

# ShopNest Power BI Report

By

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To



# SHOP NEST

# ShopNest Power Bi Report

ShopNest stands as the leading department store in the e-commerce marketplaces in Portugal. Serving as a seamless link, it connects small businesses from various regions in Portugal to channels, streamlining the process with a single point of contact. Through the ShopNest Store, these merchants can showcase and sell their products, with the added convenience of direct shipment to customers facilitated by ShopNest logistics partners. The provided data represents authentic commercial information that has undergone the process of anonymization.

## Tasks to do :

Design a comprehensive Power BI dashboard to address key business analytics for a retail dataset. The following analytical questions should be answered through your dashboard:

**1. Top Categories by Total Price:**

- Identify and visually represent the top 10 product categories by total sales.

**2. Delayed Orders Analysis:**

- Determine the number of delayed orders in each category. An order is considered delayed if the actual delivery date is later than the estimated delivery date.

**3. Monthly Comparison of Delayed and On-Time Orders:**

- Create a dynamic visual that compares the number of delayed orders to the number of orders received earlier for each month. Utilize the drillthrough cross-report feature to provide a detailed analysis of late and on-time deliveries.

**4. Payment Method Analysis:**

- Analyze the most frequently used payment methods by customers using a visually appealing representation, such as a pie chart or other suitable visuals.

**5. Product Rating Analysis:**

- Determine the top 10 highest-rated products and the bottom 10 lowest-rated products using a bar or column chart.

**6. State-wise Sales Analysis:**

- Identify and visually represent states with high and low sales, providing a clear understanding of regional sales performance.

**7. Seasonal Sales Patterns:**

- Investigate and visualize any seasonal patterns(Quarterly) or trends in sales data over the course of the year.

**8. Revenue Analysis:**

- Determine the total revenue generated by ShopNest Store and analyze how it changes over time(Yearly). Represent this information through suitable visuals to highlight trends and patterns.



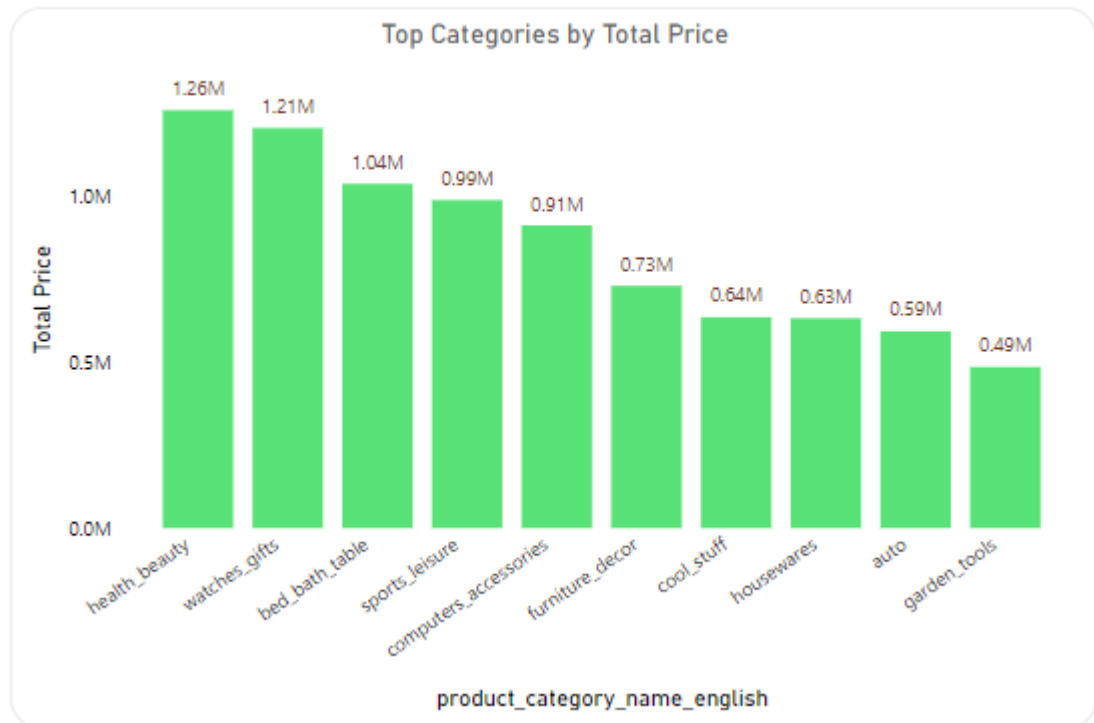
Below is the ShopNest Dashboard. I've used different charts like map, lines, bars, Treemap, and pies to show the data clearly along with Slicers to breakdown the data by Month and Year level for a deep dive into the data. I've also used colors to highlight important things. This dashboard is interactive, so let's take a look at each graph.



