# Business Insights from Exploratory Data Analysis (EDA)

1. Uniform Sales Distribution in Books and Electronics

- From the data, **Books** and **Electronics** categories represent the highest percentage of transactions, together accounting for over 50% of the total sales. However, the overall distribution is uniform.
- This indicates strong customer interest in all categories, which can be leveraged for targeted marketing campaigns.


Sales Distribution by Category
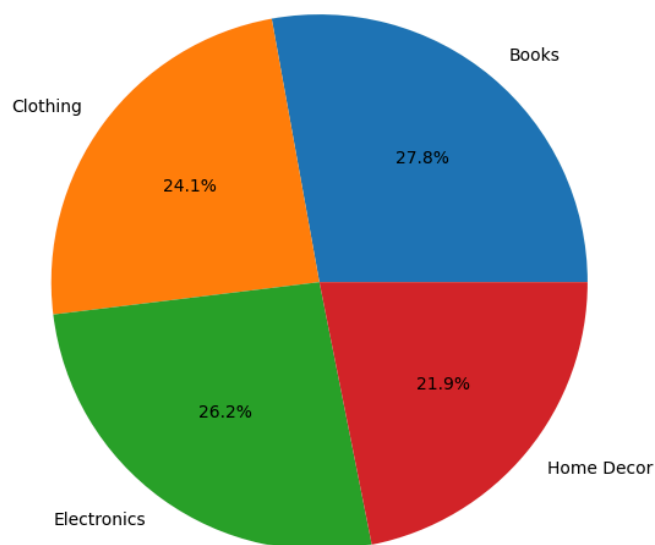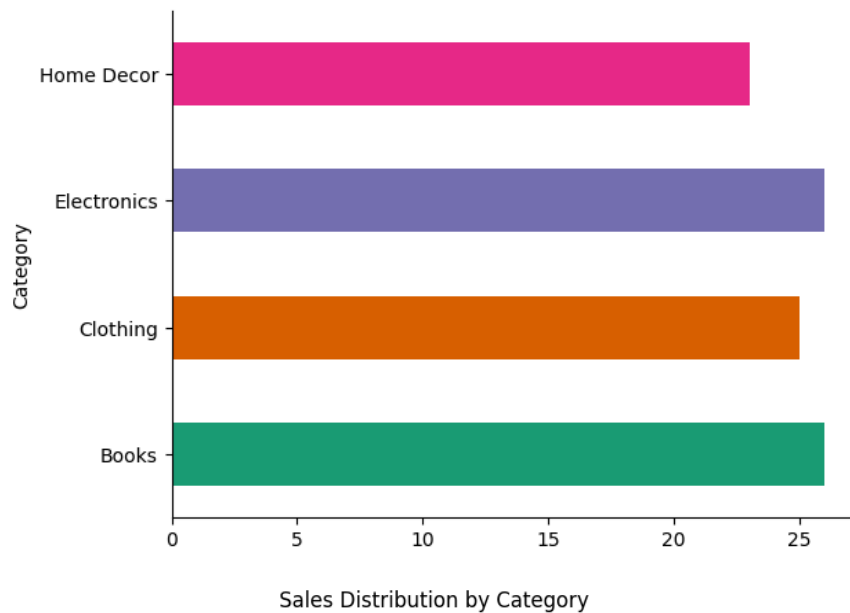
2. South America as the Most Active Region

