Task - 1

Business Insights

1. Transaction Trends Over Time

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2. Top 10 Products by Sales

- o Identifies best-performing products contributing most to revenue.
- o Enables businesses to focus on promoting high-demand items.

3. Regional Sales Distribution

- o Visualizes sales contribution by region.
- o Highlights potential regions for growth or expansion.

4. Customer Spending Segmentation

- o Analyzes customer spending distribution.
- o Highlights high-value customers for targeted marketing.

5. Category-Wise Analysis

- o Examines sales distribution across categories.
- o Provides insights for category-level inventory and promotions.

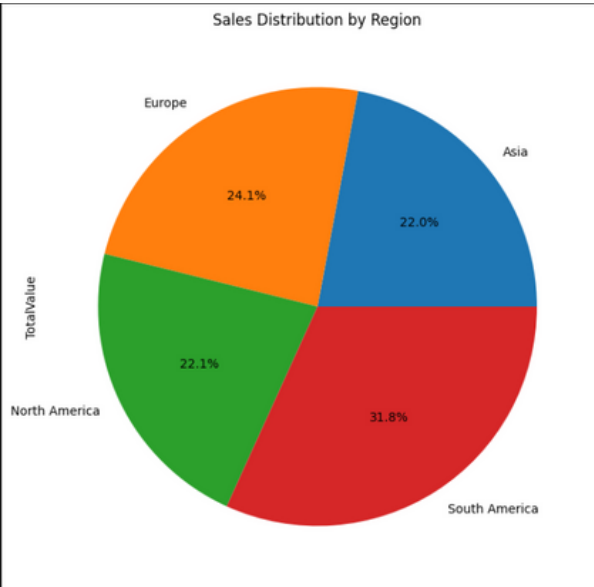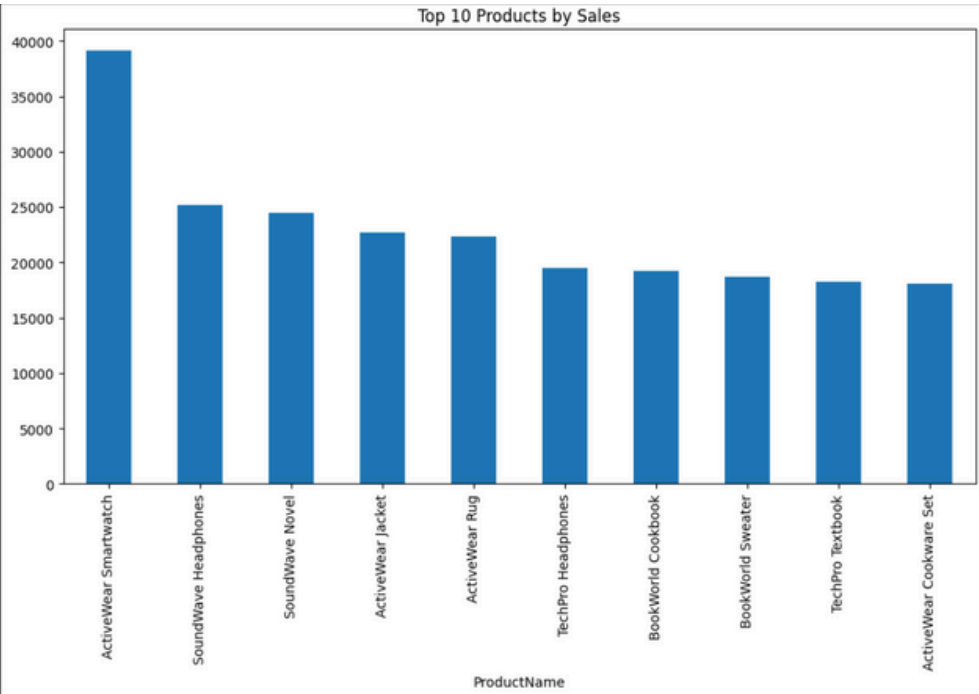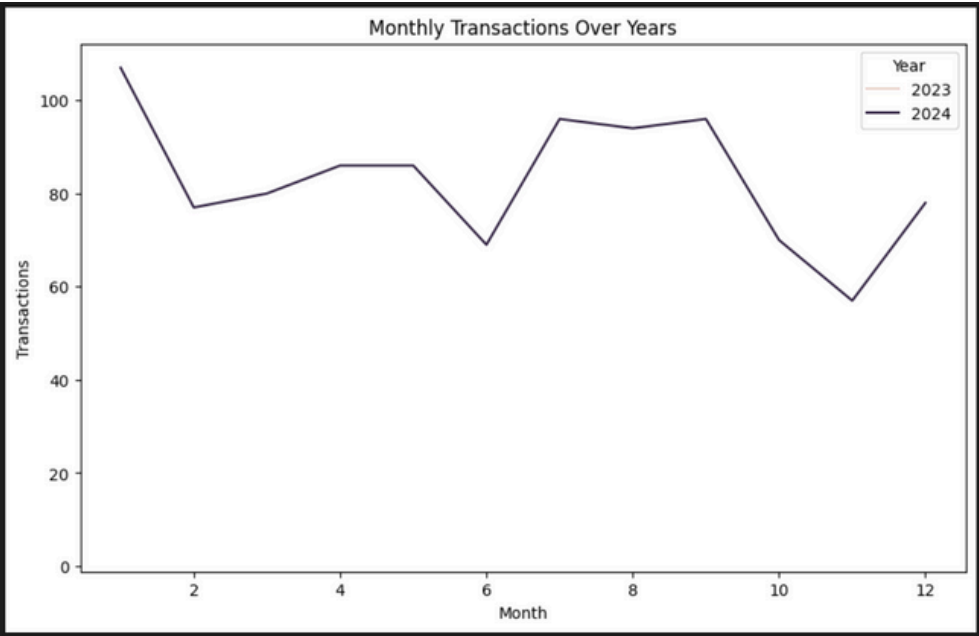## 6. Customer Retention and Loyalty