## 1. Top Categories by Total Price:

- Identify and visually represent the top 10 product categories by total Price.

### Visualization



### Explanation

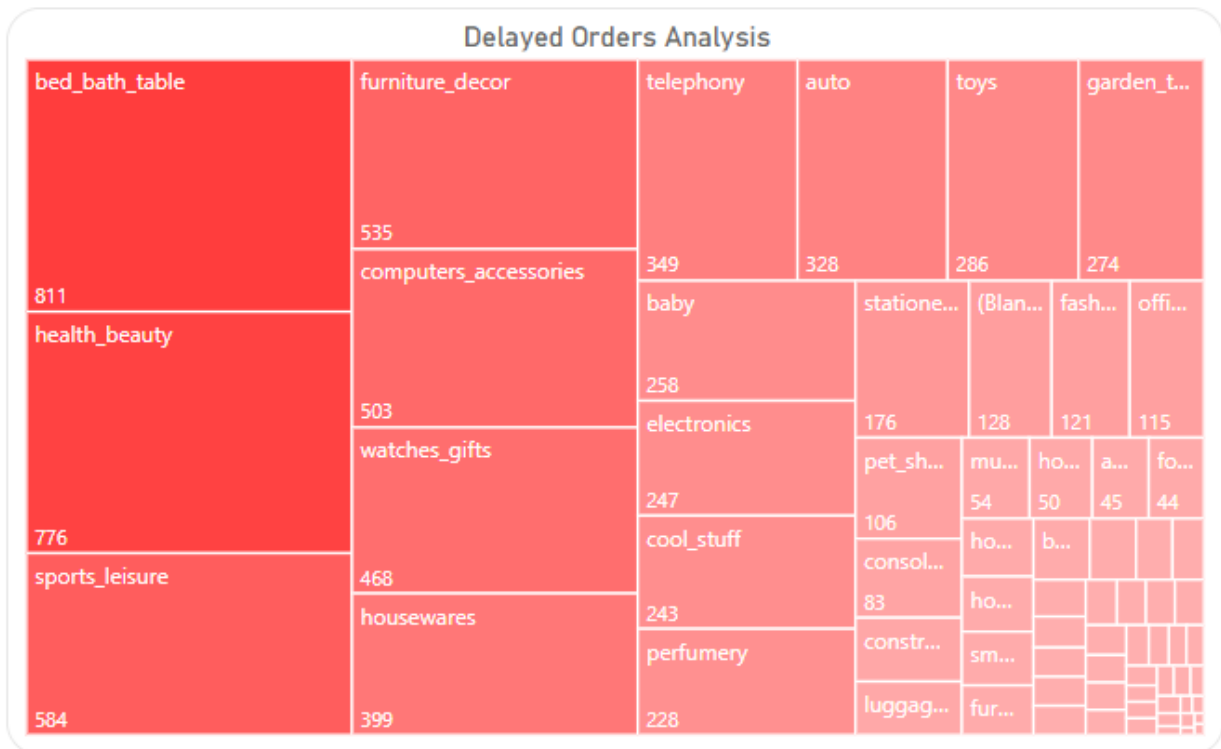
In the bar chart above, I have showed Category wise Total Price distribution. Further analysis is explained below.

