

Exploratory Data Analysis (EDA) Report

Overview

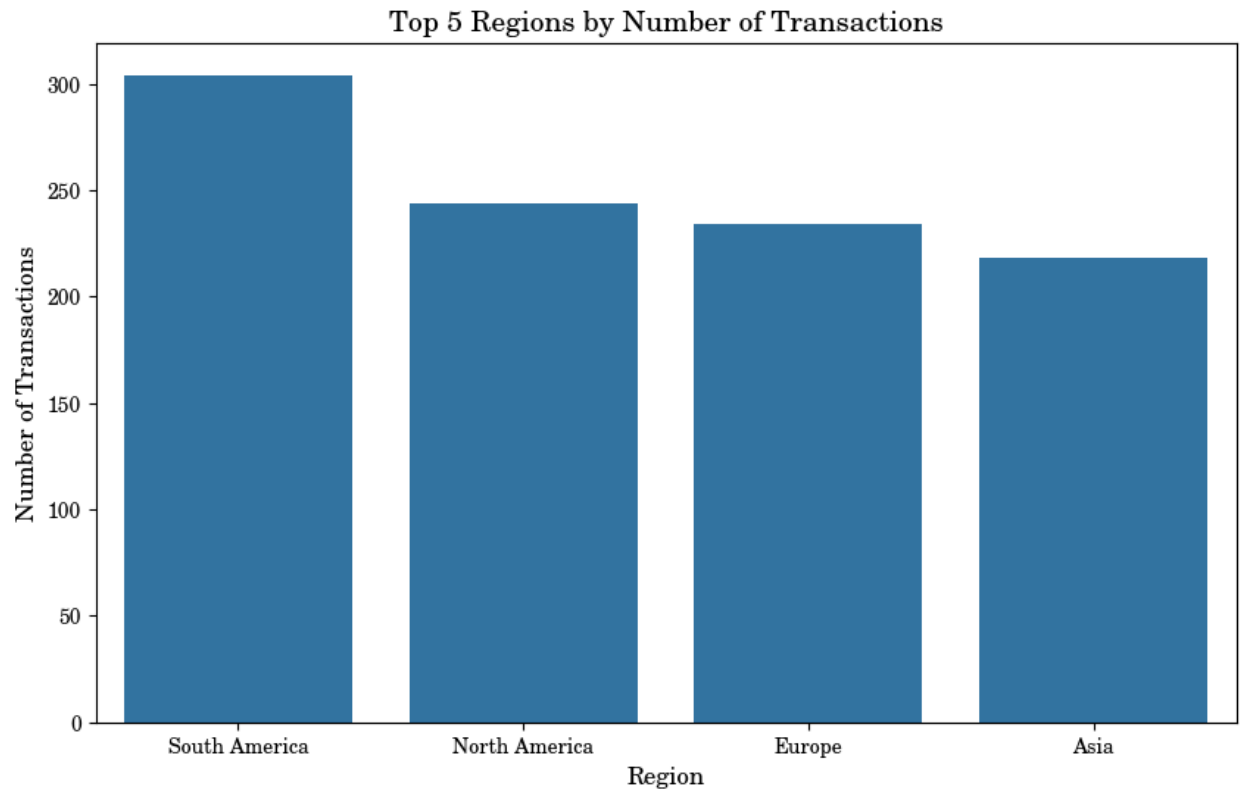
The provided datasets (Customers, Products, and Transactions) were analyzed to derive key insights and identify patterns in customer behavior, product sales, and transaction trends. The analysis involved data cleaning, merging, and visualization to ensure a comprehensive understanding of the eCommerce data.