- The data highlights **South America** as the region with the highest customer activity.
- Expanding product availability and marketing in this region could further boost sales.
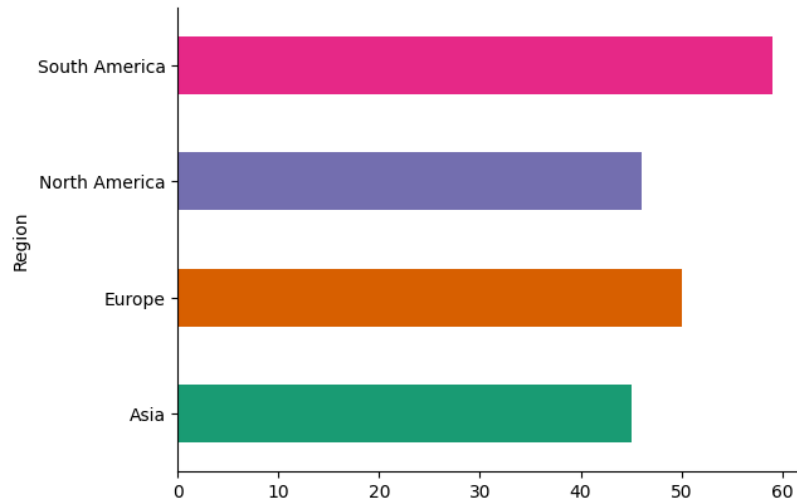
3. Diverse Price Range in Product Categories

- The violin plot reveals that all categories, especially **Electronics** and **Books**, exhibit a wide price range.
- This indicates product availability across different price points, catering to a varied customer base.
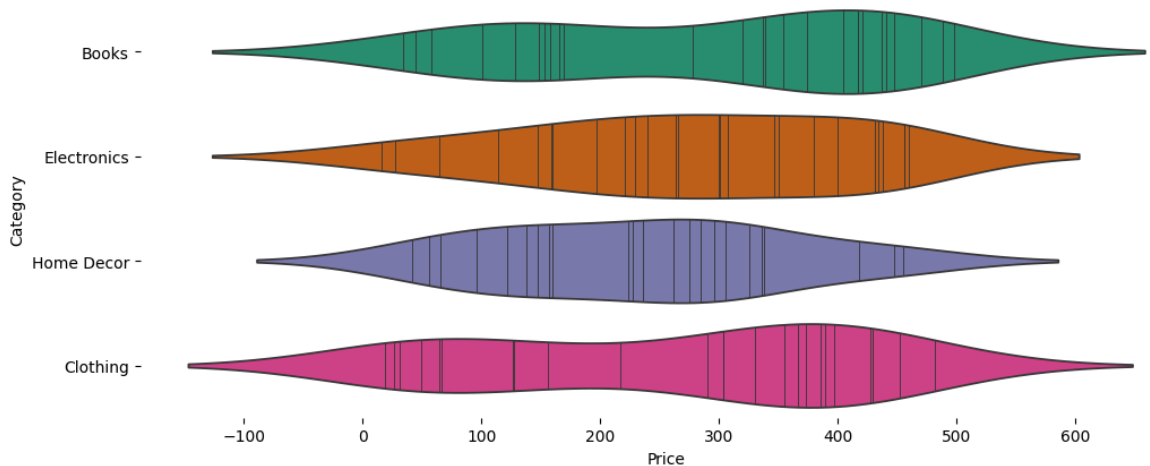
4. Consistent Transaction Activity Throughout the Year