- Health & Beauty** and **Watches & Gifts** are the top-performing categories in terms of total price, with sales exceeding **1.2 million**.
- Bed Bath & Table** and **Sports Leisure** follow closely, with total sales exceeding **1 million**.
- Computers Accessories** and **Furniture & Decor** also show strong performance, with sales around 0.9 million.
- Cool Stuff, Housewares, Auto, and Garden Tools** have lower total sales, ranging from 0.73 million to 0.49 million.

## 2. Delayed Orders Analysis:

- Determine the number of delayed orders in each category. An order is considered delayed if the actual delivery date is later than the estimated delivery date.

### Visualization



### Explanation

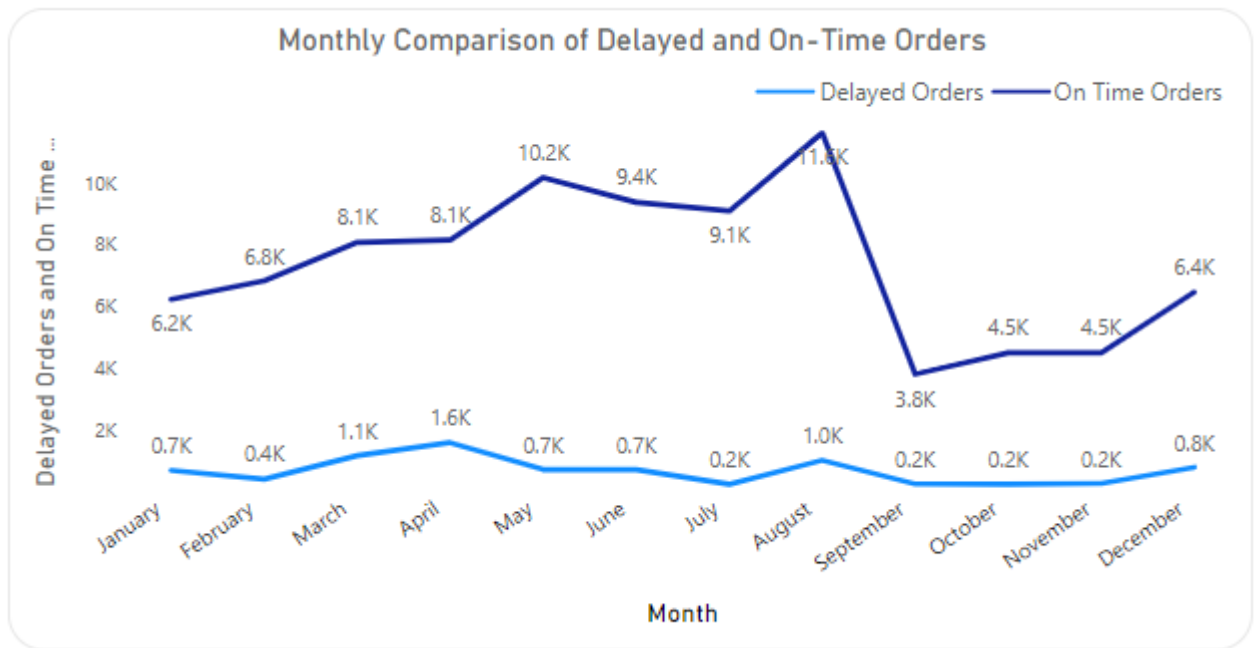
The chart above displays the Delayed orders using a Treemap.

- Top Categories for Delayed Orders:** **Bed Bath Tables** and **Health Beauty** categories face the highest delays with 811 and 776 delayed orders, respectively. These should be prioritized for operational improvements.
- Mid-Level Delays:** Categories like **Sports Leisure**, **Furniture**, and **Computer Accessories** have moderate delays, ranging from 503 to 584. Focused efforts to streamline these could help reduce overall delays.
- Lowest Delays:** **Perfumes** and **Stationery** and the rest categories show the least delays, at 228 and 176, indicating well-optimized processes respectively.
- Recommendation:** Investigate supply chain bottlenecks in top delayed categories, optimize inventory management, and monitor high-volume categories for better delivery performance.

