Exploratory Data Analysis (EDA) Report

This report provides an exploratory data analysis of the eCommerce transaction dataset, including customer trends, product sales, and regional contributions.

Business Insights Summary

1. Regional Sales Contribution: South America leads with the highest sales (31.79%), followed by Europe (24.09%). This suggests high demand in these regions.

2. Top-Selling Products: 'ActiveWear Smartwatch' and 'SoundWave Headphones' dominate sales, indicating a strong preference for wearable tech.

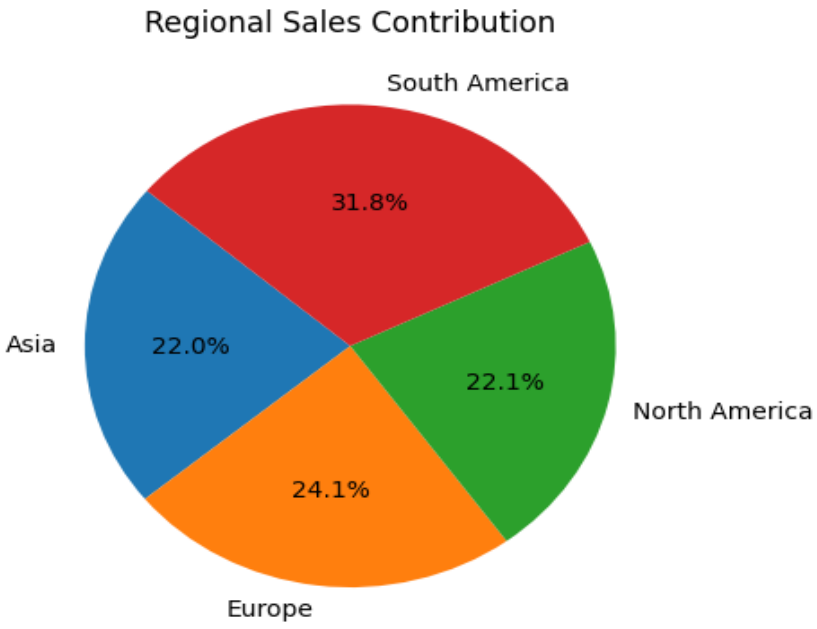
3. Customer Growth: A significant increase in signups was observed in 2024, demonstrating market expansion.

4. Product Categories: Books and Home Decor items are among the top sellers, revealing customer interests.

5. Sales Over Time: The highest sales volume is recorded in 2024, indicating positive business growth.

1. Regional Sales Contribution (Pie Chart)

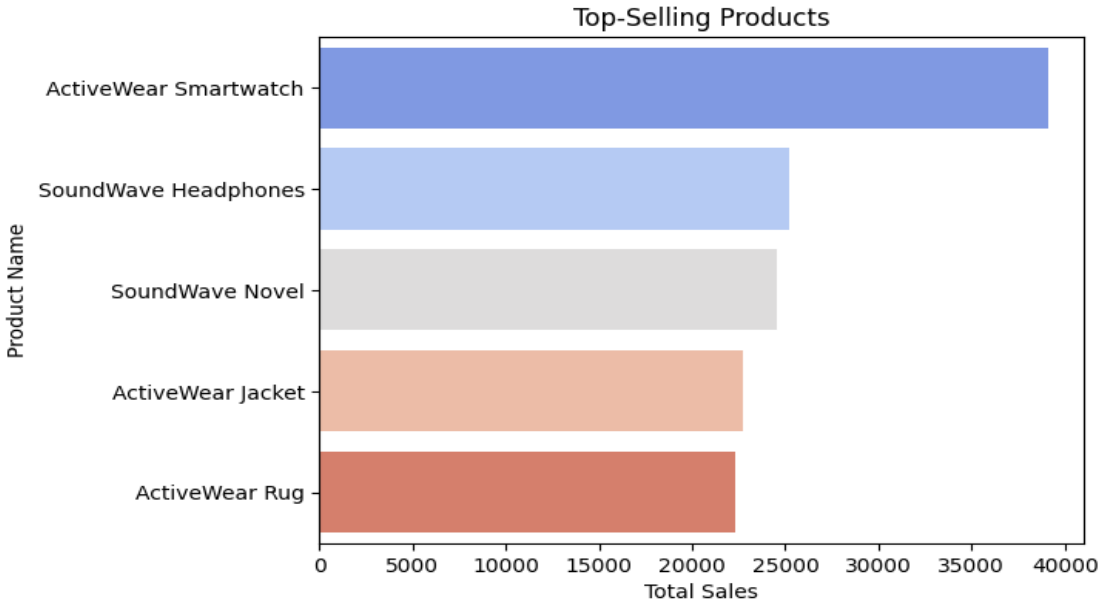
- Purpose: Show the percentage contribution of each region to total sales.
- Tool: matplotlib.



