Retail Sales Performance Dashboard Report

Submitted By:
Ayush Singoria

Roll Number: 6A

MBA (Business Analytics), Indian Institute of Foreign Trade, New Delhi

Regression and Time Series Models

Dr. Amarnath Mitra
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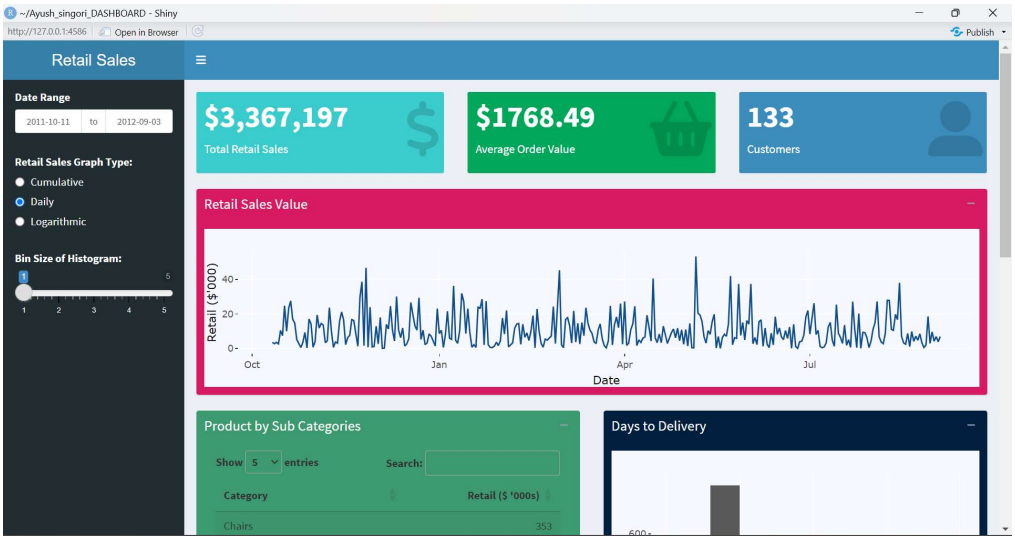
1. Introduction:

This report presents an analysis of the Retail Sales Performance Dashboard, a data visualization tool designed to provide insights into key performance indicators (KPIs) and trends in our retail business. By analysing sales data across various dimensions, the dashboard aims to empower stakeholders to make informed decisions regarding various aspects of our operations, including inventory management, marketing campaigns, and resource allocation.

2. About the Dashboard

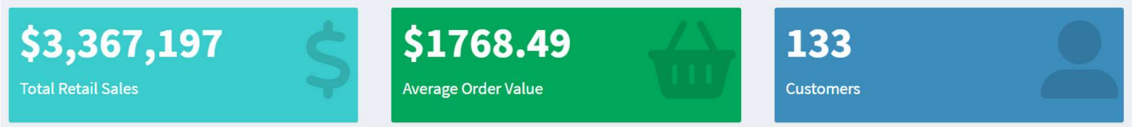
The Retail Sales Performance Dashboard offers a comprehensive overview of our retail performance through interactive visualizations and key metrics. It allows users to filter data by date range and visualize specific aspects of sales performance, including:

1. Overall Sales Trends: Track total sales value and identify seasonal fluctuations or other patterns.
2. Product Performance: analyse sales by product category or subcategory to identify top performers and potential areas for improvement.
3. Customer Acquisition and Engagement: Gain insights into customer acquisition trends, average order value, and factors influencing customer behavior.
4. Delivery Performance: Monitor delivery times and identify opportunities for optimizing logistics and customer satisfaction.
5. Profitability Analysis: Assess profit margins across different regions, product categories, and order priorities.



3. Section-by-Section Analysis and Managerial Implications

3.1 Top Row Value Boxes:



Objective: Provide immediate insights into key performance indicators.

Analysis:

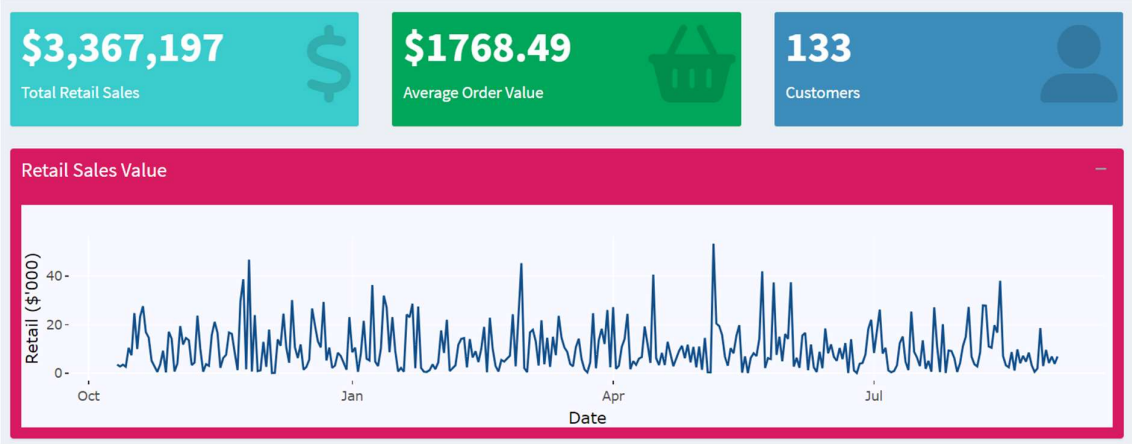
- Total Retail Sales: This metric directly reflects the overall revenue generated within the selected timeframe. Significant changes compared to past periods should be investigated. During time period of 2011 to 2012 data **total retail sales were: $3,367,197**
- Average Order Value (AOV): Indicates the average amount spent per order, reflecting customer buying behaviour and pricing strategies. During time period of 2011 to 2012 data **Average order value were: $1768.49**
- Number of Customers: Tracks customer acquisition and overall customer base growth. Customer: 133

Managerial Implications:

- We can monitor sales trends to identify growth opportunities or potential concerns.
- We can Analyse AOV changes to assess pricing effectiveness and customer behavior.
- We can Track customer acquisition to evaluate marketing efforts and customer engagement strategies.

3.2 Retail Sales Value Chart:

Objective: Visualize the trend of retail sales over time.



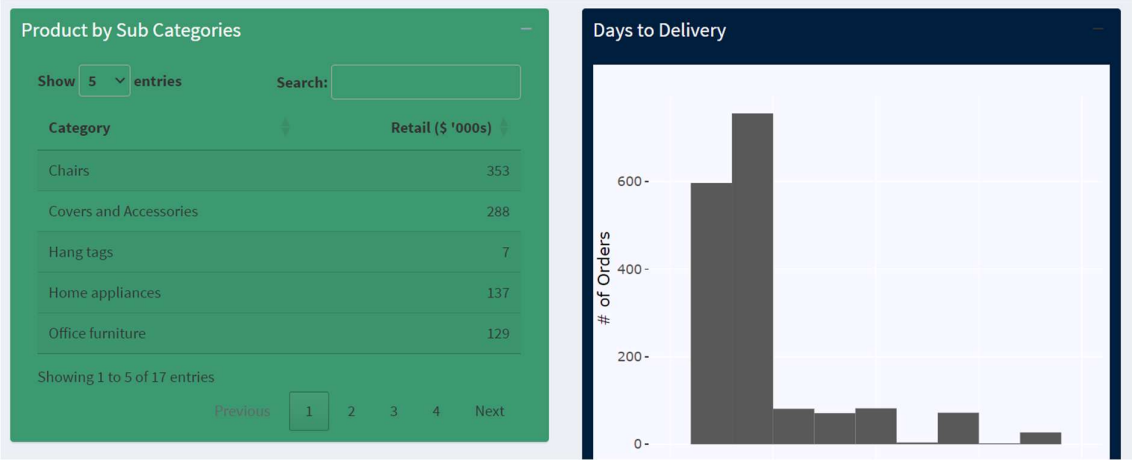
Analysis:

The chosen graph type (cumulative, daily, or logarithmic) impacts how trends are displayed. Identify periods of peak sales, potential seasonality, and compare performance to previous periods.

Managerial Implications:

We can adjust inventory levels and staffing based on anticipated sales fluctuations. Plan marketing campaigns and promotions to leverage peak sales periods. Compare current performance to past trends to identify areas for improvement.

3.3 Product by Subcategories Table:



Objective: Identify top-performing product categories and subcategories.

Analysis:

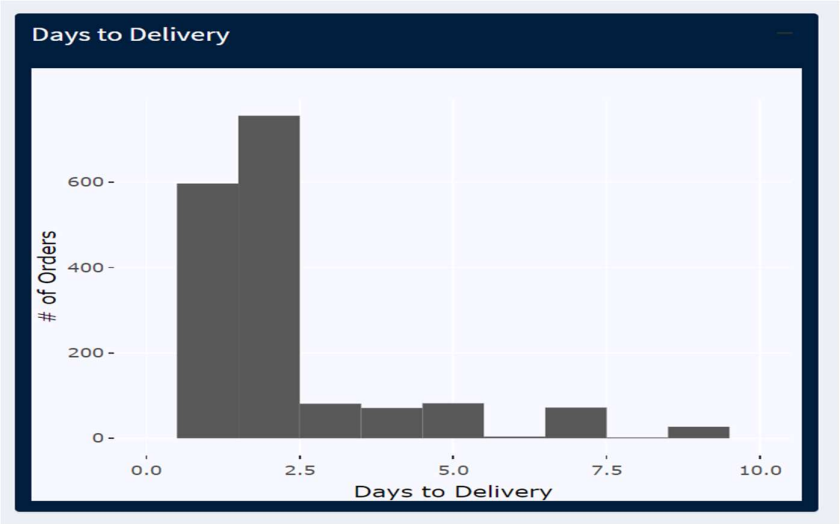
This table displays subcategories ranked by their total sales contribution within the selected timeframe.