### 3. Monthly Comparison of Delayed and On-Time Orders:

- Create a dynamic visual that compares the number of delayed orders to the number of orders received earlier for each month. Utilize the drillthrough cross-report feature to provide a detailed analysis of late and on-time deliveries.

#### Visualization



#### Explanation

In above graph I have used a line chart which compares **Delayed Orders** and **On-Time Orders** for each month. I have also used drillthrough cross-report feature to provide a detailed analysis.

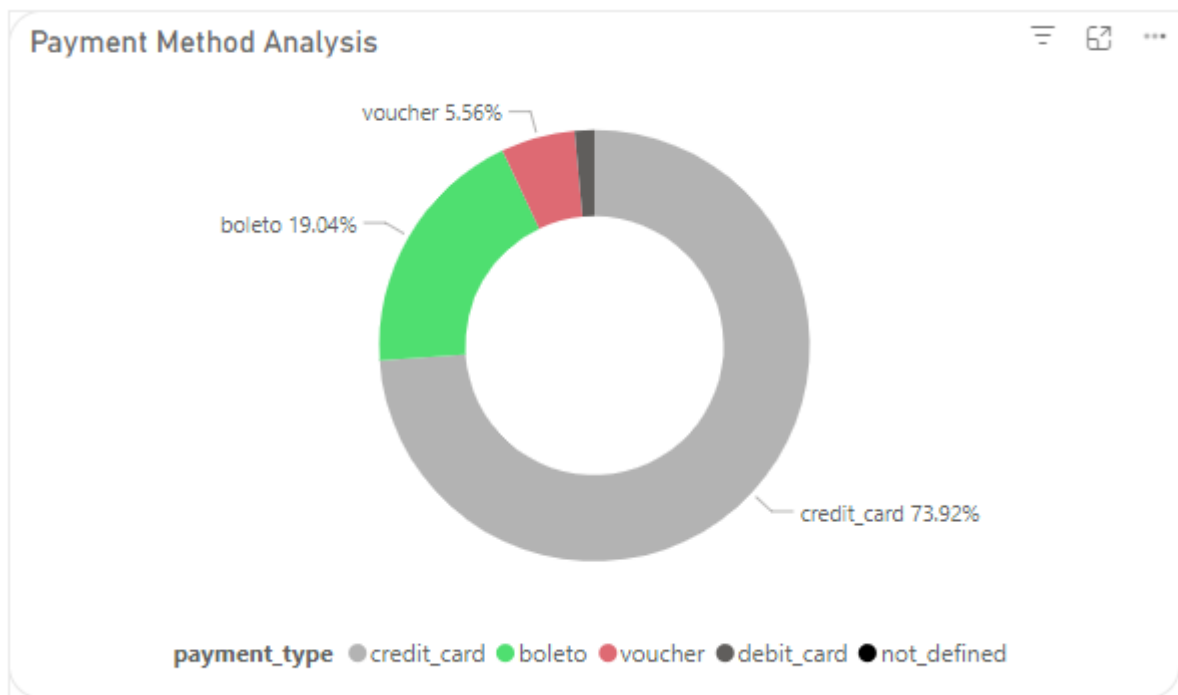
- On-Time Orders** (Dark Blue): Highest in **August at 11.1K** orders. Drop sharply to **3.8K in September**. End at **6.4K** in December.
- Delayed Orders** (Light Blue): Highest in **April at 1.6K** orders. Stay low for most months, reaching **0.2K** in **September**. Slight rise to **0.8K** in December. **August** had the most on-time orders, while September saw a big decline.



#### 4. Payment Method Analysis:

- Analyze the most frequently used payment methods by customers using a visually appealing representation, such as a pie chart or other suitable visuals.

##### Visualization



##### Explanation

Above is the pie graph which shows Payment Method used by customers of ShopNest.

- Overall, **credit cards are the most popular payment method**, accounting for **73.92%** of transactions.
- Boleto** is the second most popular, representing 19.04% of transactions.
- Vouchers** are used in 5.56% of transactions.
- Debit cards** and **undefined** payment methods are not shown, meaning they account for less than 1% of transactions combined.

