

Dashboard Report for ShopNest Capstone Project

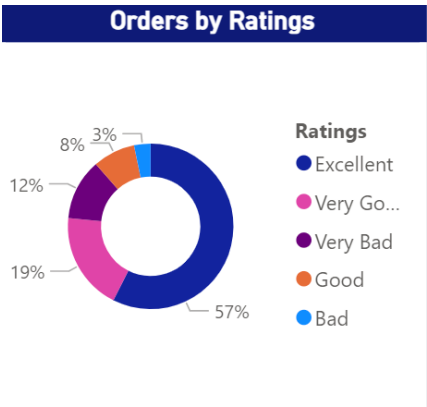
1. Introduction

This report highlights the insights derived from the ShopNest dataset using a Power BI dashboard. The objective of this analysis is to address critical business questions, such as understanding customer ratings, identifying trends in seller activity, analyzing payment behaviors, evaluating product category performance, and examining delivery efficiency. These insights will help ShopNest optimize operations and enhance customer satisfaction.

2. Analytical Tasks and Visualizations

Task 1: Rating Distribution

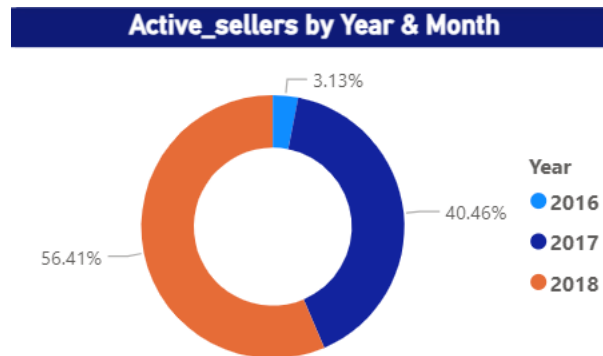
- Question Statement:** Identify the rating distribution in the ShopNest dataset, showcasing ratings categorized as Excellent, Very Good, Good, Bad, and Very Bad, along with corresponding orders.
- Visualization:**



- Expanded Explanation:**
 - Excellent* ratings dominate with **57%**, reflecting strong customer satisfaction.
 - Very Good* and *Good* ratings account for the majority of the remaining orders.
 - Bad* and *Very Bad* ratings together make up only **3%**, indicating effective quality control but highlighting an opportunity for further reducing negative experiences.
- Recommendation:** Investigate customer feedback for the *Bad* and *Very Bad* ratings to identify and address any recurring issues.

Task 3: Active Sellers (Yearly and Monthly)

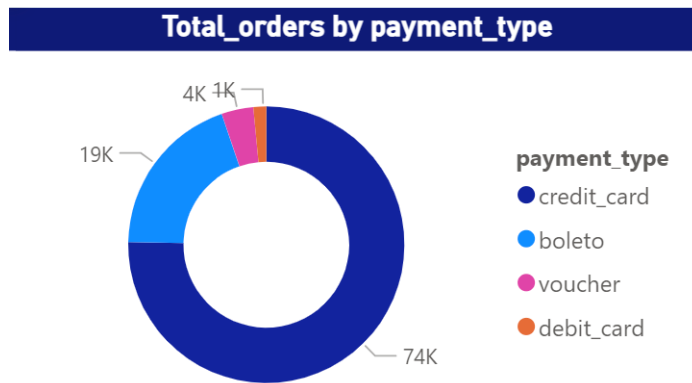
- **Question Statement:** List the total number of active sellers yearly and monthly.
- **Visualization:**



- **Expanded Explanation:**
 - Seller activity saw the highest participation in **January 2017 and January 2018**, suggesting a post-holiday surge in activity.
 - The lowest seller engagement occurred in **2016**, reflecting the early stage of the platform's adoption.
 - **Additional Insight:** The growth in seller activity from 2016 to 2018 demonstrates increased platform credibility and merchant trust.
 - **Recommendation:** Introduce targeted campaigns to onboard new sellers, especially during low-activity months, and retain them throughout the year.
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Task 4: Most Common Payment Methods

- **Question Statement:** Which payment methods are most commonly used by ShopNest customers?
- **Visualization:**



- **Expanded Explanation:**
 - **Credit Cards** are the most preferred payment method, followed by alternative options like **digital wallets** and **bank transfers**.
 - This trend reflects a preference for secure, convenient payment solutions.
- **Recommendation:** Ensure robust credit card processing infrastructure to handle increased transaction volumes. Additionally, promote digital wallet options for customers who prefer mobile payment methods.