We can analyse changes in ranking over time to identify emerging trends and potential opportunities. In the dataset chairs is top subcategory with retail value of $ 353000, followed by covers and Accessories with retail value of $288000.

Managerial Implications:

Allocate resources towards promoting and stocking top-selling products like chairs, covers and Accessories. Consider discontinuing or revamping underperforming subcategories. Develop targeted marketing campaigns for specific product categories.

3.4 Days to Delivery Chart:



Objective: Understand delivery time distribution and identify potential bottlenecks.

Analysis:

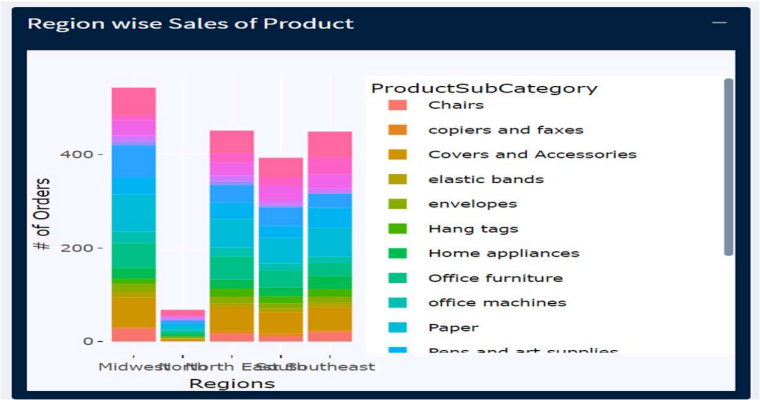
The histogram shows the frequency of orders delivered within different timeframes. Investigate peaks in delivery times to identify potential inefficiencies or logistical challenges.

Managerial Implications:

We can Optimize delivery routes and logistics processes to reduce delivery times. Set clear expectations for delivery timeframes and communicate them to customers.

Consider offering expedited shipping options for faster delivery needs.

3.5 Region wise Sales of Product Chart:



Objective: Analyse regional sales performance and identify variations.

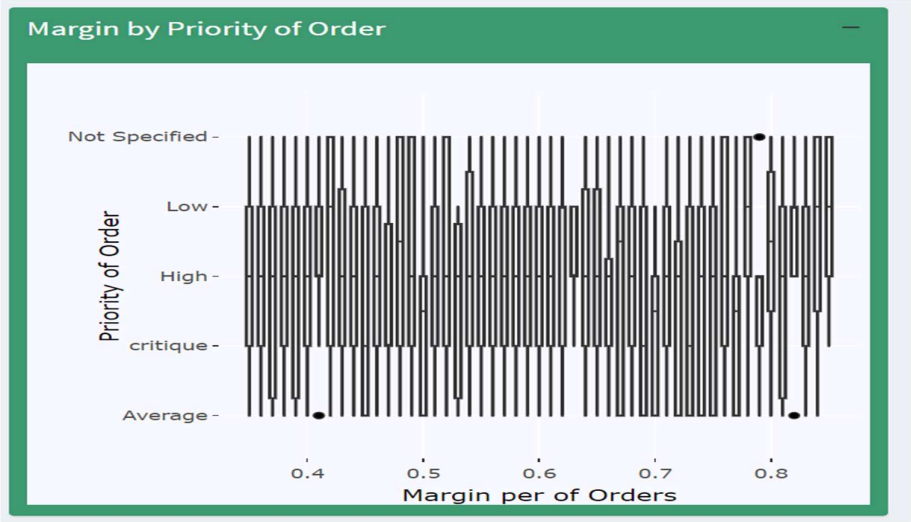
Analysis:

This chart visualizes the distribution of sales for each product subcategory across different regions.

Identify regions with high sales potential for specific products and tailor marketing efforts accordingly.

Managerial Implications:
Allocate marketing resources and promotional campaigns towards regions with higher sales potential. Consider regional preferences and adapt product offerings or pricing strategies accordingly.

3.6 Margin by Priority of Order Boxplot:



Objective: To Analyse the relationship between order priority and profit margin.

Analysis:
The boxplot shows the distribution of profit margin for orders with different priorities within each city. Investigate potential correlations between order priority and profitability to optimize pricing and fulfilment strategies.

Managerial Implications:

We can adjust pricing or offer discounts based on order priority to optimize profitability. Consider offering expedited shipping options with premium pricing for higher priority orders.