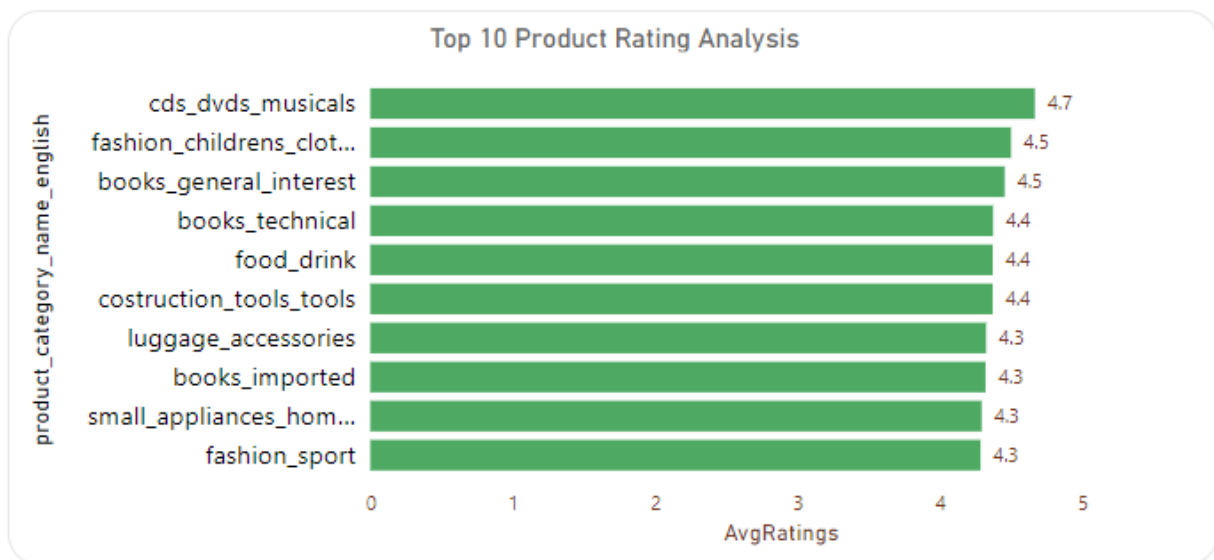
In short, **credit cards are the dominant payment method**, with boleto being a distant second.

## 5. Product Rating Analysis:

- Determine the top 10 highest-rated products and the bottom 10 lowest-rated products using a bar or column chart.

### Visualization

#### Top 10 Product Ratings



### Explanation

The graph shows the average ratings for the top 10 product categories. X-Axis has Product Categories and Y-Axis has Average Ratings(Average Review Score) which is made by using a measure and TopN Filter used to display the top 10 product categories in Power Bi..

