5. Does the projection shows remarkable progress for the company? Does the projection indicate remarkable progress for the company?

Hypothesis: Yes, the projection shows significant progress.

For comprehensive Descriptive, Diagonistics, Predictive and Prescriptive Analysis that involves:

- Total Sales, Profit and Quantity along their Respective Percentage Growth
- Top 15 Categories, Segments, and Regions by Sales and Profit
- Analysis of Sales Performance and Profitability by Segment and Category Across Regions
- Top-Performing Subcategories
- Monthly Sales Cyclical Patterns
- Month-over-Month Sales Comparison Using Time Series Analysis
- The Impact of Quantity, Discount on Sales and Profitability
- Features with the Greatest Impact on Sales and Profit Outcomes– Using Feature Importance and Regression Model
- Trends and Seasonality in Sales
- Forecasting Sales using ARIMA Model
- Customer Segments That Drive the Most Sales

Go to : <https://github.com/olumidebalogun1/Superstore-Sales-Perfomance-Analysis-Using-R-Language>