- o Loyal customers generate significant revenue.
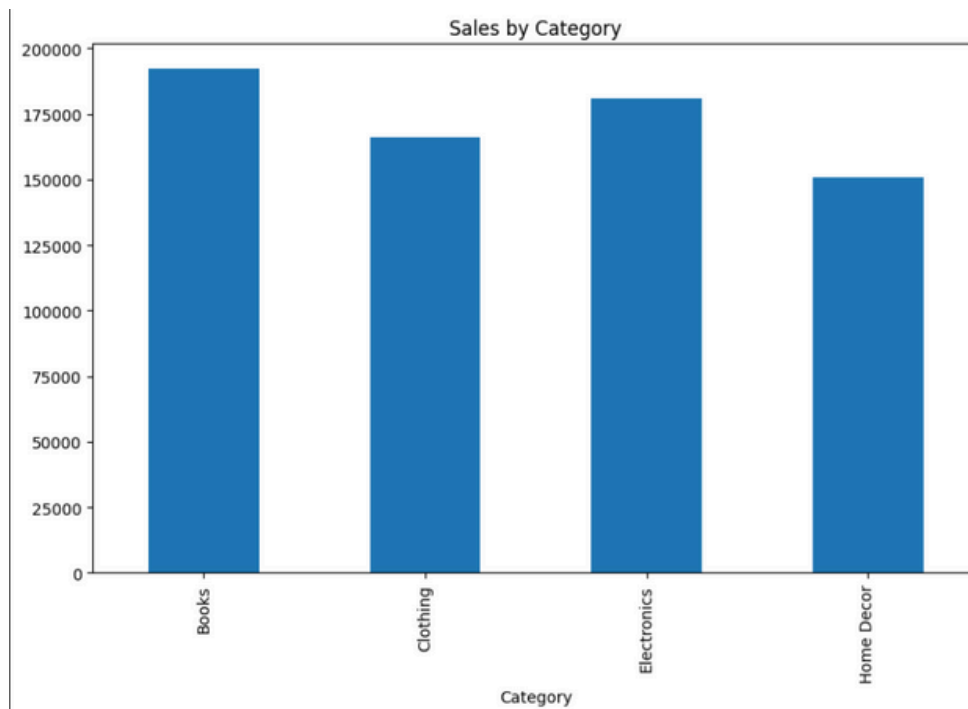- o Focus on retention strategies for repeat buyers.
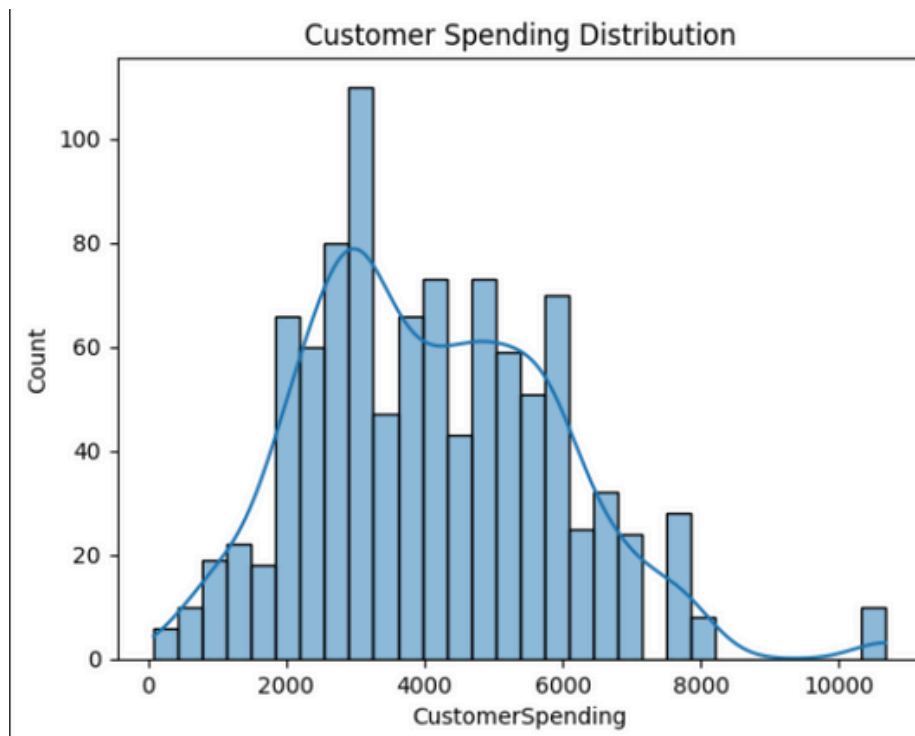
7. Customer Acquisition Trends

