Angara Venkata Sai Singu Rishik
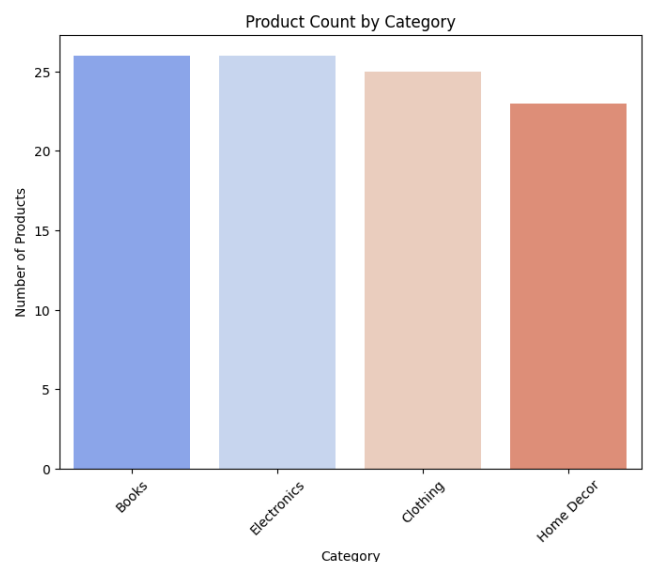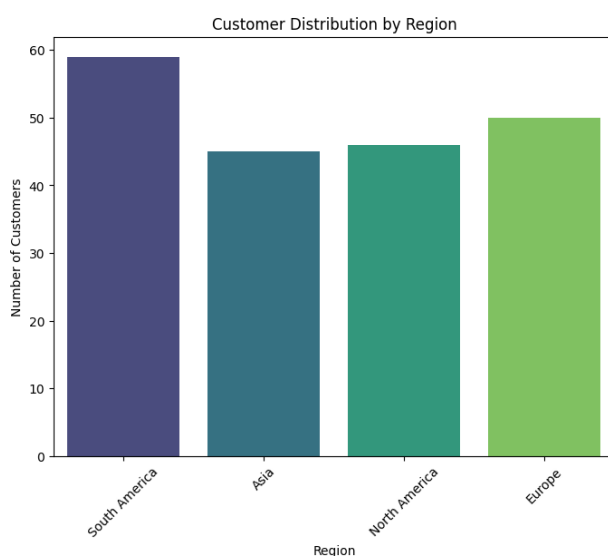rishikangara@gmail.com
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Zeotap Data Science Intern Assignment

Business Insights based on EDA:
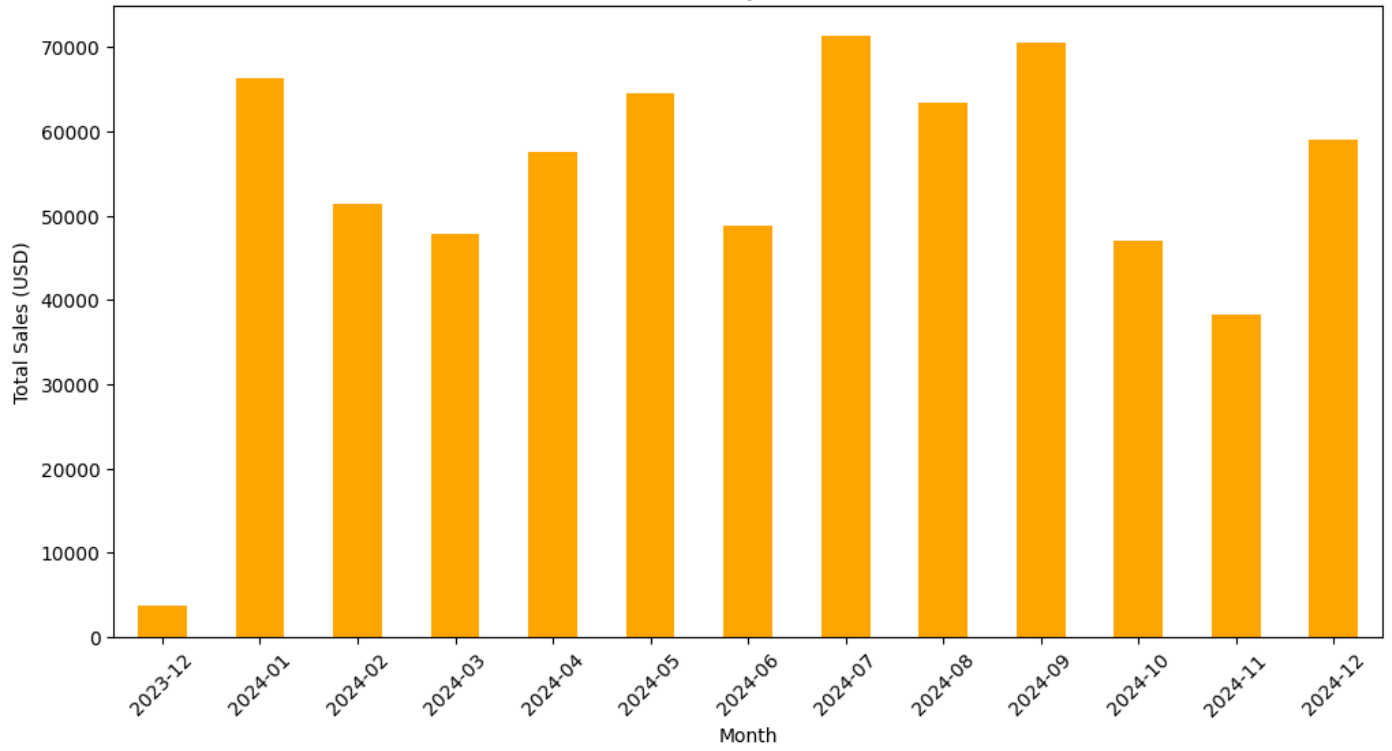
1. South America is the Largest Customer Base with High Sales Contribution
   i. South America has the highest number of customers (59 out of 200), making it the strongest regional market.
   ii. The sales by region chart indicates that South America generates the highest revenue.
   iii. Targeted marketing strategies, localized promotions, and customer retention efforts in this region could further enhance revenue.
   iv. Expanding inventory with region-specific products or offering exclusive discounts may solidify dominance in this market.
   v. Attracting more customers from other regions through regional campaigns can help balance sales distribution.