Task 5: Profit Margin by Product Category

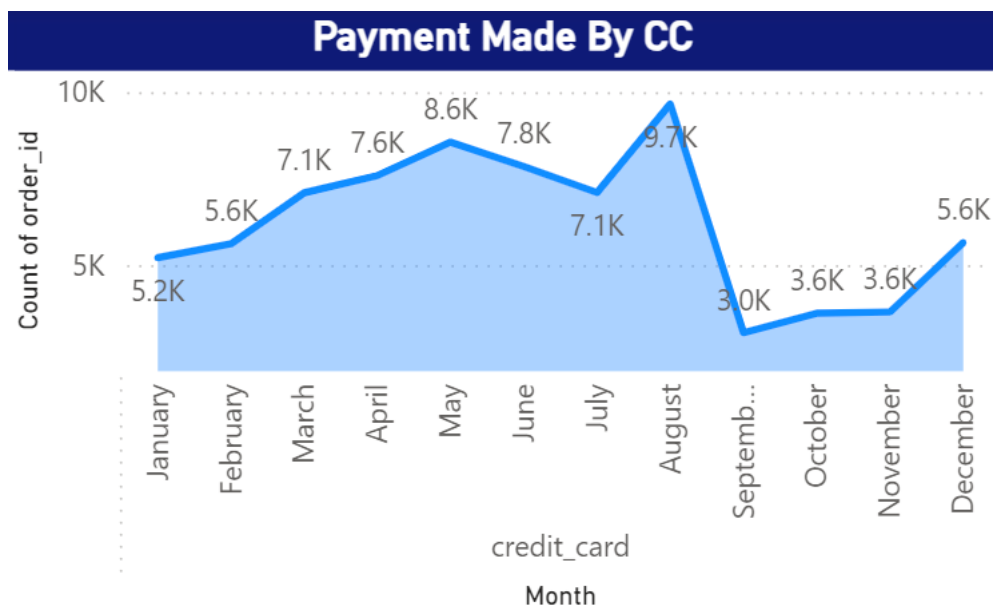
- **Question Statement:** Identify the product category-wise profit margin using the provided formula.
- **Visualization:**



- **Expanded Explanation:**
 - **Fashion Roupa Infanto** leads in profit margin generation, making it a critical product category for revenue growth.
 - Categories like **Luxury Accessories** and **Electronics** also contribute significantly to profit margins.
 - **Recommendation:** Focus marketing campaigns and promotions on high-margin product categories. Evaluate lower-margin products for cost optimization opportunities.
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Task 6: Monthly Payments by Credit Card

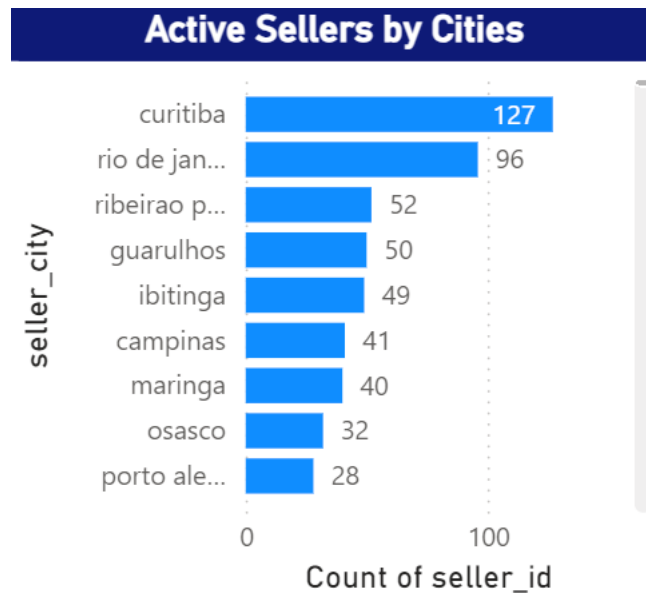
- **Question Statement:** Determine the monthly payments made by customers using credit cards.
- **Visualization:**



