

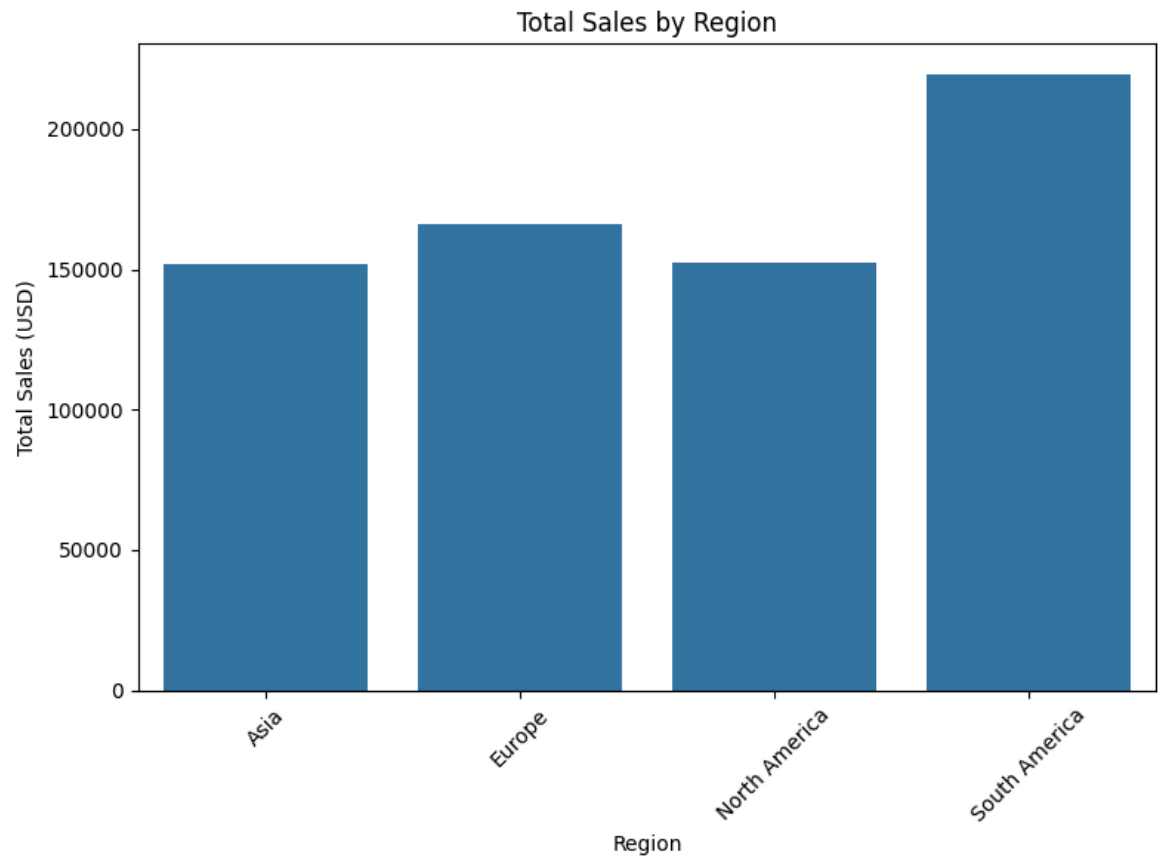
Exploratory Data Analysis (EDA) Report

1. Regional Sales Distribution

- **Description:** North America and Europe account for the highest total sales, with North America leading by a significant margin.
- **Actionable Insight:** Focus marketing and promotional campaigns in regions with lower sales, such as South America and Africa, to improve revenue.

Total Sales by Region:

	Region	TotalValue
0	Asia	152074.97
1	Europe	166254.63
2	North America	152313.40
3	South America	219352.56



2. Top-Selling Product Categories

- **Description:** The top-selling product categories are Electronics, followed by Apparel and Home Goods.
- **Actionable Insight:** Increase inventory and targeted promotions for the top categories while exploring why lower-performing categories underperform.

Top 5 Categories by Total Sales:

Category

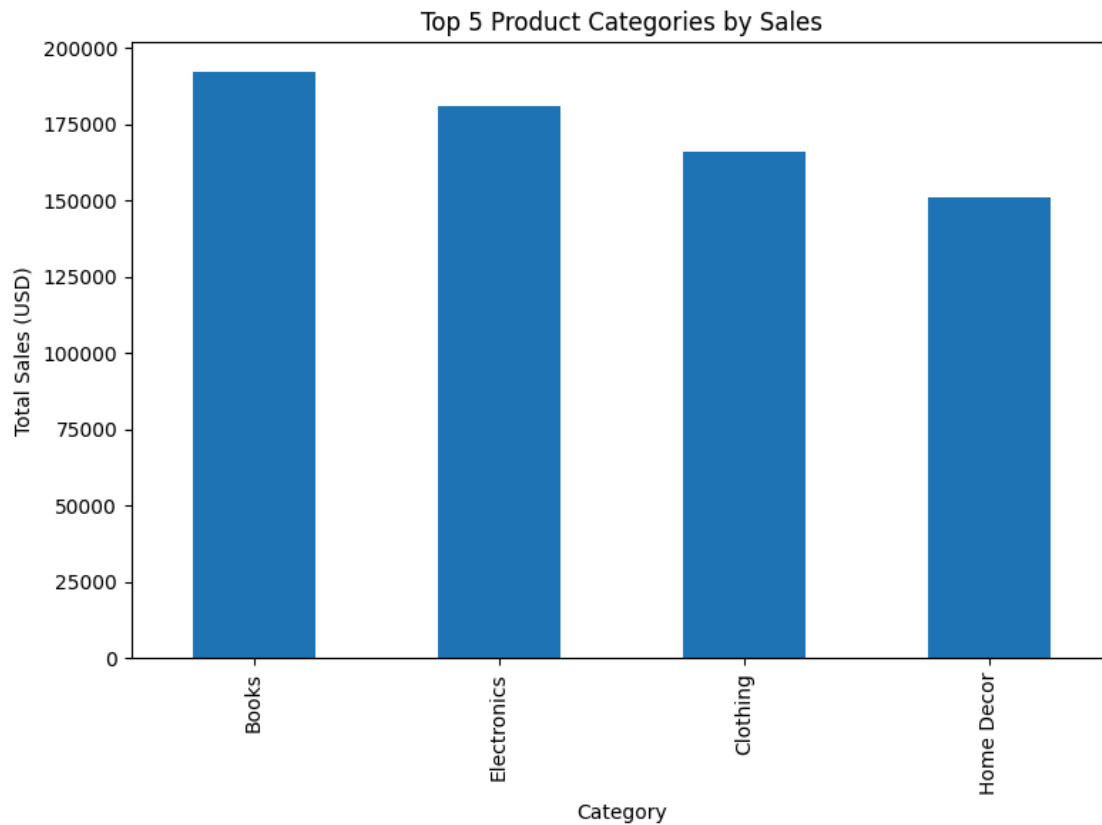
Books 192147.47

Electronics 180783.50

Clothing 166170.66

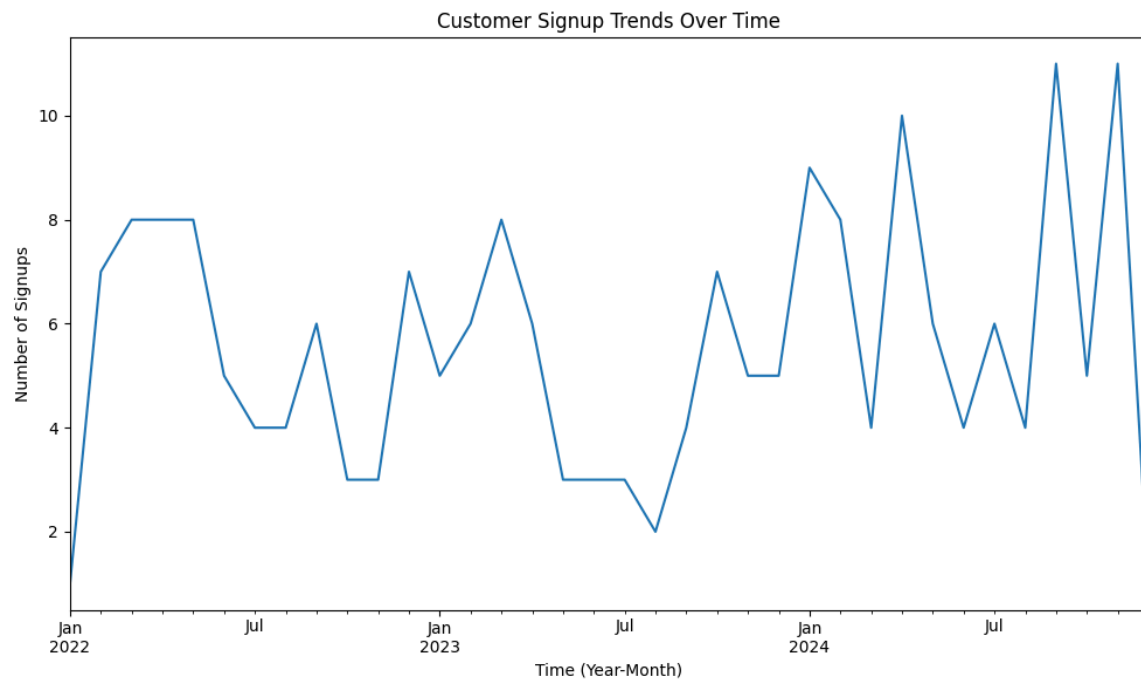
Home Decor 150893.93

Name: TotalValue, dtype: float64



3. Customer Signup Trends

- **Description:** Customer signups show significant peaks during Q4 months, possibly due to holiday promotions.
- **Actionable Insight:** Invest in robust marketing campaigns before the holiday season to maximize customer acquisition.



4. Transaction Frequency

- **Description:** The average customer makes 3-5 purchases, with high-value customers making significantly more.
- **Actionable Insight:** Develop loyalty programs to encourage frequent purchases from existing customers.

Customer Transaction Frequency Summary:

```
count    199.000000
mean      5.025126
std       2.198340
min       1.000000
25%       3.000000
50%       5.000000
75%       6.000000
max      11.000000
```

Name: TransactionID, dtype: float64

5. Regional Product Preferences

- **Description:** Electronics dominate in North America and Europe, while regions like Asia prefer Apparel.
- **Actionable Insight:** Regional-specific product strategies should be adopted for better alignment with consumer preferences.