2. Books Category Has the Most Products, But Electronics and Wearables Dominate Sales
   i. The Books category has the highest number of products (26 out of 100), but it does not lead in sales volume.
   ii. The top-selling products include "ActiveWear Smartwatch" and "SoundWave Headphones," indicating a preference for technology-driven products.
   iii. Despite a wider selection of books, customers are more inclined towards high-tech wearable and electronic products.
   iv. Businesses should consider increasing investments in high-demand tech products while optimizing pricing strategies.
   v. Bundling accessories with electronics or running category-specific promotions could enhance sales performance.

3. High-Value Customers Drive a Significant Share of Revenue
   i. The top 5 customers contributed over $40,000 in total spending, proving that a small segment of loyal buyers plays a significant role in revenue generation.
   ii. These high-value customers likely make repeat purchases, reinforcing the need for a loyalty program.
   iii. Personalized offers, exclusive discounts, and premium services can further improve their retention and spending.
   iv. Implementing an upselling and cross-selling strategy for these customers could boost revenue significantly.

   v. Businesses should analyze purchasing behavior and offer premium memberships or incentives to encourage higher spending.

4. Monthly Sales Fluctuations Suggest Seasonality or Promotional Influence
   i. The monthly sales chart displays fluctuations, with noticeable peaks in certain months.
   ii. Seasonal demand, holiday shopping trends, or promotional campaigns may influence these variations.
   iii. Understanding past sales trends can help plan marketing campaigns to optimize high-performing months.
   iv. Running exclusive offers and promotions during peak seasons could drive additional revenue.
   v. Offering discounts or bundled deals during historically slow months may help maintain steady sales throughout the year.

5. The Price Range of Products Varies Widely, Indicating a Diverse Customer Base
   i. Product prices range from \$16.08 to \$497.76, with an average price of \$267.55, suggesting a mix of budget-conscious and high-spending customers.
   ii. This variation in spending capacity calls for a diverse pricing strategy to cater to all segments.
   iii. Introducing premium and budget-friendly versions of popular products can maximize revenue across different customer groups.
   iv. Financing options, bundle deals, and targeted discounts can improve conversion rates for both high- and low-spending consumers.
   v. Using purchase history and segmentation to provide personalized recommendations can enhance customer experience and increase sales.
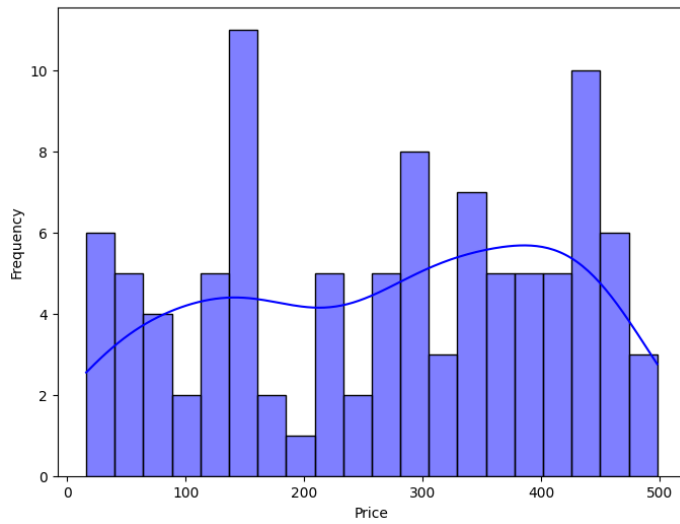
Graphs Supporting the above Insights:

Customer Distribution by Region

Product Count by Category