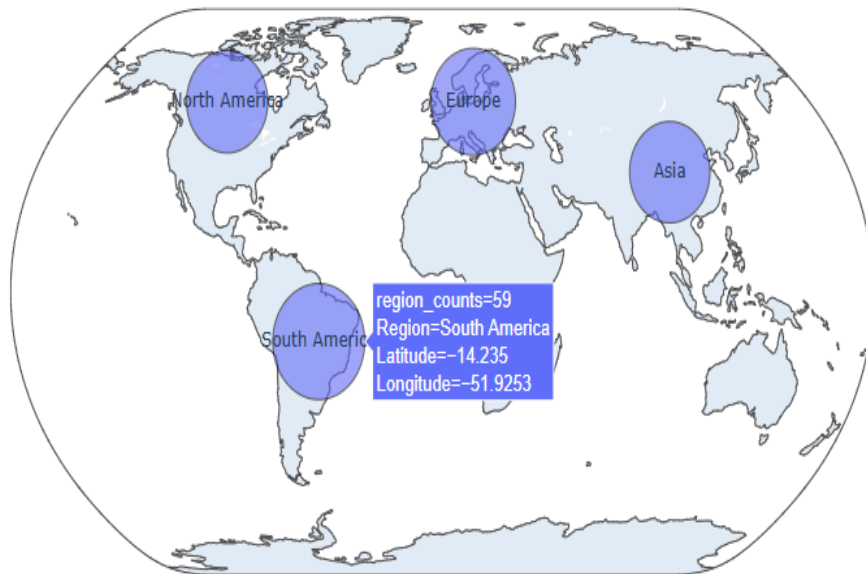# Exploratory Data Analysis (EDA) Report

This report presents the results of the exploratory data analysis (EDA) on customer and product transaction data. The goal is to extract meaningful business insights to inform strategic decisions.


Business Insights

Insight 1: Regional Market Dominance

Bubble Map of Region Counts

- **Analysis**:
  South America is the largest market with the highest customer count, followed by Europe.
- **Implication**:
  South America and Europe are crucial regions for business growth. Expanding targeted campaigns and product offerings in these areas could maximize revenue.

Number of Transactions by Month
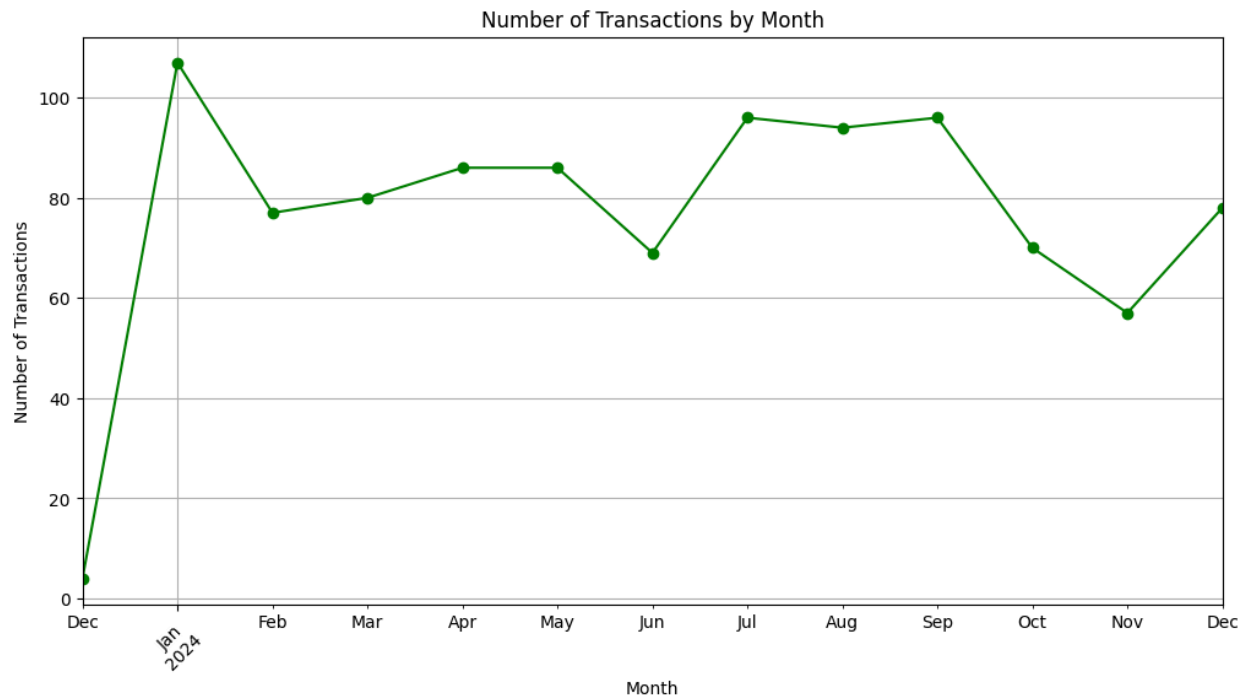
Insight 2: Seasonal Peaks in Transactions and Revenue

- **Analysis**:
  January 2024 recorded the highest number of transactions, with September 2024 showing the highest transaction value.
- **Implication**:
  Capitalizing on January and September trends with focused promotions and inventory optimization can drive increased sales.