- **Expanded Explanation:**
 - Payments peak in **August** (~9700 transactions), followed by **May**.
 - **September** and **October** record the lowest payments, possibly due to seasonal consumer behavior.
 - **Additional Insight:** The peak in August aligns with back-to-school or seasonal shopping trends, while dips could be linked to post-summer spending slowdowns.
 - **Recommendation:** Launch targeted promotions during low-transaction months to boost sales and payment activity.
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Task 7: Sellers by City (Excluding Cities Starting with S and B)

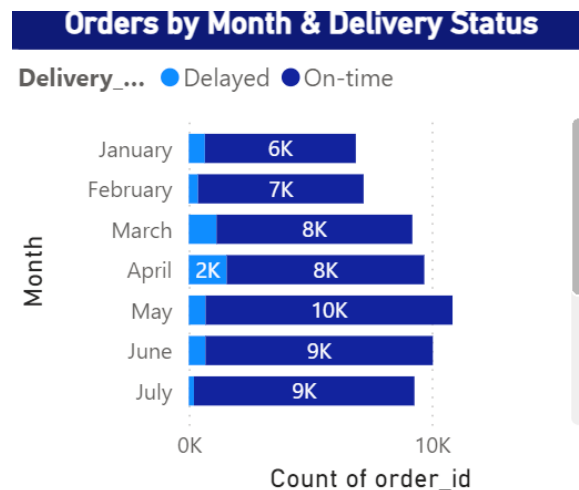
- **Question Statement:** Identify sellers categorized by city, excluding cities starting with the letters S and B.
- **Visualization:**



- **Expanded Explanation:**
 - **Curitiba** and **Rio de Janeiro** dominate seller activity, indicating these cities as key operational hubs.
 - Other cities show moderate seller participation, emphasizing room for expansion in underrepresented areas.
 - **Recommendation:** Expand seller recruitment initiatives in regions with low representation to diversify and enhance the platform's coverage.
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Task 8: Delayed vs. On-Time Orders

- **Question Statement:** Compare the number of delayed orders to the number of on-time orders received earlier for each month.
- **Visualization:**



- **Expanded Explanation:**
 - **August** shows the highest on-time deliveries (~12,000) but also records the highest number of delays, suggesting logistics constraints during high-demand months.
 - On-time delivery numbers drop significantly in **September, October, and November**, possibly indicating logistical bottlenecks or reduced operational capacity.
- **Recommendation:** Implement measures to scale logistics operations during peak months, such as August, to reduce delays. Streamline delivery processes during slower months to improve efficiency.

3. Conclusion

The ShopNest dashboard highlights significant insights, including:

- **Customer Satisfaction:** A high percentage (57%) of *Excellent* ratings reflects strong service quality.
- **Seller Trends:** Activity peaks in January of 2017 and 2018, emphasizing seasonality. Curitiba and Rio de Janeiro are top-performing cities.
- **Payment Preferences:** Credit cards dominate, with peak activity in August, likely driven by seasonal factors.
- **Profit Drivers:** High-margin products, such as Fashion Roupas Infantil, contribute significantly to profitability.
- **Delivery Challenges:** On-time deliveries are strong overall but face challenges during peak months like August.

Recommendations

1. Focus on addressing negative customer experiences by analyzing feedback.
2. Drive seller engagement through targeted campaigns during off-peak months.
3. Invest in logistics and delivery infrastructure to handle peak demand in August.

4. Promote high-margin product categories to maximize profitability.
5. Explore geographic expansion to onboard sellers in underserved regions.