

Customer Segmentation & Business Insights Report

Prepared by: Riya Bose

Contents

1	Introduction	2
2	Business Insights from EDA	3
2.1	Most Revenue-Generating Regions	3
2.2	Top Categories	3
2.3	Customer Trends (High Spenders)	4
2.4	Seasonal Trends	4
2.5	Underperforming Products	6
2.6	Repeat Customers vs. One-Time Shoppers	6
2.7	Top Products by Profit Margin	6
3	Conclusion	9

1. Introduction

This report provides key business insights derived from customer transactions, segmentation analysis, and exploratory data analysis (EDA). The goal is to identify opportunities to improve customer retention, increase revenue, and enhance marketing strategies.

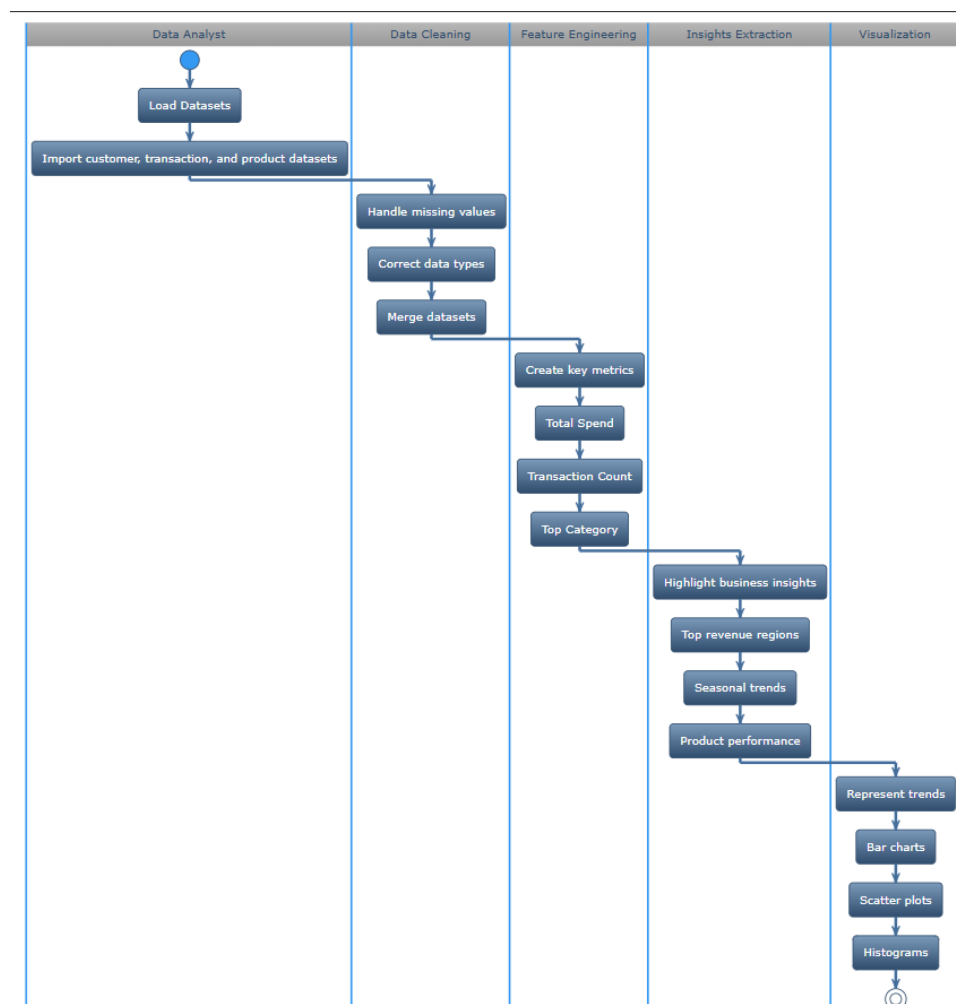


Figure 1: Work Flow Diagram

2. Business Insights from EDA

2.1 Most Revenue-Generating Regions

Insight: Certain regions significantly contribute to revenue generation.

Highlights:

- South America & Europe lead in revenue generation.
- North America & Asia show potential for growth but currently underperform.

Actionable Strategy:

- Increase marketing budgets in high-performing regions.
- Improve customer acquisition in low-performing regions through localized campaigns.