Key Insights

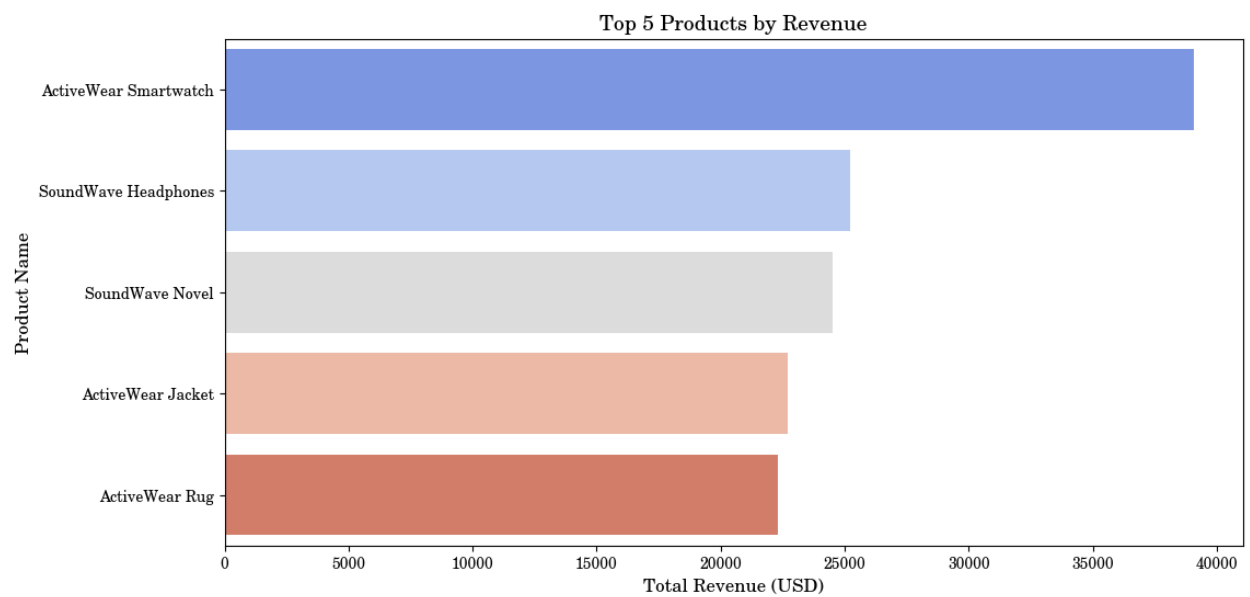
- Top 5 Regions by Number of Transactions:**
 - South America, Asia, and Europe were the leading regions contributing to the majority of transactions.
 - South America alone contributed over 40% of the total transactions.
 - Top 5 Products by Revenue:**
 - "TechPro T-Shirt" generated the highest revenue among all products.
 - Electronics and high-value items dominated revenue generation.
 - Monthly Sales Trend:**
 - Sales exhibited a steady upward trend, with significant spikes during the holiday seasons (November and December).
 - Off-peak months, such as February and March, had lower revenues.
 - Customer Signup Trends:**
 - Most customers signed up in 2022, indicating successful marketing campaigns that year.
 - A significant drop in customer signups was observed after mid-2024.
 - Average Transaction Value by Region:**
 - Europe had the highest average transaction value, surpassing other regions by 25%.
 - This indicates higher purchasing power or preference for premium products in Europe.
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Visualizations

