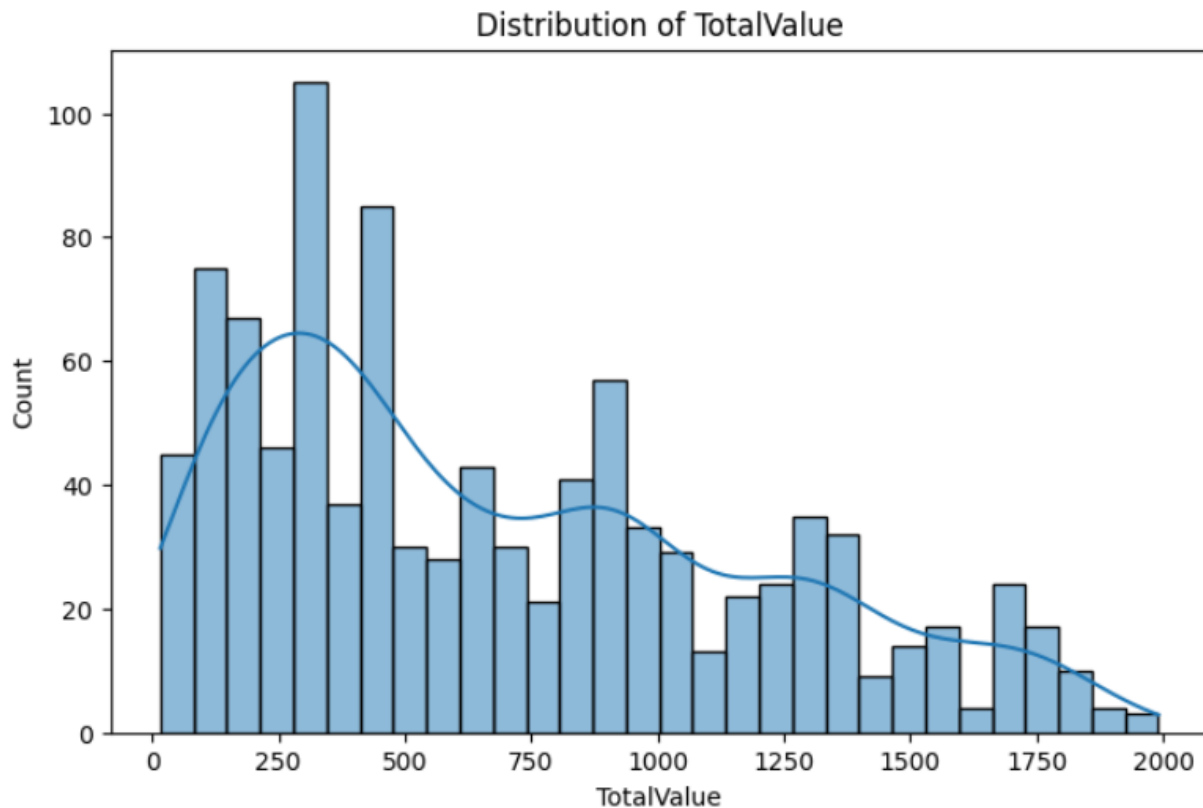


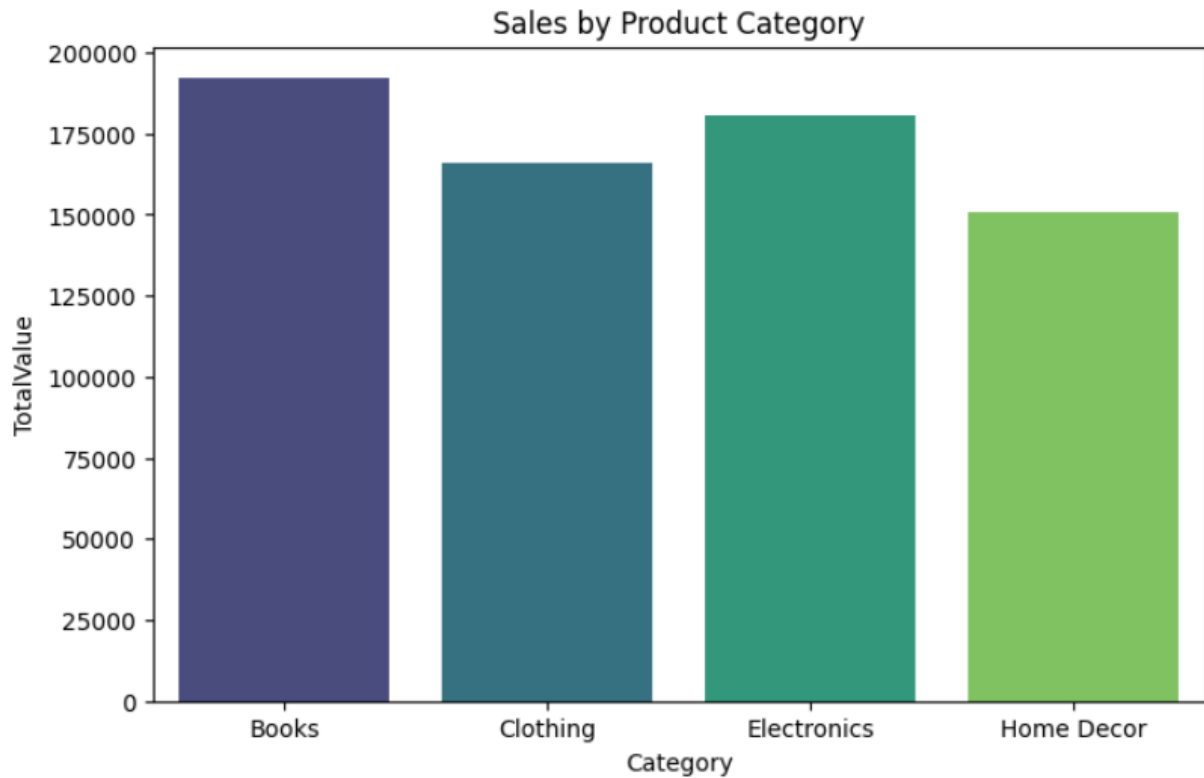
# Zeotap Assignment – Data