

Business Insights from EDA

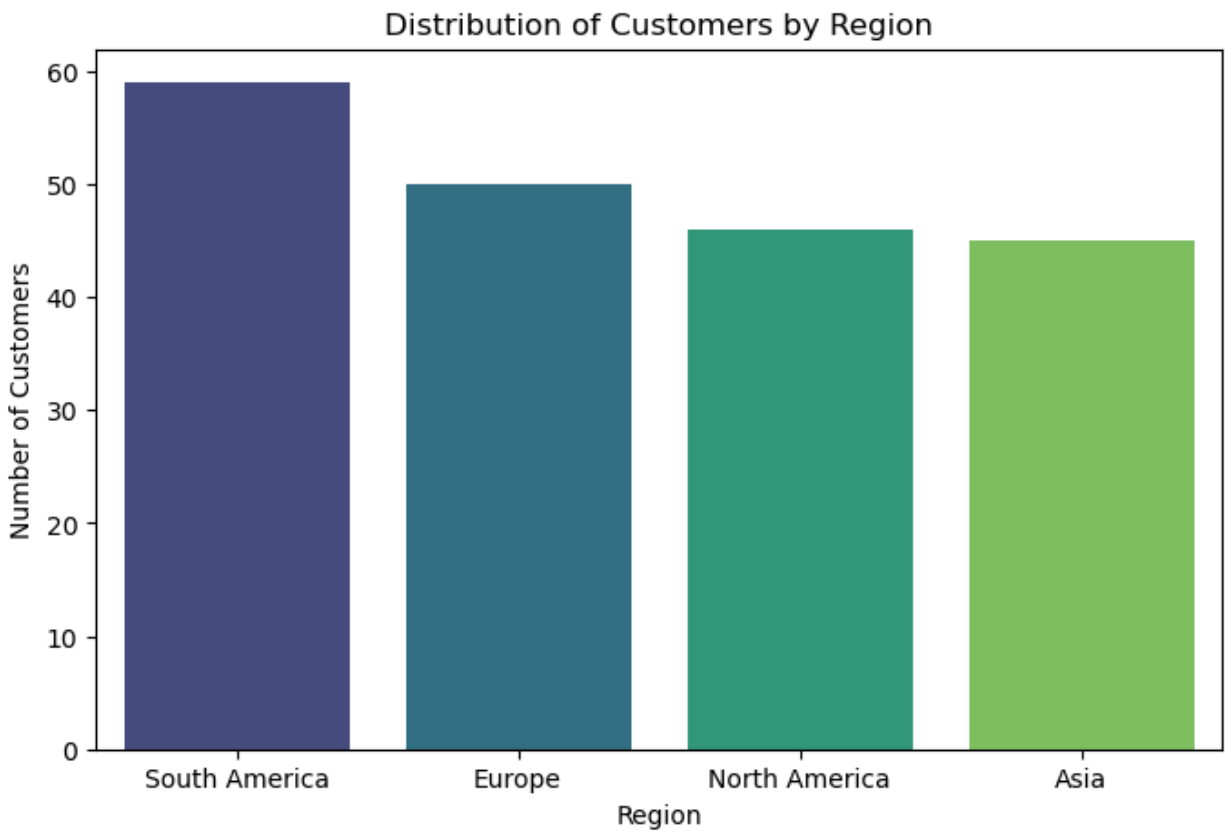
Introduction

This report analyzes business data and insights gained from Exploratory Data Analysis (EDA) of the provided data.

The EDA focused on key business areas like regional customer distribution, product category performance, and seasonal transaction trends.