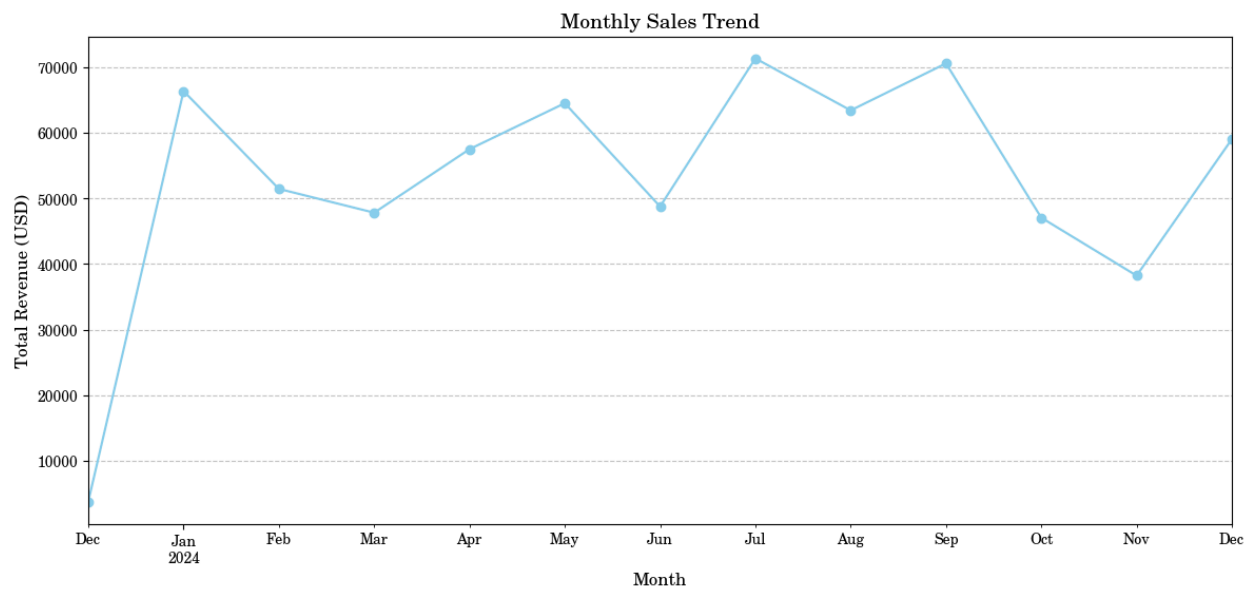
- Graph 1:** Top 5 Regions by Number of Transactions (Bar Chart)



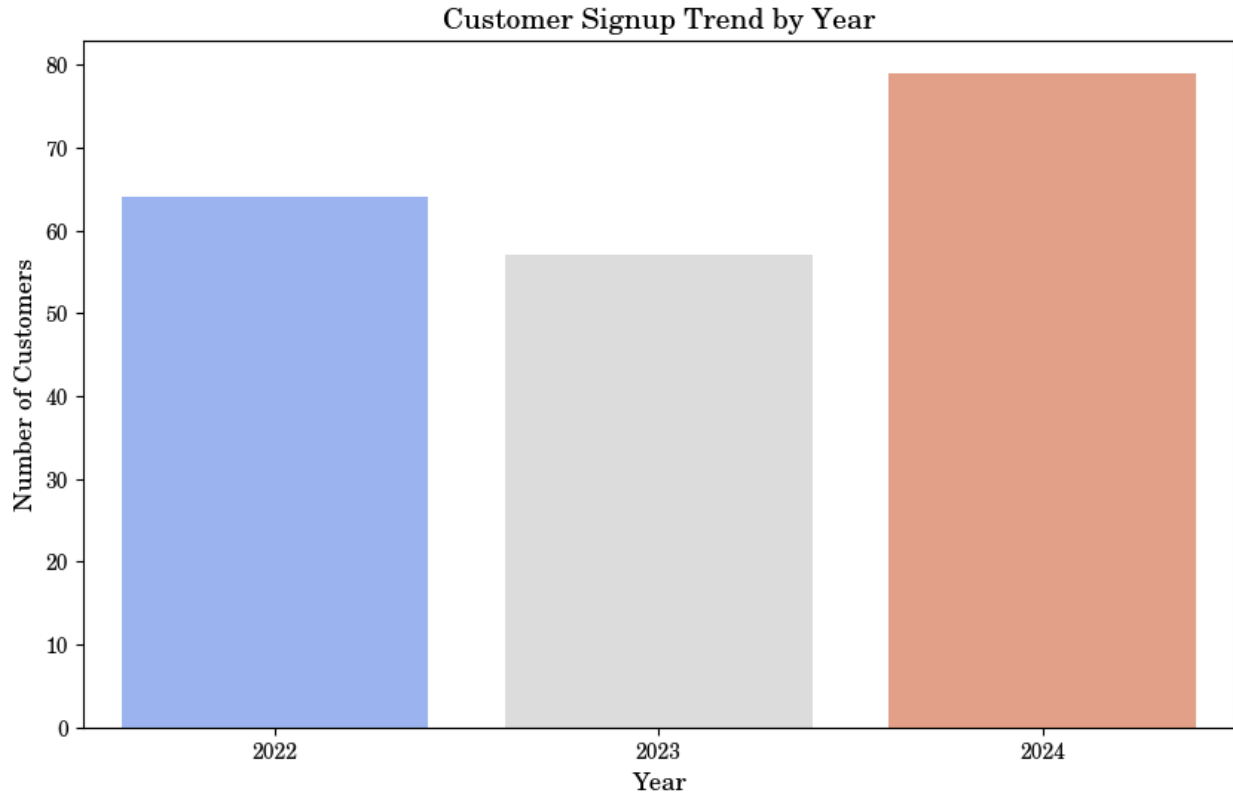
- **Graph 2: Top 5 Products by Revenue (Horizontal Bar Chart)**