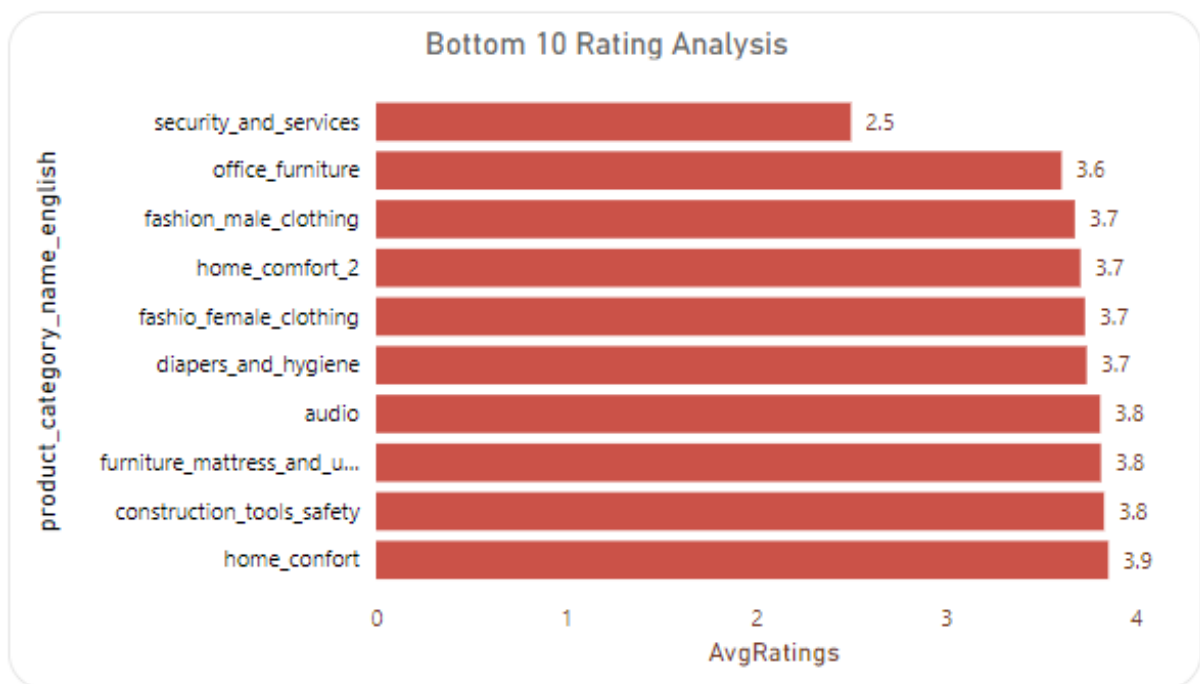
- CDs, DVDs, and Musicals** have the highest average rating of 4.7.
- Fashion for Children and Clothing** and **Books** follow closely with 4.5 average ratings.
- Books, Technical** and **Food and Drink** share the third position with an average rating of 4.4.
- Construction Tools and Tools** and **Luggage and Accessories** are tied for the fourth spot with an average rating of 4.3.
- Books Imported** and **Small Appliances and Home Appliances** are tied for the sixth spot with an average rating of 4.3.
- Fashion and Sport** has the lowest average rating among the top 10 categories at 4.3.

Overall, the top 10 product categories have high average ratings, ranging from 4.3 to 4.7. This suggests that customers are generally satisfied with the products in these categories.