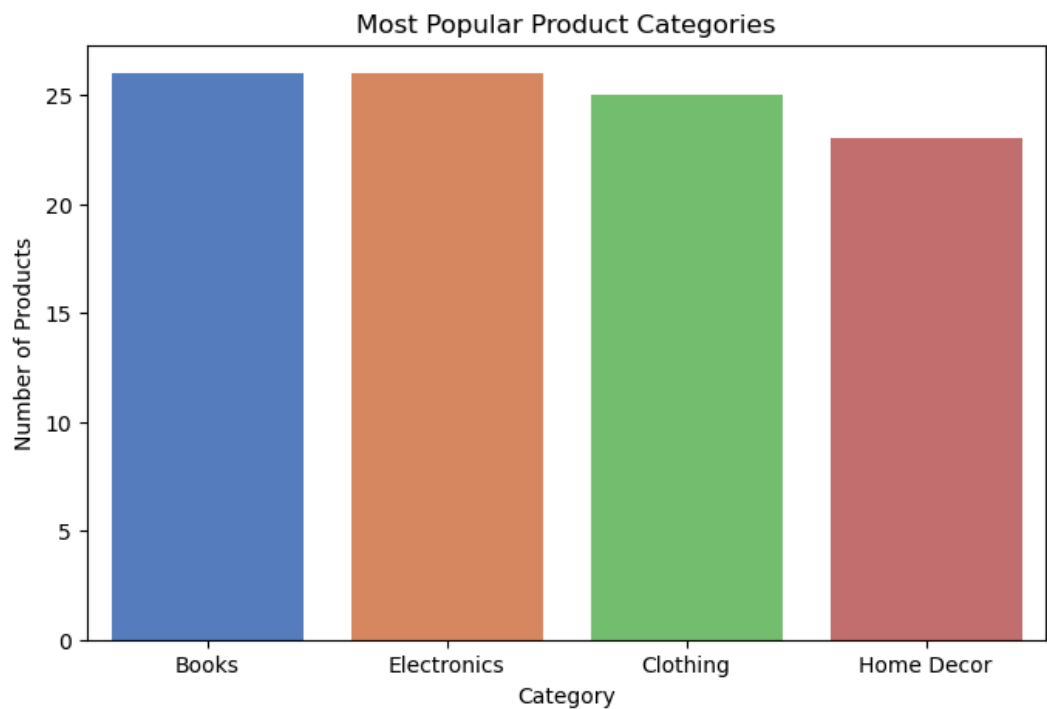
The analysis also explores high-value product purchases and customer signup patterns to reveal valuable business insights.

1. Regional Customer Distribution

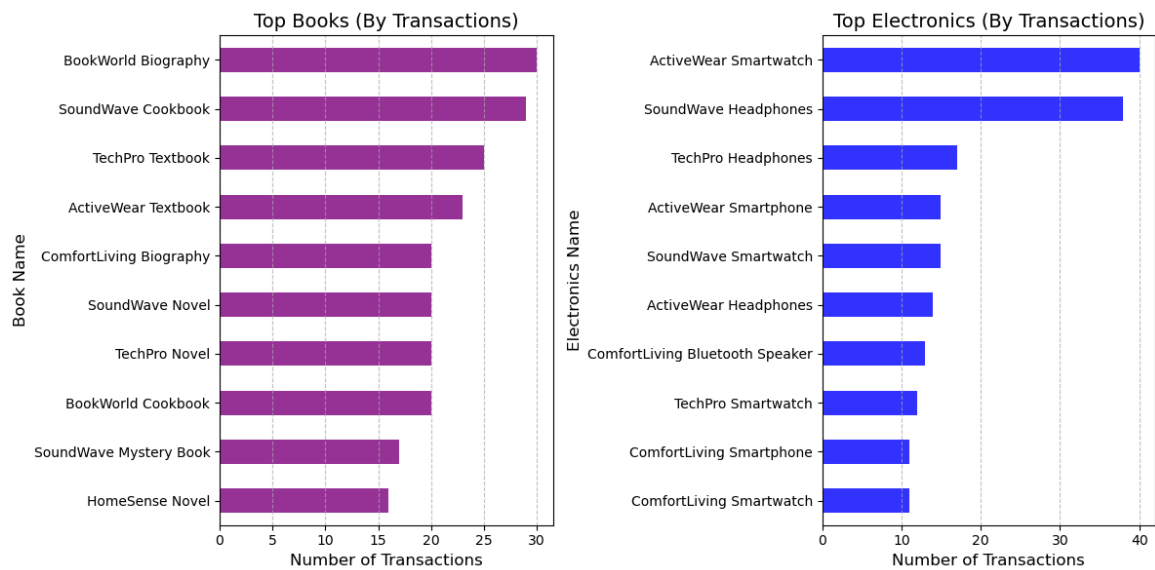


Analysis of the dataset reveals that South America and Asia account for the majority of customers. South America contributes significantly to the customer base, followed by Asia. This suggests that these regions are important for business growth. Investing in region-specific advertising, localized product offerings, and partnerships can further strengthen customer acquisition and retention.