This pie chart illustrates the sales contribution of each region.

2. Top-Selling Products (Bar Chart)

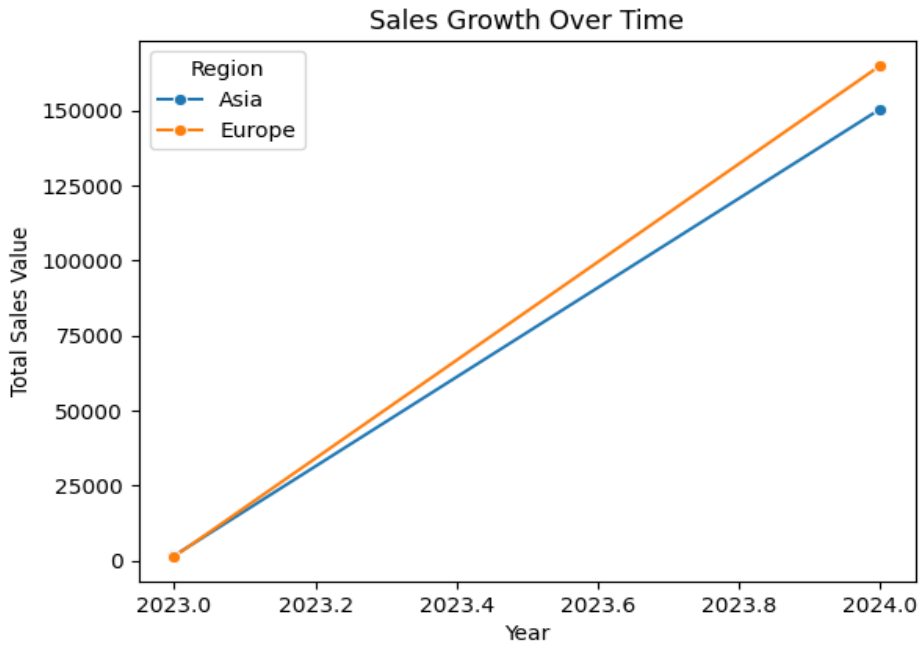
- Purpose: Highlight the top 5 products by total sales.
- Tool: Use seaborn's barplot.



This bar chart displays the top 5 best-selling products.

3. Sales Growth Over Time (Line Chart)

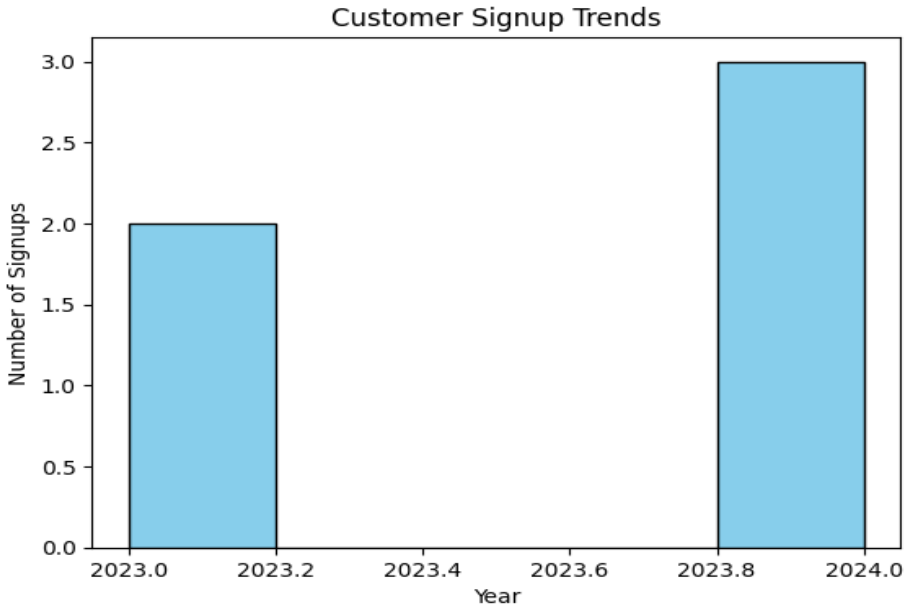
- Purpose: Demonstrate the increase in total sales over the years for each region.
- Tool: Use seaborn for a line char