- The time series analysis of transaction values shows consistent activity with periodic peaks.
- This trend suggests stable customer engagement year-round, with opportunities to capitalize on peak periods.
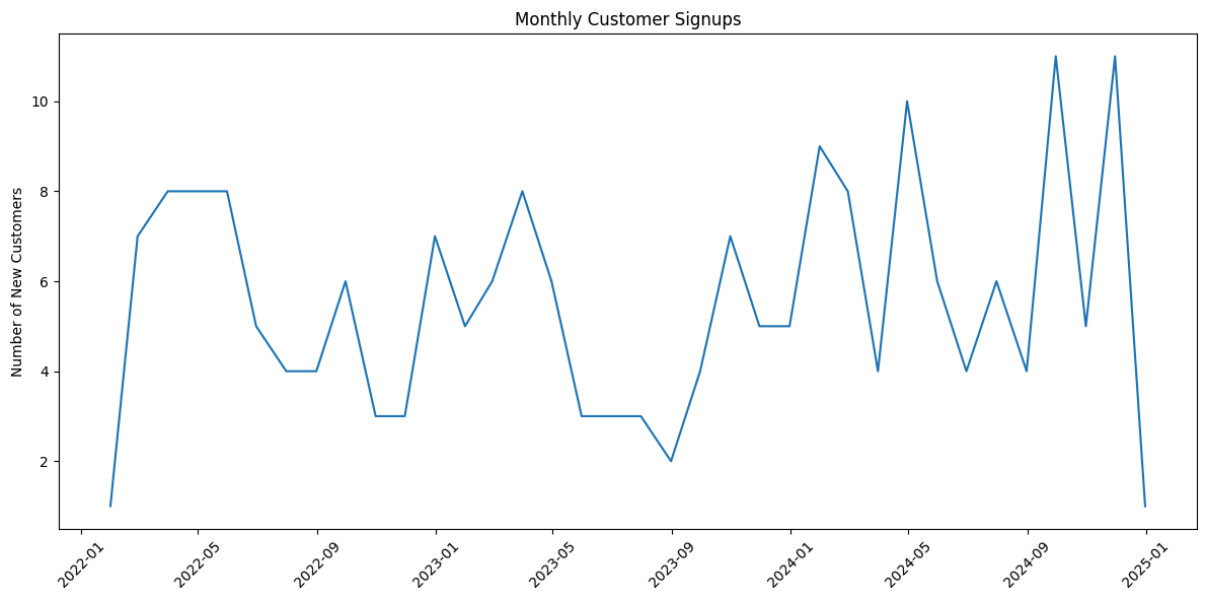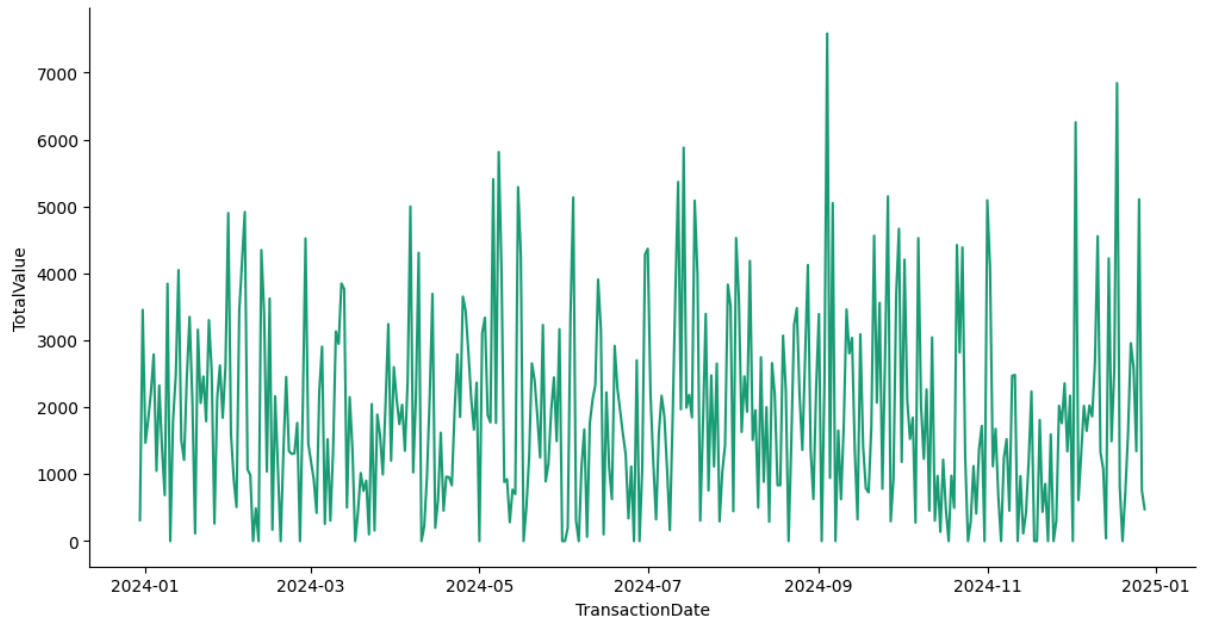
5. Average Transaction Value of $690

- The average transaction value is relatively high, indicating a propensity for customers to purchase higher-value items.
- Strategies such as **bundling** and **premium product promotions** could further increase transaction sizes.