## Bottom 10 Product Ratings



Here comes the bottom 10 product categories. I have used TopN Filter and sorted it Ascending to showcase Bottom 10 Ratings. Analysis below helps us to understand the chart.

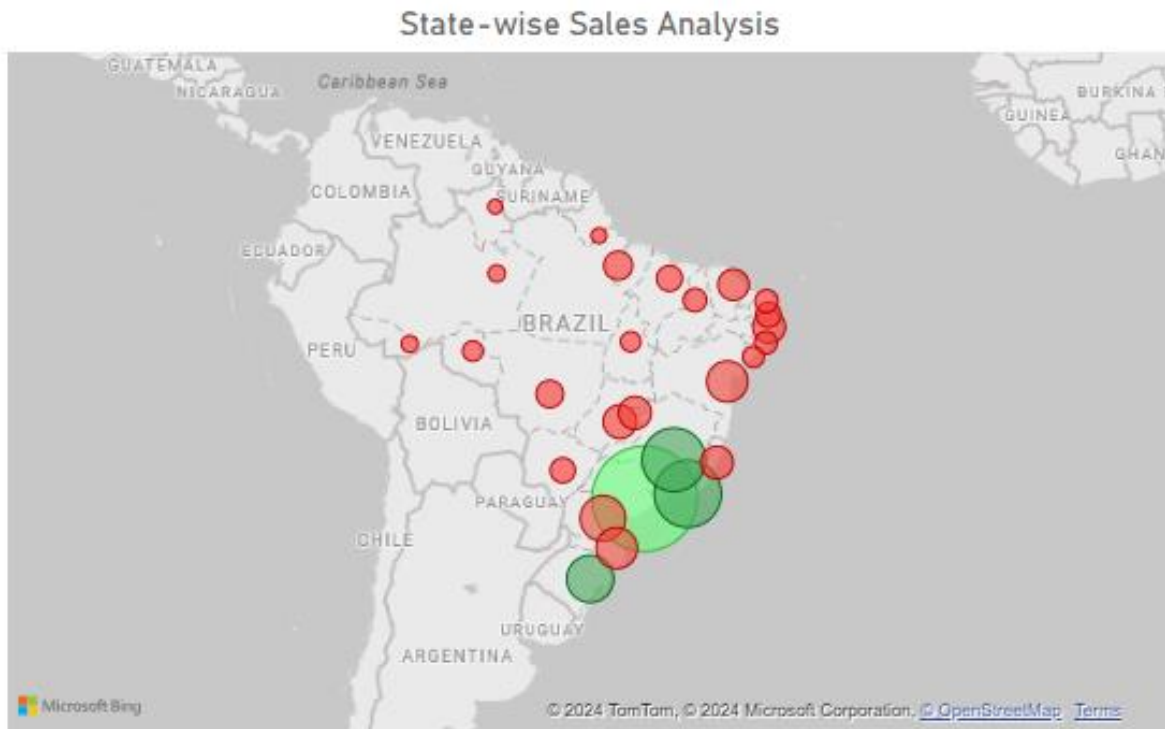
- **Security and Services** has the lowest average rating of **2.5**.
- **Office Furniture** has an average rating of 3.6.
- **Fashion Male Clothing, Home Comfort, and Fashion Female Clothing** are tied for the second-lowest position with an average rating of 3.7.
- **Diapers and Hygiene, Audio, Furniture Mattresses and Upholstery, and Construction Tools and Safety** are tied for the fourth-lowest position with an average rating of 3.8.
- **Home Comfort** has the highest average rating among the bottom 10 categories at 3.9.

