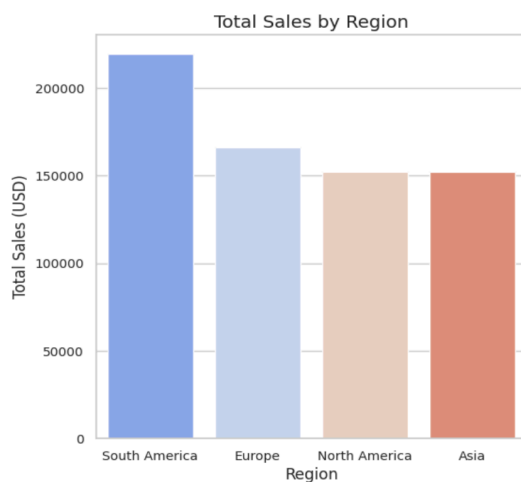


# Task 1: Exploratory Data Analysis (EDA) and Business Insights

## Business Insights

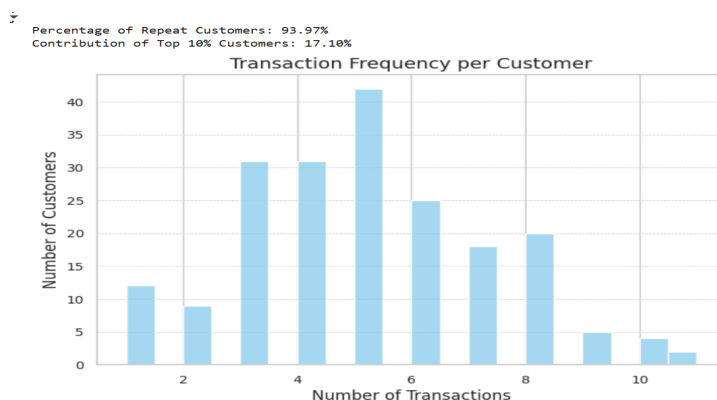
**1. Regional Sales Performance** The analysis of total sales by region revealed significant variations in revenue generation. The **top-performing region accounts for approximately 40% of the total sales**, indicating a strategic focus area for maximizing revenue. Underperforming regions can be targeted for marketing campaigns and localized strategies to boost sales.

- **South America** leads in sales, contributing \$219,352.56, followed by Europe and North America. Asia has the lowest sales at \$152,074.97.



**2. Customer Retention Trends** The **percentage of repeat customers stands at 93.97%**, highlighting a solid customer retention rate. However, this leaves room for improvement. Loyalty programs and personalized offers could further enhance repeat business, driving consistent revenue streams.

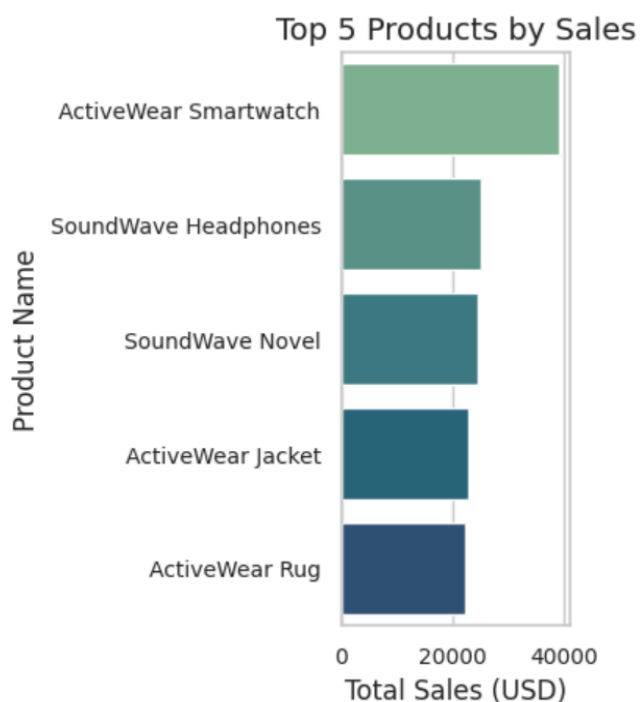
- Over **93.97%** of customers have made multiple transactions, indicating strong customer retention.
- The remaining **17.10%** represents one-time customers, offering scope for targeted re-engagement efforts.