Insight 3: Books and Electronics Dominate Product Sales

- **Analysis**:
  Books generate the highest sales value and volume across regions, followed by Electronics.
- In South America and in Europe Books and Electronics are the dominance
- **Implication**:
  Continued investment in Books and Electronics is recommended, with efforts to explore
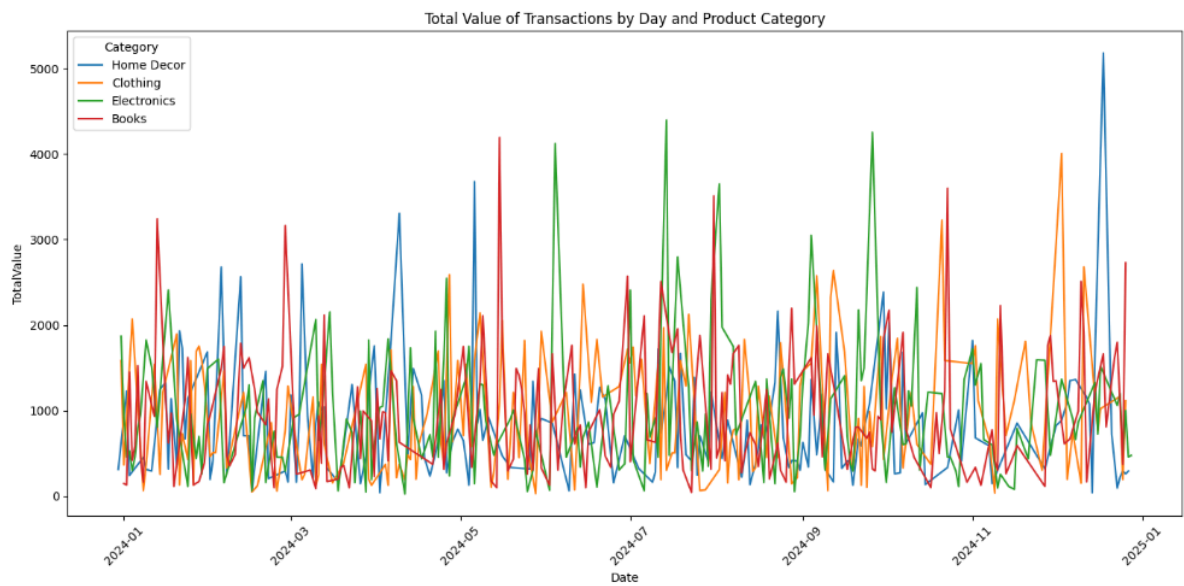
underperforming categories like Clothing.
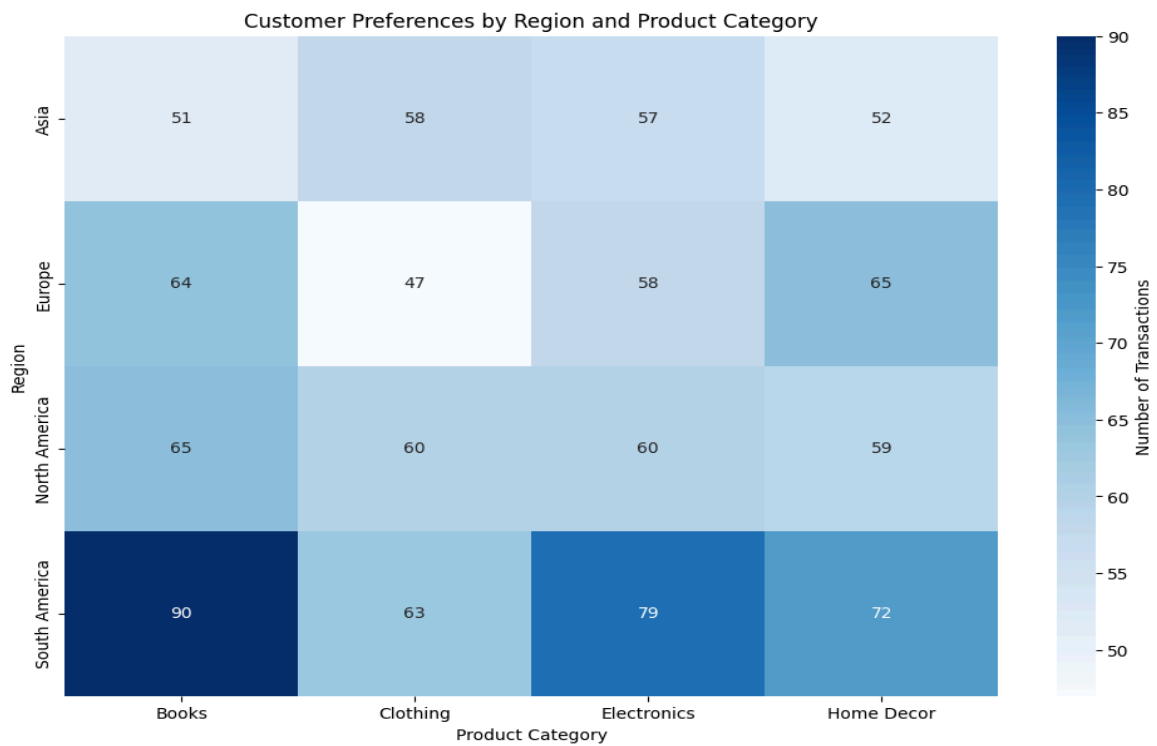

