

EDA Analysis

Insights from the given data after EDA

- The highest number of customers comes from South America (59 customers), followed by Europe (50), North America (46), and Asia (45). This highlights South America as a key market for potential expansion.
- Customer Signups by Year:
 - **2022**: 64 customers signed up.
 - **2023**: 57 customers signed up.
 - **2024**: 79 customers signed up (highest).
 - **Insight**: Customer acquisition is increasing steadily, indicating positive growth, especially in 2024. This trend can guide future marketing and onboarding strategies.
- Books and Electronics are the top categories by count, with 26 products each. However, Books have the highest representation among the most expensive products (e.g., TechPro Textbook at \$497.76), suggesting opportunities for premium pricing in this category.
- South America generated the highest revenue (\$219,352.56), significantly surpassing other regions. Focusing on products and campaigns tailored to this market could amplify revenue growth.
- July and September are peak sales months, generating \$71,366.39 and \$70,603.75 in revenue, respectively. Leveraging these months for marketing campaigns and stock optimization could boost sales further.
- The average spending per customer is \$3,467.31. Strategies like loyalty programs or personalized offers for high-value customers can increase customer retention and overall spending.

From the derived insights we can increase profits by

1. Region-Specific Campaigns

- **Focus on South America**: With the highest customer count and revenue, South America should receive campaigns (e.g., culturally aligned advertisements, exclusive discounts).
- **Expand Presence in Europe and Asia**: Marketing to these regions to close the gap between their revenue and South America's.

2. Category Optimization

- **Invest in Popular Categories:** Books and Electronics are the leading product categories. Launch new, high-margin products in these categories.

3. Seasonal Promotions

- **Capitalize on Peak Months:** Develop high-impact marketing campaigns in July and September, the months with the highest sales.
- **Boost Slow Months:** Offer heavy discounts or promotional bundles in months like November to balance sales throughout the year.

4. Customer Strategies

- **Loyalty Programs:** Introduce reward points or tier-based systems to encourage repeat purchases, especially for high-value customers spending over the \$3,467 average.
- **Personalized Offers:** Use historical data to deliver personalized offers based on purchase history, driving customer satisfaction and repeat transactions.