Overall, the bottom 10 product categories have lower average ratings compared to the top **10 categories**. This suggests that customers are generally less satisfied with the products in these categories.

## 6. State-wise Sales Analysis:

- Identify and visually represent states with high and low sales, providing a clear understanding of regional sales performance.

### Visualization



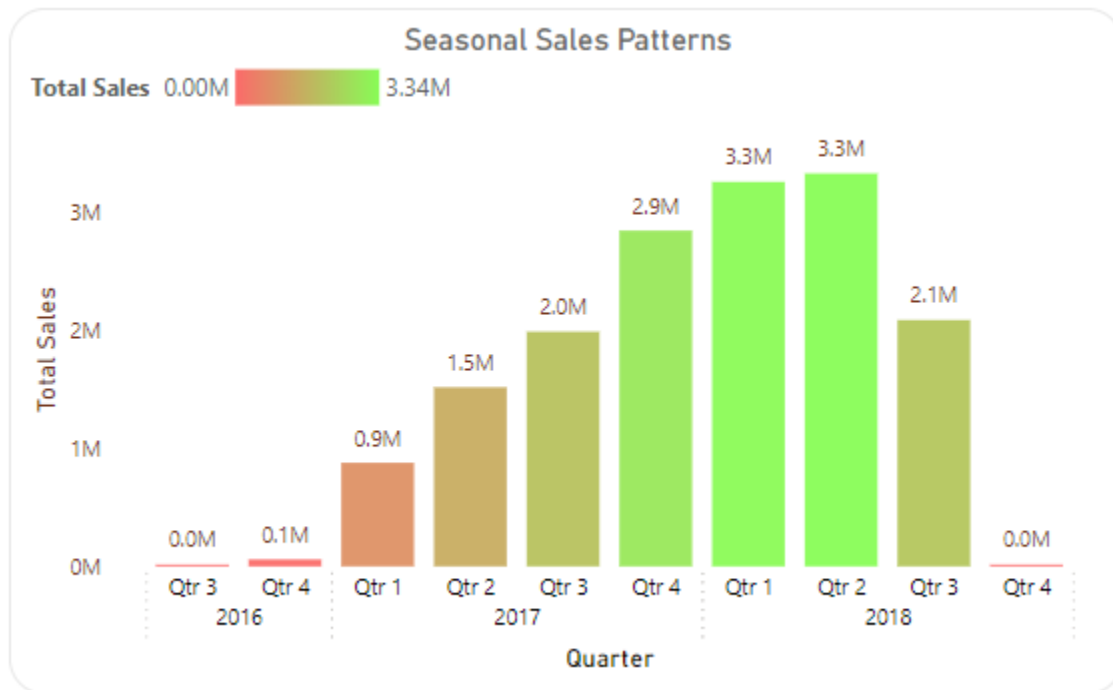
### Explanation

For the State-Wise Sales analysis I have used the map to show the high and low sales in which I have used the measure(Sales) which I made earlier. The **highs** and **lows** are color coded for an easy understanding. The map appears to be centered on **South America**, with a strong emphasis on **Brazil**. The size and density of the Bubbles within Brazil suggest a high concentration of sales activity in that country.

## 7. Seasonal Sales Patterns:

- Investigate and visualize any seasonal patterns(Quarterly) or trends in sales data over the course of the year.

### Visualization



### Explanation

The graph shows the total sales across quarters for the years 2016, 2017, and 2018. I have utilized a Stacked Column chart with Gradient to showcase Seasonal Pattern of Sales.

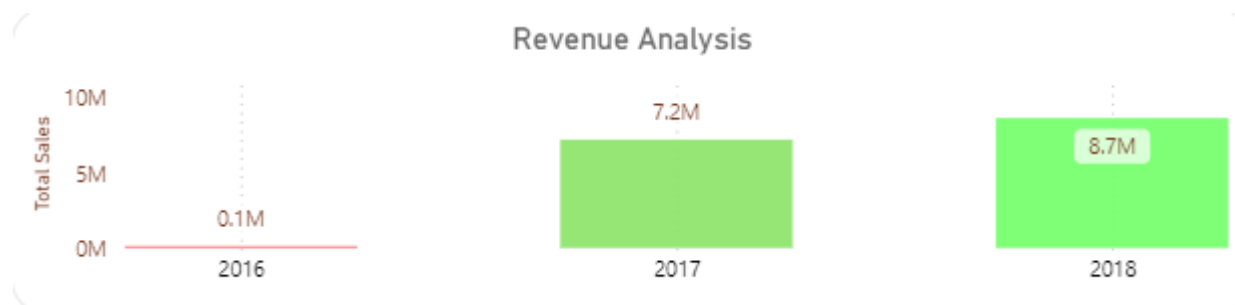
- There's a clear seasonal pattern in sales. Sales tend to be low in the first quarter of each year (Qtr 1) and increase significantly in the second and third quarters (Qtr 2 and Qtr 3). In 2018 Sales then decline again in the fourth quarter (Qtr 4).
- The highest sales are consistently observed in the end quarters of each year.



## 8. Revenue Analysis:

- Determine the total revenue generated by ShopNest Store and analyze how it changes over time (Yearly). Represent this information through suitable visuals to highlight trends and patterns.

### Visualization



### Explanation

I have used a Line & Clustured Column chart in above graph to showcase the Revenue Analysis in the year 2016, 2017, 2018. The graph shows a dramatic increase in revenue from 2016 to 2018.

- 2016 Revenue:** In 2016, revenue was very low, at just 0.1M.
- 2017 Revenue:** In 2017, revenue saw a substantial jump, reaching 7.2M.
- 2018 Revenue:** In 2018, revenue continued to climb, reaching 8.7M.

### Conclusion

Overall, the data indicates a positive trajectory for ShopNest.

- Revenue Growth:** We observed significant revenue growth from 2016 to 2018.
- Strong Sales Performance:** Several product categories demonstrate strong sales performance, with "Health & Beauty" and "Watches & Gifts" leading the pack.
- Seasonal Trends:** Sales exhibit a clear seasonal pattern, with higher sales volumes in the second and third quarters of each year.
- Geographic Concentration:** Sales appear to be concentrated in Brazil, with significant regional variations within the country.

However, there are also areas for improvement:

**Bottom-Performing Categories:** Some categories, such as "Security & Services" and "Garden Tools," show lower average ratings, suggesting potential areas for improvement in product offerings or customer experience.

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