Science Intern

## Task 1: EDA

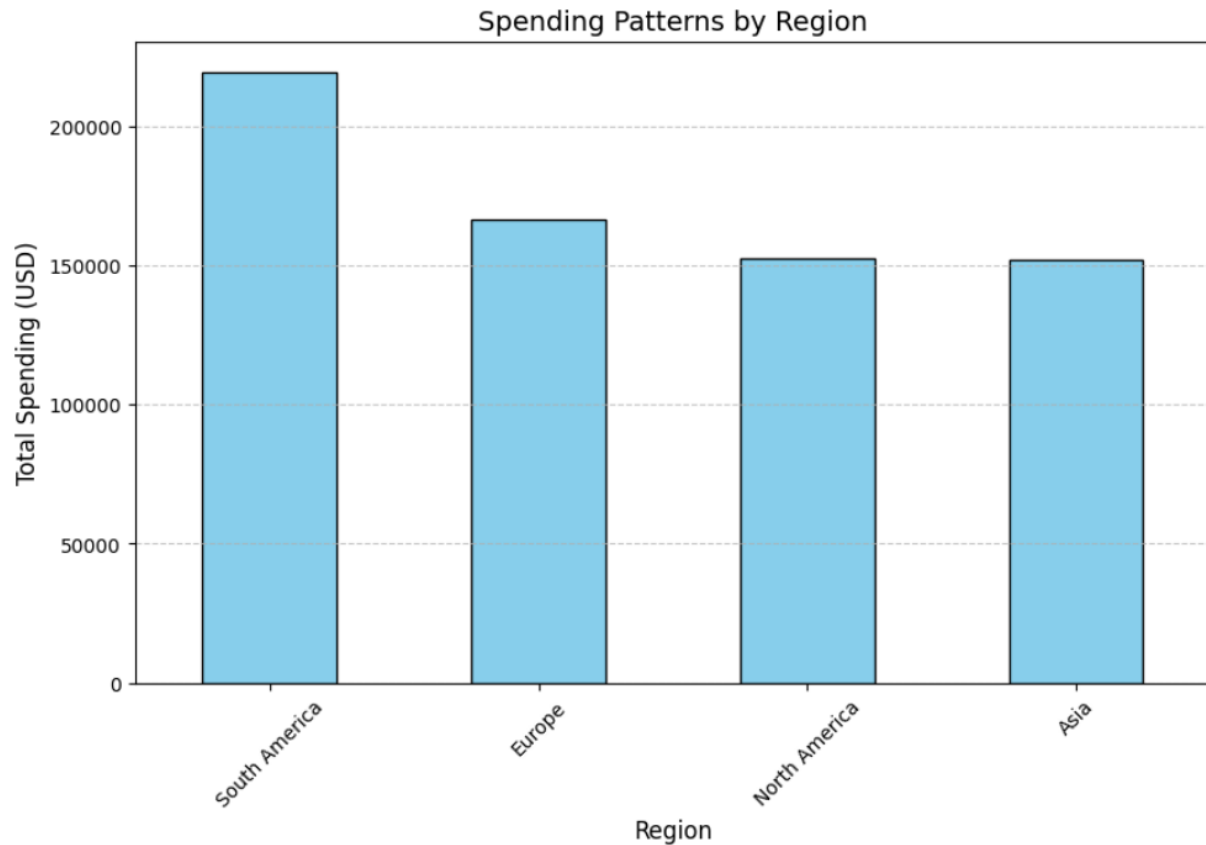
### Business Insights derived from EDA:



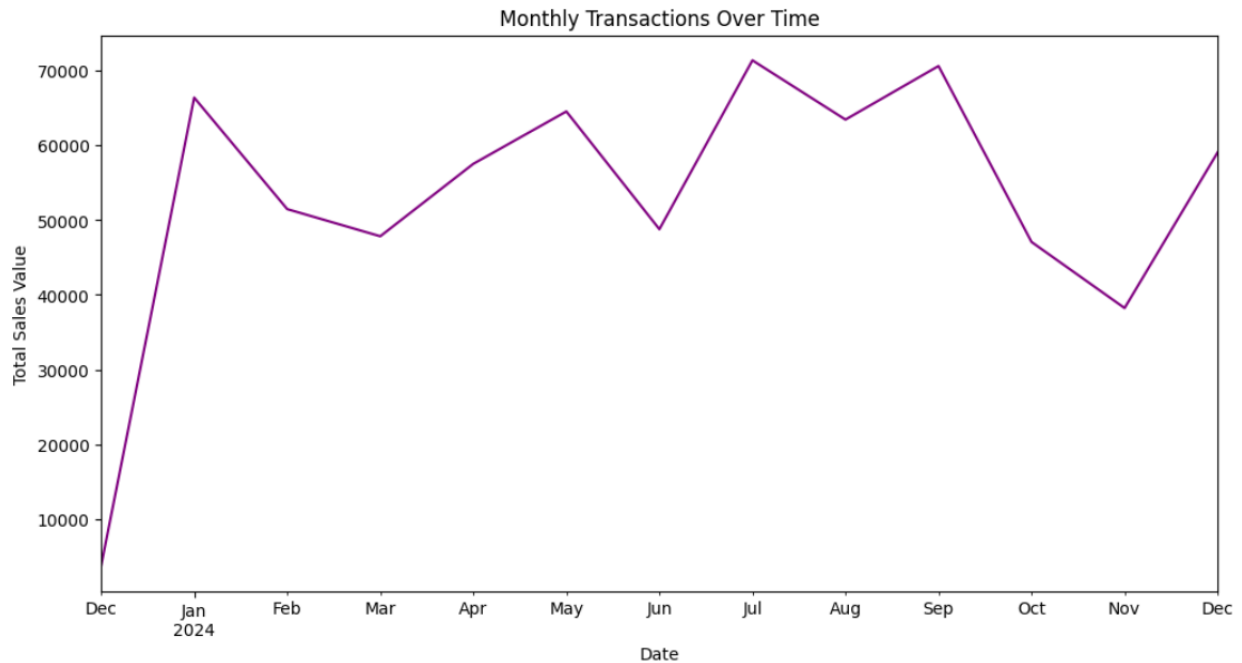
1. The histogram shows that the distribution of TotalValue is right-skewed. A majority of transactions fall in the lower spending range (e.g., below 500), with fewer transactions exceeding 1000. A small number of transactions contribute to very high TotalValue (e.g., above 1500). These could represent bulk purchases or high-value customers.