2. Product Category Performance



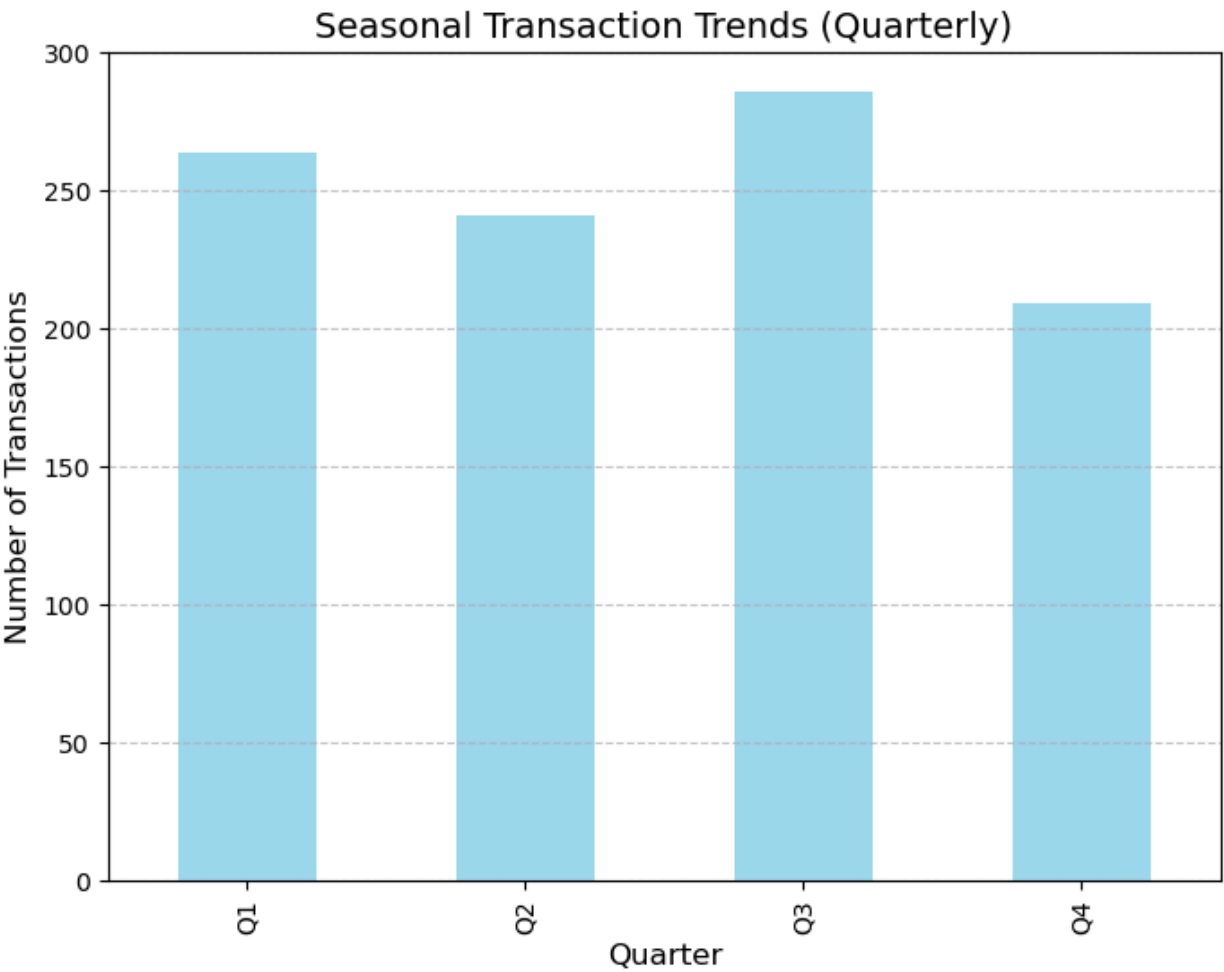
The data shows that the Books and Electronics categories generate the highest sales.