Clothing Market in Asia

In Asia region , Clothing has the highest market than other regions

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Insight 4: Home Decor's Growing Popularity

- **Analysis:**
  Home Decor products showed high total quantity sold, particularly during peaks in January 2025.
- **Implication**:
  Home Decor's growth potential can be further harnessed by bundling products or offering discounts in key months.

Insight 5: Pricing Strategies for Books

Total Spending by Region and Product Category
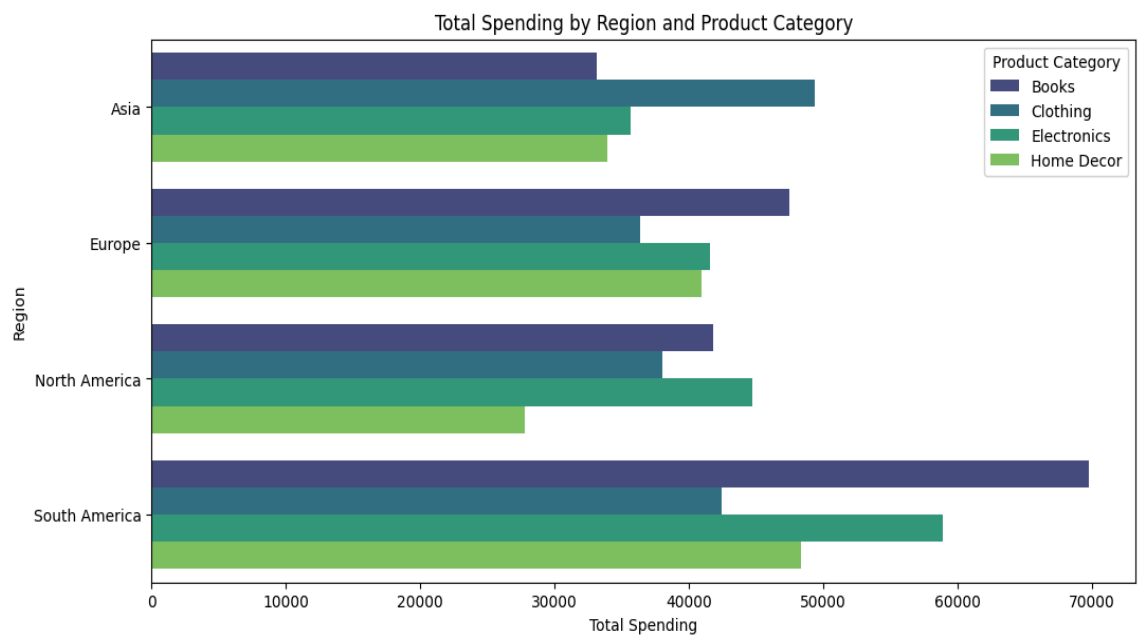
- **Analysis**
  Books have a wide price range, catering to both premium and budget-conscious customers.
- **Implication**:
  Dynamic pricing strategies, such as premium editions or discounted bundles, can capture a broader audience and enhance profitability.

Conclusion

This EDA uncovered valuable insights into regional performance, seasonal trends, and category-specific behavior. These findings provide a roadmap for targeted strategies, including marketing campaigns, product diversification, and regional focus, to maximize business growth and customer satisfaction.