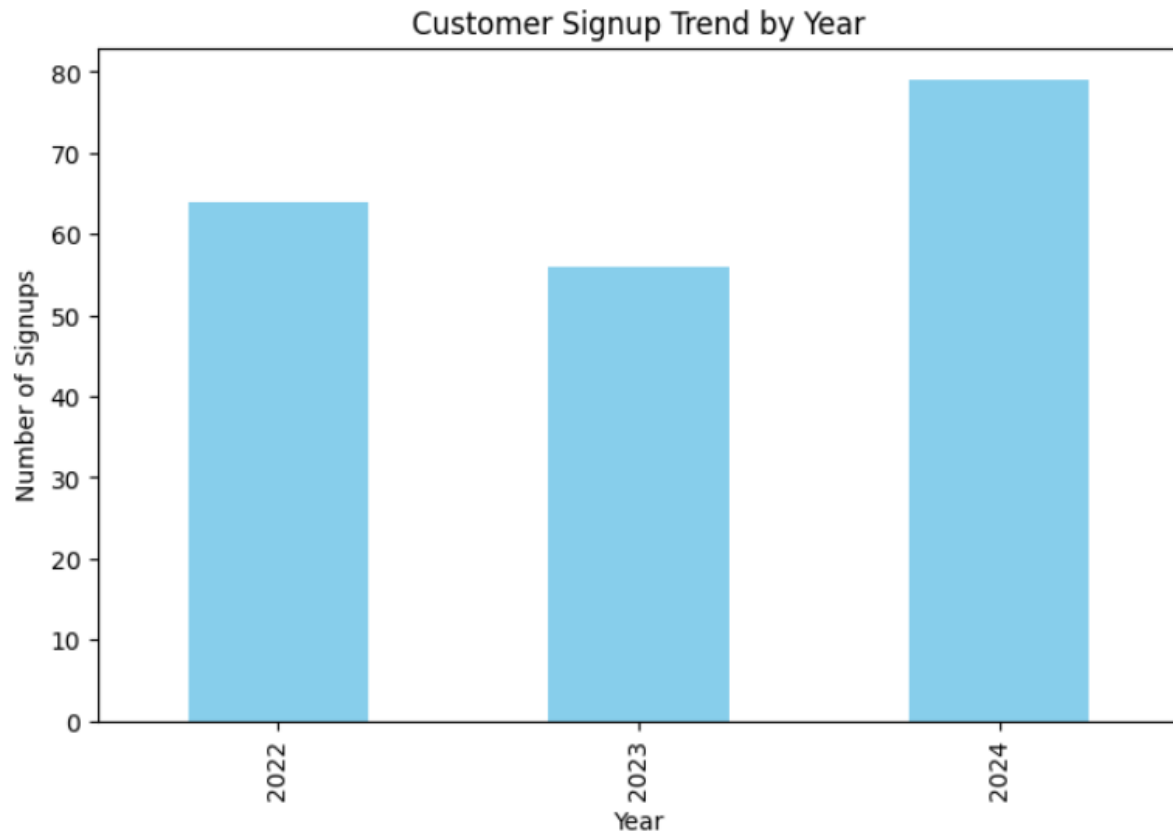
2. The Books category has the highest total sales, surpassing all other categories. This suggests that books are in high demand, possibly due to strong customer interest, seasonal promotions, or recurring purchases. The Electronics category follows closely behind Books in total sales. This could indicate a consistent customer base and high-value products contributing significantly to revenue. Clothing and Home Decor categories have lower total sales compared to Books and Electronics.



3. There's roughly a \$70,000 gap between the highest (South America) and lowest (Asia) spending regions. The middle markets (Europe and North America) show only small differences in spending, indicating similar market maturity. Europe's second-place position suggests potential for growth to match South American levels.



4. Peak sales occur in July-August (around 70,000 in value)  
Secondary peak in January 2024 (approximately 65,000) Lowest points in November-December (dropping to around 40,000) Clear seasonal fluctuations throughout the year. Need for seasonal inventory planning to match peak periods and have to implement strategies to boost sales during low periods. Consider marketing campaigns to minimize depth of seasonal troughs.



5. The number of customer signups has shown a general upward trend from 2022 to 2024. 2024 has the highest number of signups, indicating growing customer interest and engagement. The upward trend in 2024 suggests growing brand awareness and customer acquisition success. Analyzing customer retention rates alongside signup trends will provide deeper insights. Further segmentation of signup sources (e.g., region, platform, referral source) could help optimize future strategies.