Books, especially biographies, have a consistent demand, whereas premium electronic items like smartwatches show strong performance. Expanding

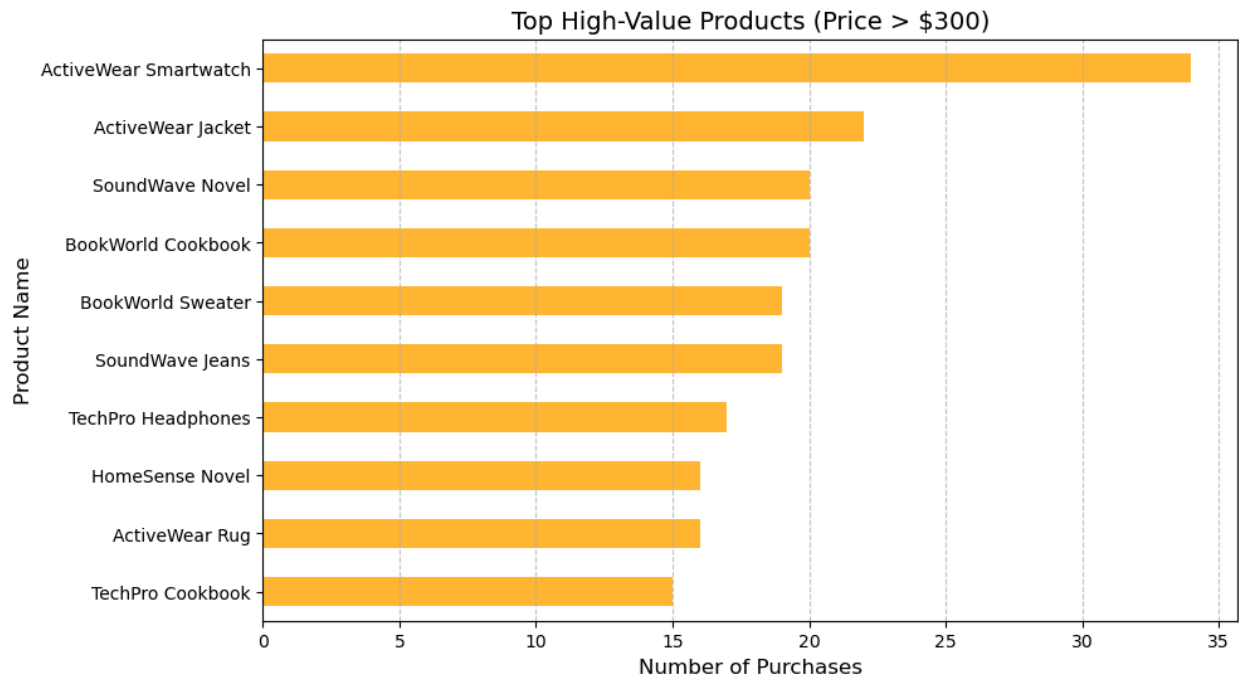
inventory within these categories, along with targeted discounts or bundled offers, could enhance revenue streams.

3. Seasonal Transaction Trends



Transaction data highlights a clear seasonal pattern, with the highest sales activity occurring in Q1 and Q3. This trend may be attributed to specific seasonal events or customer preferences. Businesses can capitalize on this by launching promotions, exclusive deals, or new product releases during these peak months, thereby optimizing overall sales and customer engagement.

4. High-Value Product Analysis



Premium products, particularly those priced above \$300, consistently generate a significant amount of income. Electronics, such as smartwatches, are very popular with high-end buyers. Businesses should sell these high-value items to rich populations, offering financing or membership prizes to encourage repeat purchases.

5. Customer Signup Patterns



The customer signup trend indicates a rise in new customers during Q1 and Q2, which could be linked to promotional campaigns, holiday seasons, or increased market activity during this time. Improving onboarding processes, such as personalized welcome offers, informative guides, and efficient customer support, can help retain these customers and build loyalty over the long run.

Conclusion

These insights act as the beneficial foundation for targeted marketing, operational planning, and inventory management. By concentrating on high-performing locations, optimising product categories, and aligning business efforts with seasonal trends, the organisation can increase revenue and strengthen its market position.