The line chart represents the increase in total sales across different years.

4. Customer Signup Trends (Histogram)

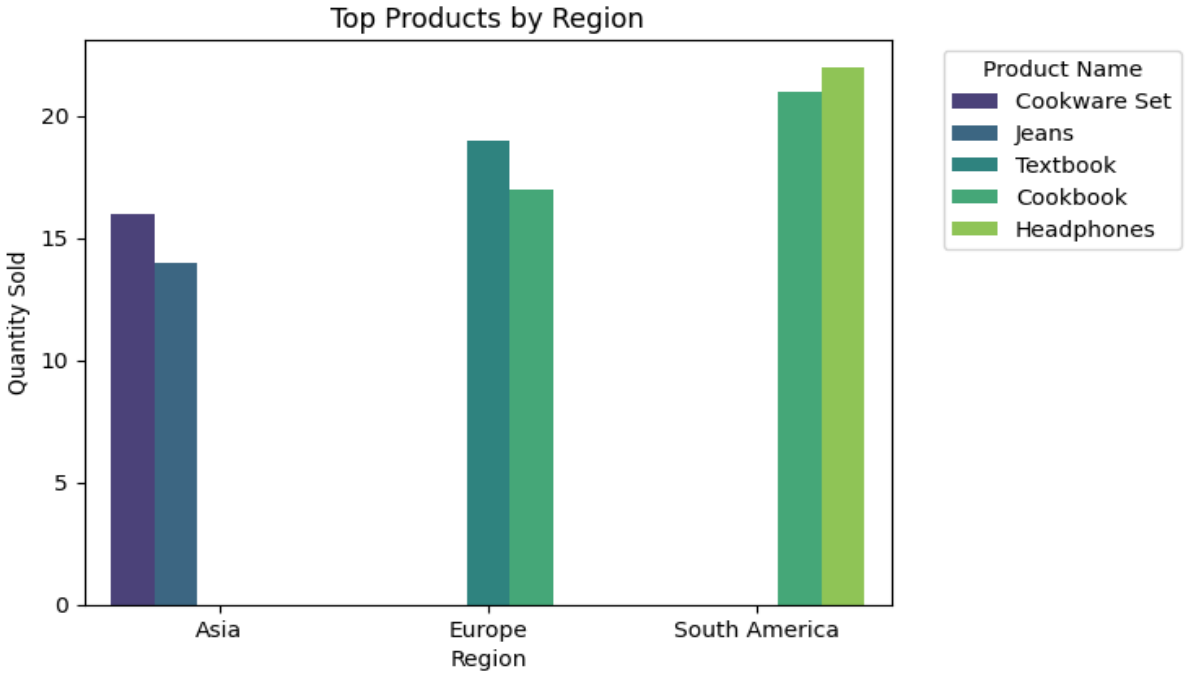
- Purpose: Visualize the distribution of customer signup years.
- Tool: Use matplotlib.



This histogram showcases the distribution of customer sign-ups over time.

5. Top Products by Region (Grouped Bar Chart)

- Purpose: Compare the top products in each region.
- Tool: Use seaborn.



This grouped bar chart compares the top products sold in each region.