- o Monitors new customer acquisition over time.
- o Helps assess the e ectiveness of marketing campaigns.

8. Churn Analysis

- o The churn rate indicates customers making only one purchase.
- o Identifies revenue loss due to churn for corrective actions.

Monthly Transactions Over Years

Top 10 Products by Sales

Sales Distribution by Region

Customer Spending Distribution

Sales by Category

Revenue from loyal customers: 683654.59

New Customer Acquisition Trends

Churn Rate: 6.03%
Revenue Loss Due to Churn: 6340.969999999999
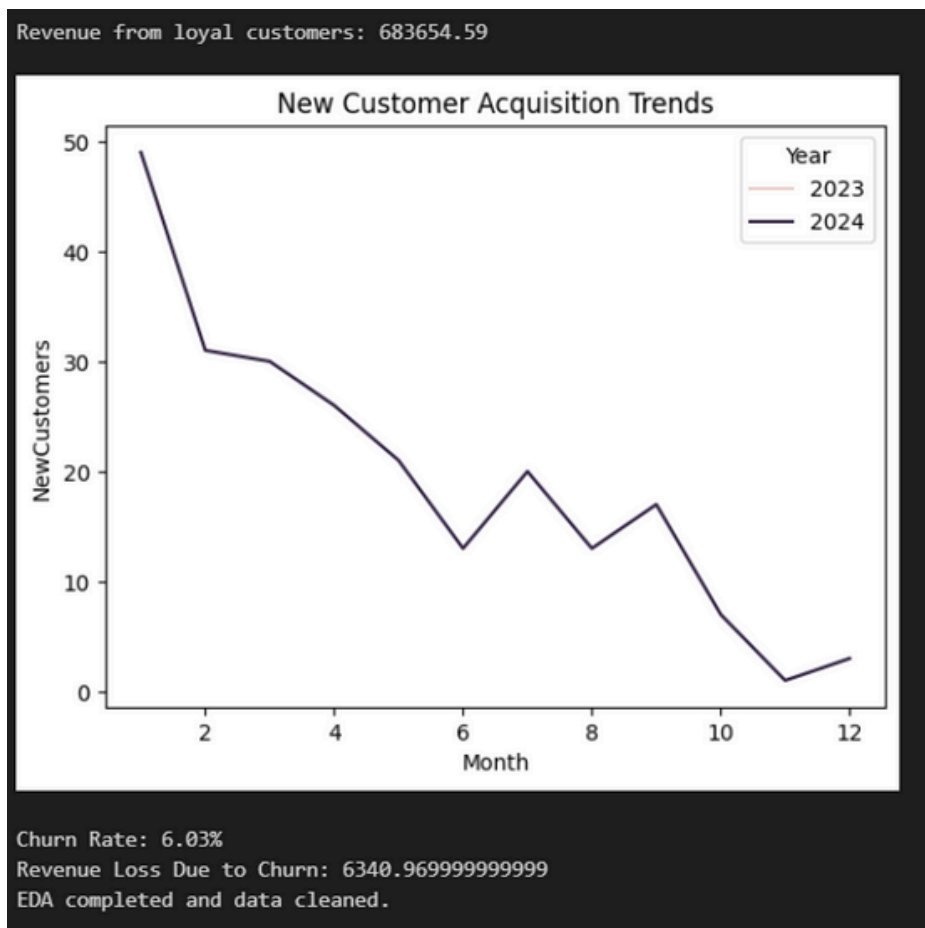EDA completed and data cleaned.

Image 1: Monthly Transactions Over Years
Trend: Transactions fluctuate across months for both 2023 and 2024.
Highlights: Peak transactions in January (>100). Lowest in October-November, with a slight recovery in December.
Comparison: 2023 had slightly higher transactions in early months than 2024.
Image 2: Top 10 Products by Sales
Best-Seller: ActiveWear Smartwatch leads with ~40,000 units sold.
Competitors: SoundWave Headphones and SoundWave Novel follow (~25,000 each).
Lower Sales: ActiveWear Cookware Set and TechPro Textbook round out the top 10.
Image 3: Sales Distribution by Region
Largest Share: South America (31.8%) dominates.
Others: Europe (24.1%), North America (22.1%), and Asia (22%) contribute evenly.