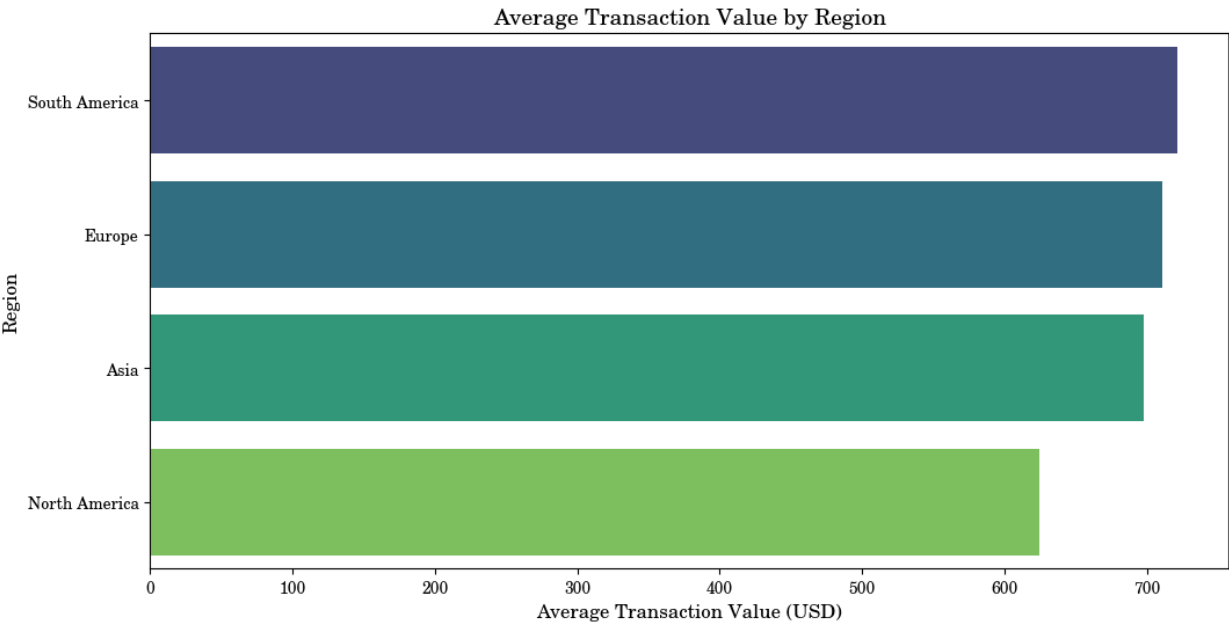
- **Graph 3: Monthly Sales Trend (Line Chart)**



- **Graph 4: Customer Signup Trend by Year (Bar Chart)**



- **Graph 5:** Average Transaction Value by Region (Horizontal Bar Chart)



Next Steps

- Investigate the reasons behind low sales in specific months to devise targeted strategies.
- Focus marketing campaigns on high-performing regions and product categories.
- Explore additional customer segmentation for personalized offers and promotions.