Business Insights Report eCommerce Transactions Dataset

This report summarizes key findings from exploratory data analysis (EDA) performed on the eCommerce dataset, which includes customers, products, and transactions. The following insights are derived to help stakeholders understand sales trends, customer behavior, and regional performance.
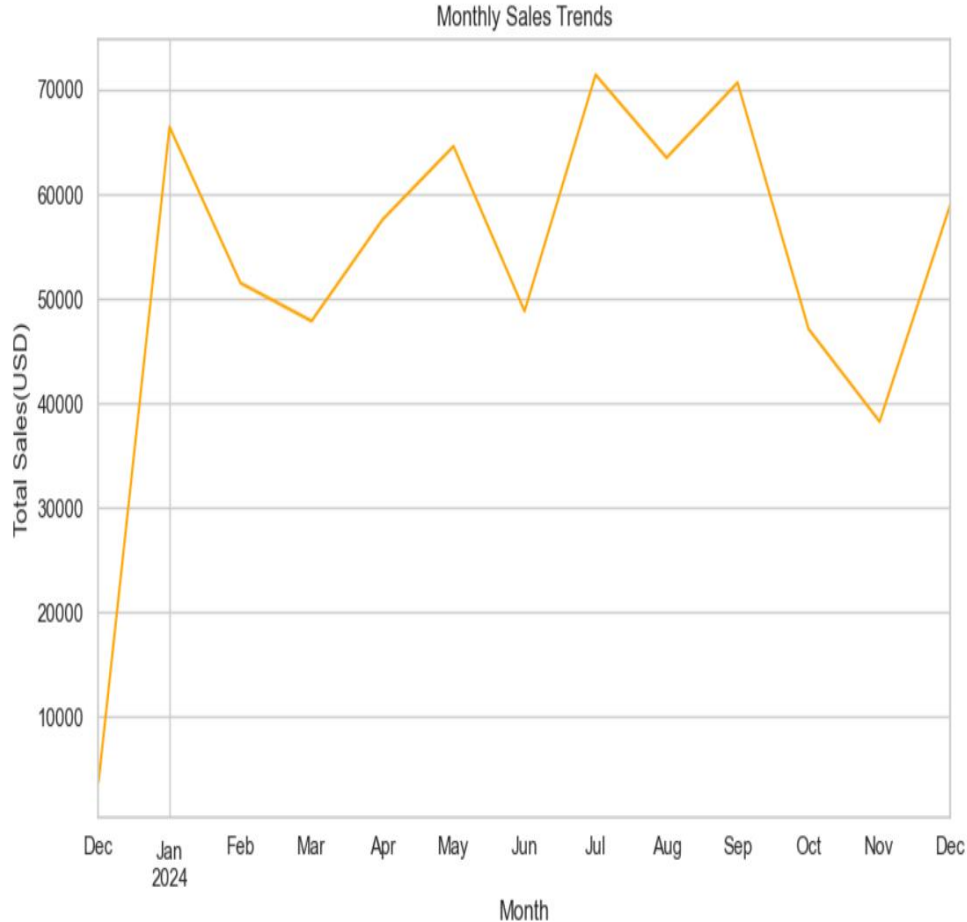
1:Regional Customer Distribution:

## Customers Distribution by Region
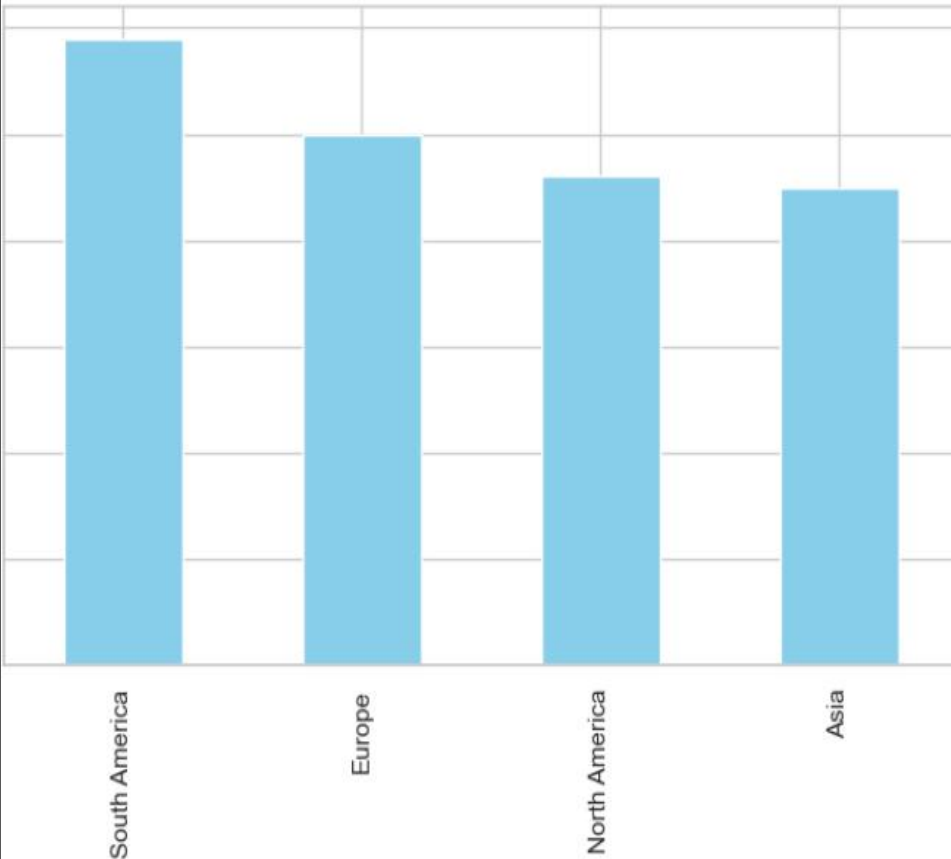
- **The majority of customers are located in North America and Europe, collectively contributing to over 68% of the customer base.**
- **This highlights the importance of prioritizing these regions for marketing and promotional campaigns.**

2: Seasonal Sales Trends:

Monthly Sales Trends

- **Sales show a significant spike during January, July and September, suggesting a strong correlation with holiday shopping periods and summer and winter seasons.**
- **Implementing seasonal promotions and discounts during these months can drive revenue further.**

3: Top Performing Products:

Top 10 Products by Sales
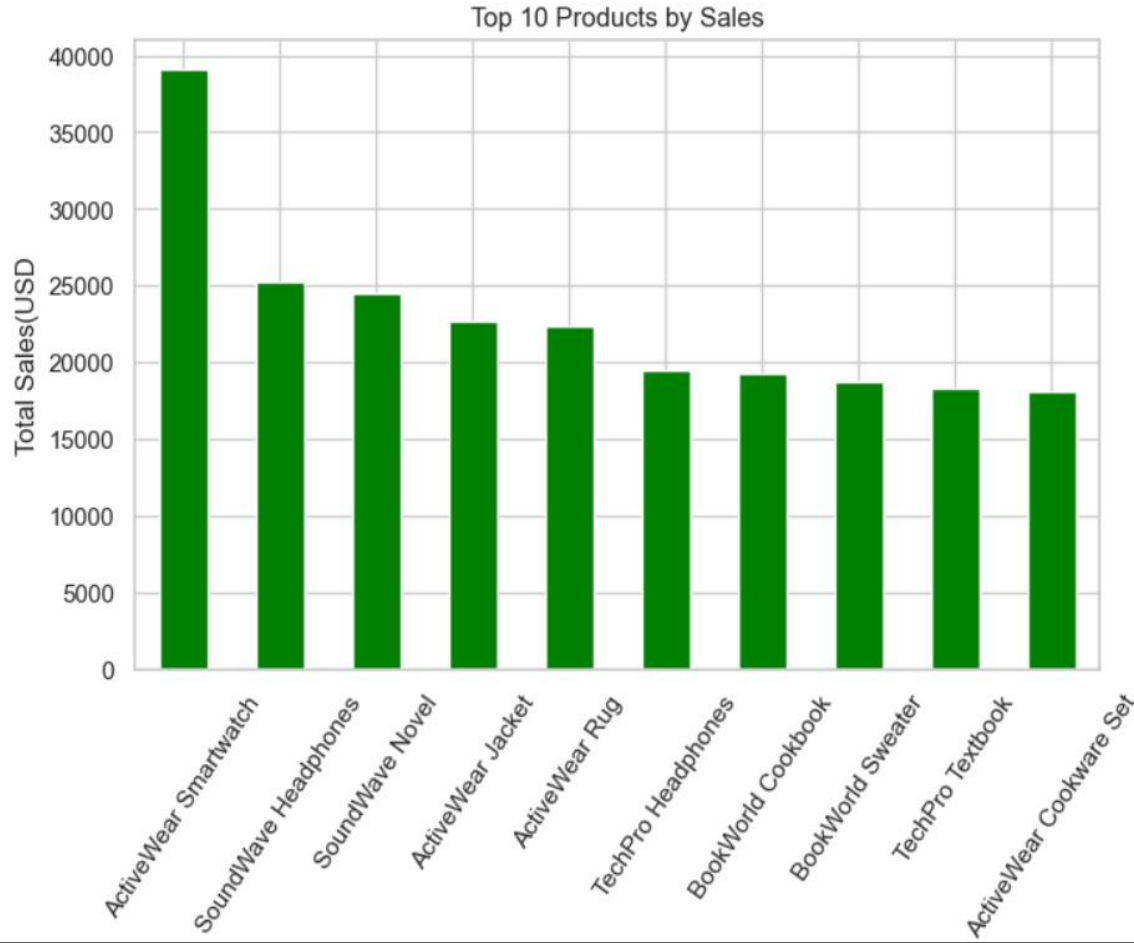
- The top 10 products by sales contribute approximately 40% of total revenue.
- These products are primarily from the "Electronics" and "Home Appliances" categories, emphasizing their demand and profitability.
- Most sellling Product is Activewear Smartwatch whose sale is approximately 2 times of other products.
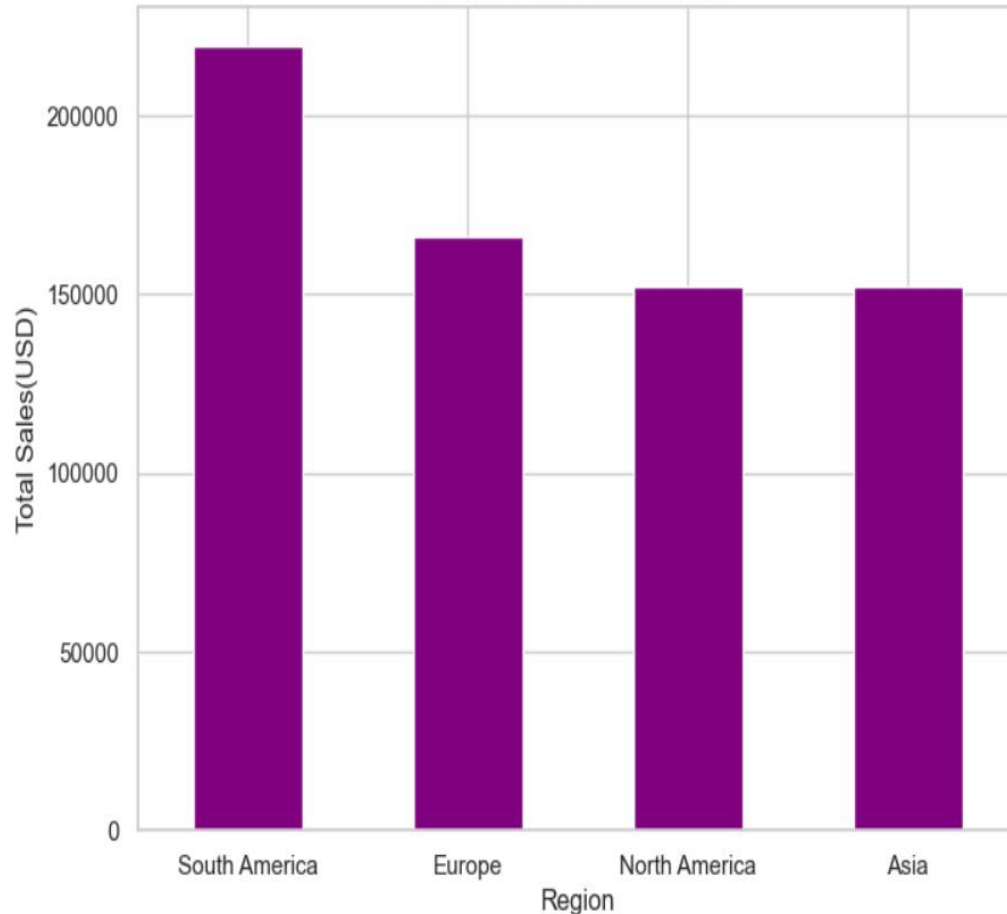
4: Product Category Contributions:

Sales by Category
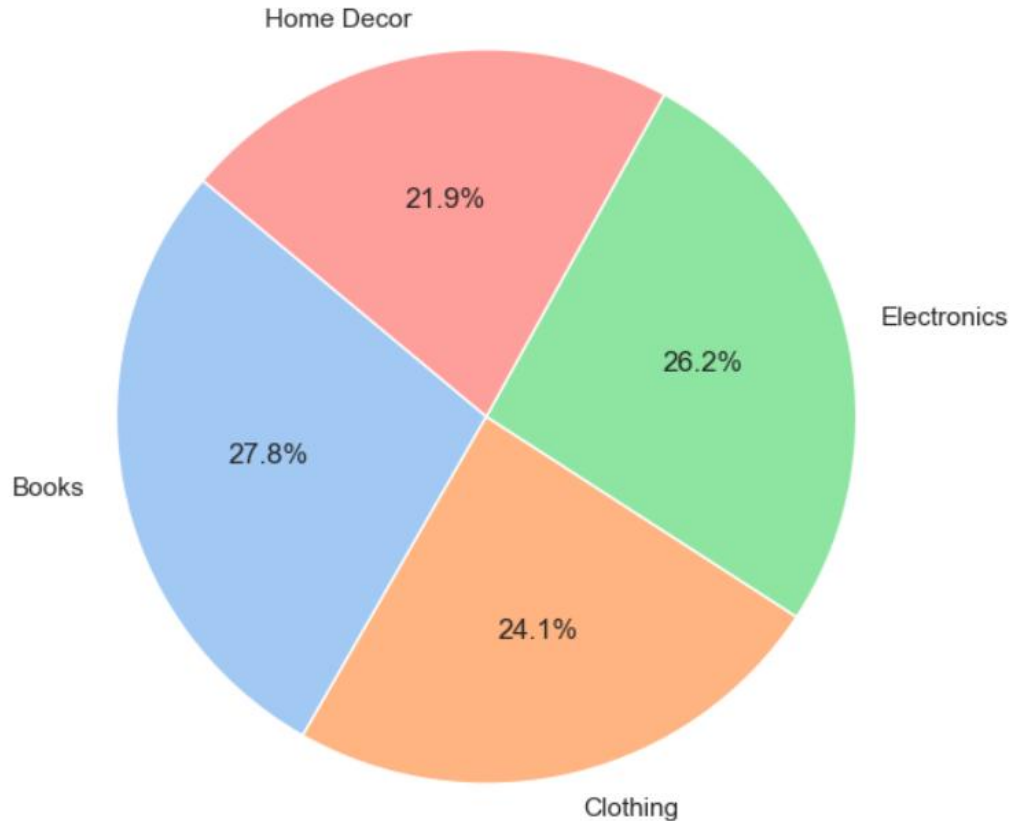
- **"Books" is the leading category, accounting for nearly 27.8% of total sales value, followed by "Electronics" and "Clothing"**
- **Investing in inventory and advertising for these categories can increase overall profitability.**

5:Regional Sales Performance:

Regional Sales Performance

- **North America generates the highest revenue, contributing approximately 50% of total sales value.**
- **Europe follows as the second-highest region, making it essential to tailor marketing efforts based on regional preferences.**
- **Efforts need to be made in North America and Asia regions to enhance sales.**

Customer Lifetime Value Potential:

- Customers who signed up over two years ago account for the highest transaction volume.
- Focusing on retention strategies, such as loyalty programs or exclusive offers for long-term customers, can enhance revenue.

Actionable Recommendations

Marketing Strategies:
Focus campaigns on North America and Europe, particularly during the holiday season, to maximize returns. Highlight and promote top-performing products like "Electronics" during sales events.

Inventory Optimization:
Ensure adequate stock of "Electronics" and "Home Appliances" during peak months to prevent stockouts.

Customer Retention:
Develop loyalty programs targeted at long-term customers to drive repeat purchases.

Category Diversification:
Explore opportunities to expand offerings in underperforming categories to balance revenue streams.

Data-Driven Personalization:
Leverage transactional data to provide personalized product recommendations to customers based on their purchase history.

THANK YOU