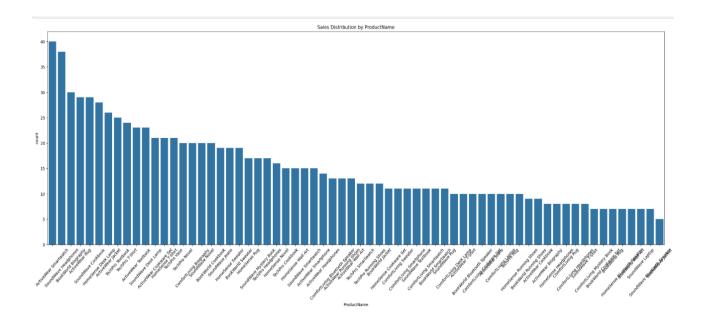
Task 1: Exploratory Data Analysis (EDA)

Sales Distribution by Product Name

The ActiveWear Smartwatch has emerged as the highest-distributed product, closely followed by SoundWave Headphones. These products demonstrate strong demand and customer preference. To further capitalize on this trend:

- ActiveWear Smartwatch marketing campaigns should be expanded to maintain momentum.
- Bundle offers including both products could increase cross-selling opportunities.

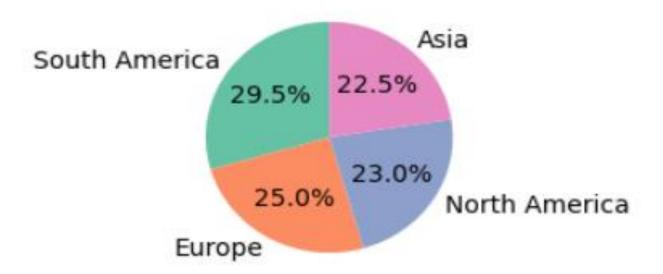


Customer Distribution by Region

South America leads the customer base with 29.5%, followed by Europe at 25.0%.

- South America: Focus on maintaining customer loyalty through localized promotions and tailored advertising.
- Europe: Expand regional outreach through partnerships and targeted campaigns to further grow the customer base.
- Explore potential in other regions with low market penetration to drive growth.

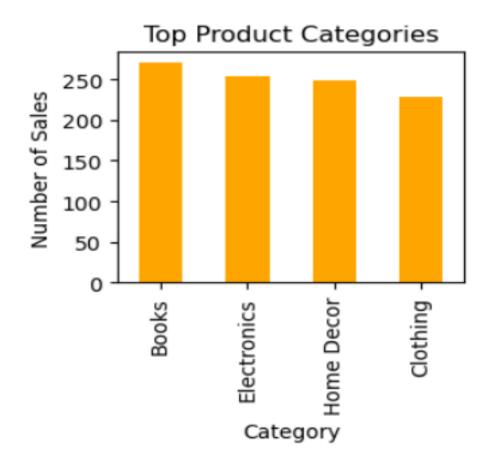
Customer Distribution by Region



Popular Product Categories

Books rank as the most popular category with 270 sales, followed by Electronics with 254 sales.

- Leverage the popularity of books by introducing curated recommendations, seasonal book sales, or subscription services.
- The Electronics category should focus on enhancing product variety and leveraging the popularity of items like the ActiveWear Smartwatch and SoundWave Headphones.



Time-Series Analysis of Sales

Monthly sales trends highlight peak periods which can be strategically utilized for:

- Optimized promotions during peak months to maximize revenue.
- Inventory and resource planning to avoid stockouts or overstocking.
- Implementing targeted advertising campaigns during low-sales periods to stimulate demand.



Top-Selling Products by Quantity

The ActiveWear Smartwatch leads with 100 units sold, generating \$39,097, followed by SoundWave Headphones with 97 units sold, generating \$25,212.

- Expand the product lines for ActiveWear Smartwatch to include accessories or upgraded versions.
- Enhance marketing efforts for SoundWave Headphones, focusing on highlighting their features and competitive pricing.
- Conduct customer feedback surveys to identify potential improvements or desired features for these top-performing products.

Recommendations for Business Improvement

1. Regional Strategy:

- Strengthen focus on South America and Europe while exploring untapped markets.
- Tailor campaigns based on regional preferences and customer behavior.

2. Product Strategy:

- Focus on top-performing products and categories.
- Introduce complementary products or services to increase customer retention and basket size.

3. Promotional Strategy:

- Use time-series sales data to strategically plan promotions and resource allocation.
- Optimize advertising spend during low-sales months.

4. Customer Engagement:

- Leverage data from top-selling products and categories to create loyalty programs.
- Use personalized recommendations to enhance customer satisfaction and repeat purchases.

By implementing these strategies, the company can enhance its market presence, customer loyalty, and revenue generation.