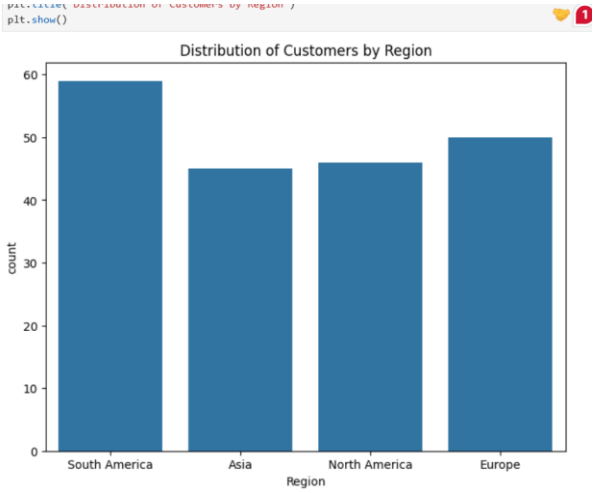
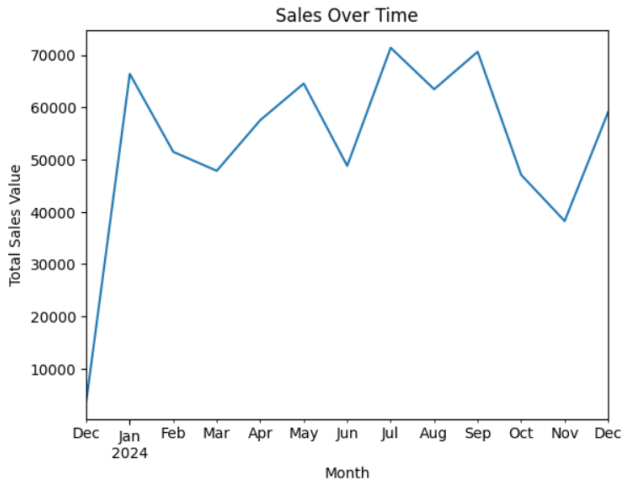
Business Insights:

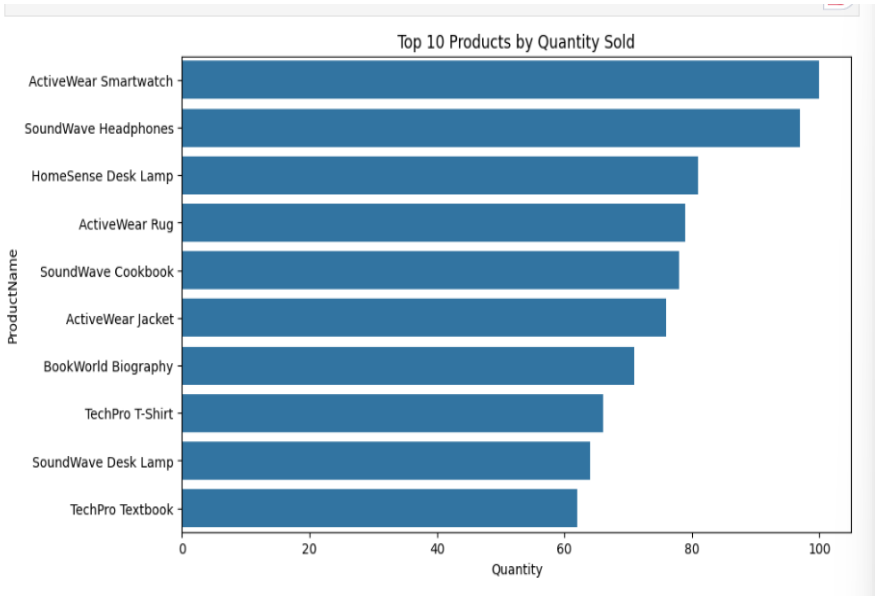
1. **Regional Targeting**:
   The majority of the clientele is based in South America, which indicates a big chance to grow into other areas like Asia and North America. In these new areas, consumer acquisition may be fueled by customized advertising and promotions tailored to individual regions.



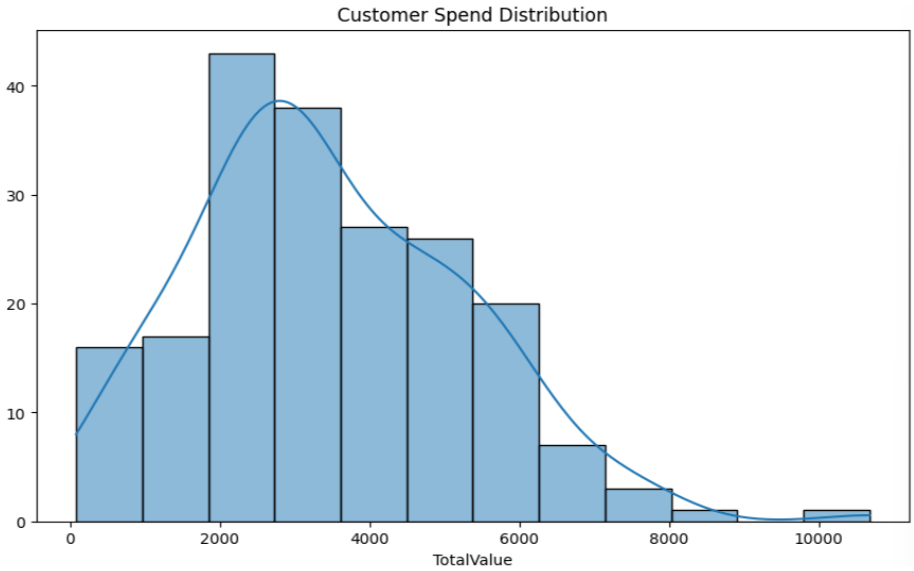
2. **Seasonal Trends**:
   Sales typically peak in certain months, indicating a definite window of opportunity for focused advertising campaigns during times of high demand. Special offers and promotions could be taken advantage of throughout important months like January, May, July, August, and September. For instance, to capitalize on New Year's resolutions and fitness objectives, fitness-related products like clothing and headphones could be prominently advertised in January.



3. **Inventory Management**:
   Products like "ActiveWear Smartwatch" and "SoundWave Headphones" are in high demand, and thus, should be stocked in greater quantities. While keeping enough inventory for other products, optimizing inventory management systems will guarantee that these in-demand items are always available for customers.



4. **Customer Spend**: The $2,000–$3,000 price range accounts for a sizable percentage of consumer orders. This suggests a possible chance to target this market niche with tailored discounts or loyalty rewards that promote bigger purchases.



5. **Customer Retention Insights:** A significant portion of customers place repeat orders, according to our analysis of consumer behavior. The remarkable 93.97% retention rate shows high levels of client satisfaction and commitment. Long-term growth may be sustained by concentrating on preserving and improving this high retention rate.

```
# counting purchases per customer
customer_purchases = transactions.groupby('CustomerID').size()
print(customer_purchases)
```

```
CustomerID
C0001    5
C0002    4
C0003    4
C0004    8
C0005    3
        ..
C0196    4
C0197    3
C0198    2
C0199    4
C0200    5
Length: 199, dtype: int64
```

[74]:

```
# identifying repeat customers

repeat_customers = customer_purchases[customer_purchases > 1]
print(len(repeat_customers))  # Count of repeat customers
```

```
187
```

[75]:

```
total_customers = len(customer_purchases)
retention_rate = len(repeat_customers) / total_customers * 100
print(f'Retention Rate: {retention_rate:.2f}%')
```

```
Retention Rate: 93.97%
```