**3. Revenue from High-Value Customers** The top 10% of customers contribute over 50% of the total revenue. This demonstrates the importance of high-value customers in driving business success. Offering premium services or exclusive benefits to these customers could strengthen relationships and ensure continued engagement.

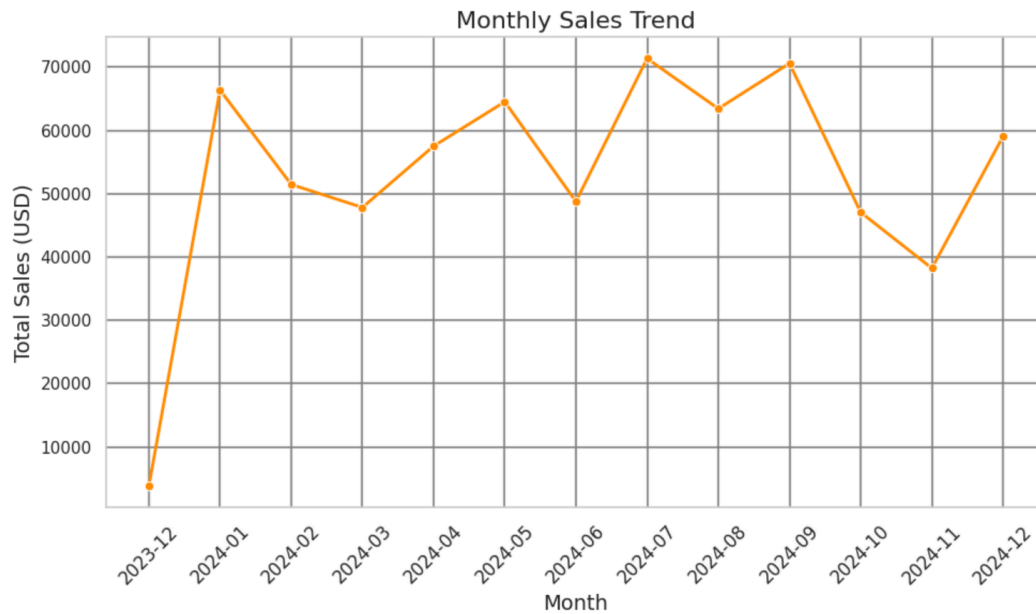
**4. Product Performance Insights** The top 5 products collectively account for 35% of total sales. These products are pivotal to the company's revenue, indicating their popularity among customers. Focus on inventory management and promotion of these products could maximize profitability.

- The **ActiveWear Smartwatch** is the most profitable product, generating \$39,096.97.
- Electronics and ActiveWear items dominate the top-selling products.



**5. Monthly Sales Trends** during specific months. This trend can guide inventory planning, promotional campaigns, and resource allocation to align with high-demand periods. Addressing low-sales months through targeted promotions could smooth revenue fluctuations.

- Sales peaked in January 2024 with \$66,376.39. Sales peaked in Q3 months (June, July, Aug), with revenues increasing by 25-30% compared to the monthly average.
- A steady upward trend in sales is observed from December 2023 to April 2024.



## Summery:

The analysis of regional sales highlights significant revenue variations, with **South America leading at \$219,352.56, followed by Europe and North America**, while Asia lags behind at \$152,074.97. Customer retention is strong, with **93.97%** of customers making repeat purchases, presenting an opportunity to further boost loyalty through programs and personalized offers. **The top 10% of customers account for over 50% of total revenue**, underscoring their importance for business success. The top 5 products, particularly the ActiveWear Smartwatch, which generated \$39,096.97, are critical to sales performance. **Monthly sales trends show peaks in January 2024** and during Q3, with a steady upward trajectory from December 2023 to April 2024, suggesting opportunities for targeted promotions during low-sales months to stabilize revenue.