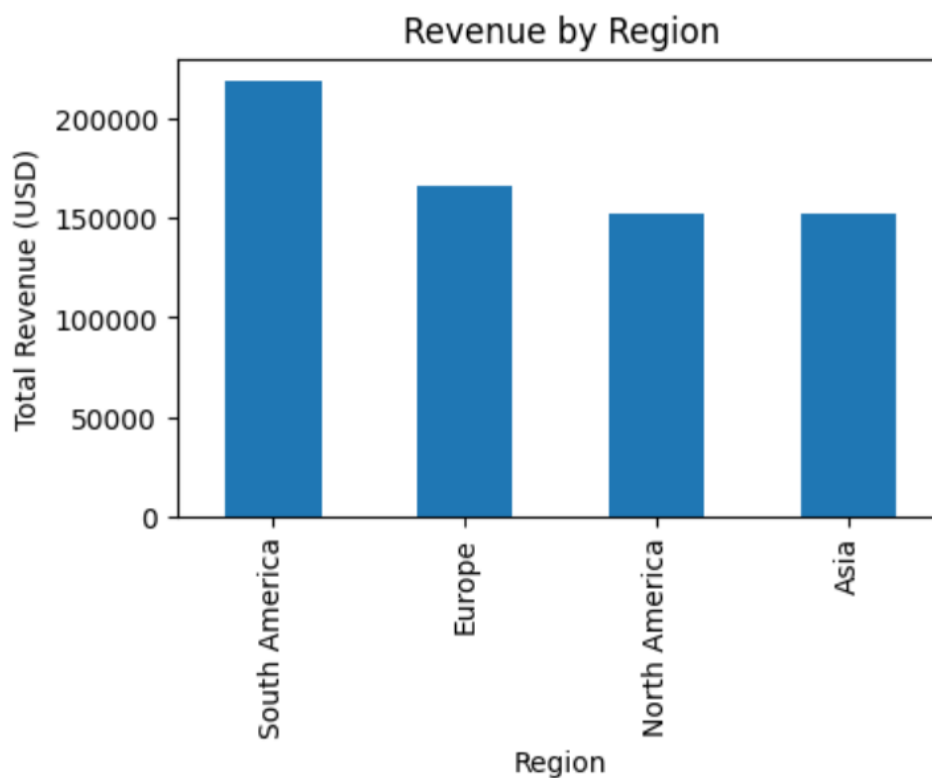


Figure 2: Most Revenue-Generating Regions

2.2 Top Categories

Insight: Electronics & Books dominate sales.

Highlights:

- Electronics & Books account for the majority of total revenue.
- Clothing & Home Decor have steady but lower sales volumes.

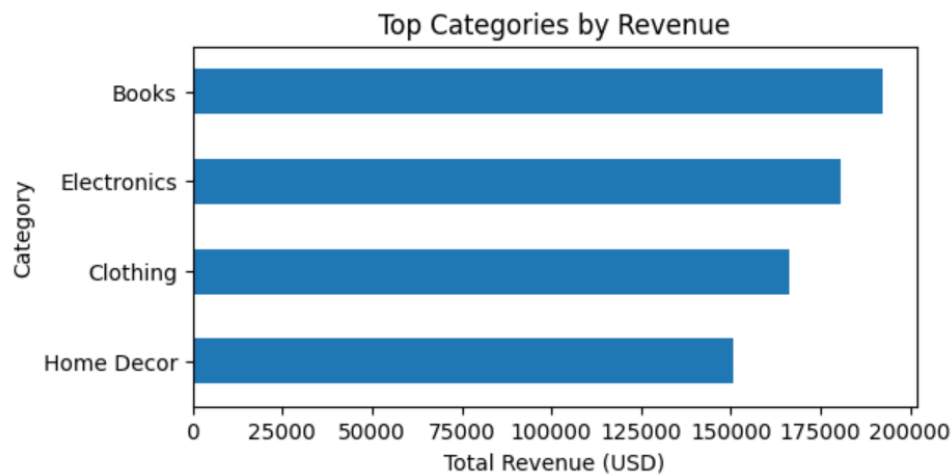


Figure 3: Top Categories

Actionable Strategy:

- Promote high-margin categories like Electronics.
- Bundle slow-moving products with high-demand ones to increase sales.

2.3 Customer Trends (High Spenders)

Insight: Top 10% of customers contribute significantly to revenue.

Highlights:

- High-value customers have frequent transactions and higher purchase values.

Actionable Strategy:

- Implement VIP loyalty programs with exclusive perks.
- Use targeted ads for high-value customers.

2.4 Seasonal Trends

Insight: Revenue spikes during holiday seasons and key shopping months.

Highlights:

- Black Friday, Christmas, and New Year show significant sales increases.

Actionable Strategy:

- Plan seasonal sales campaigns in advance.
- Optimize inventory to prevent stockouts during peak demand periods.

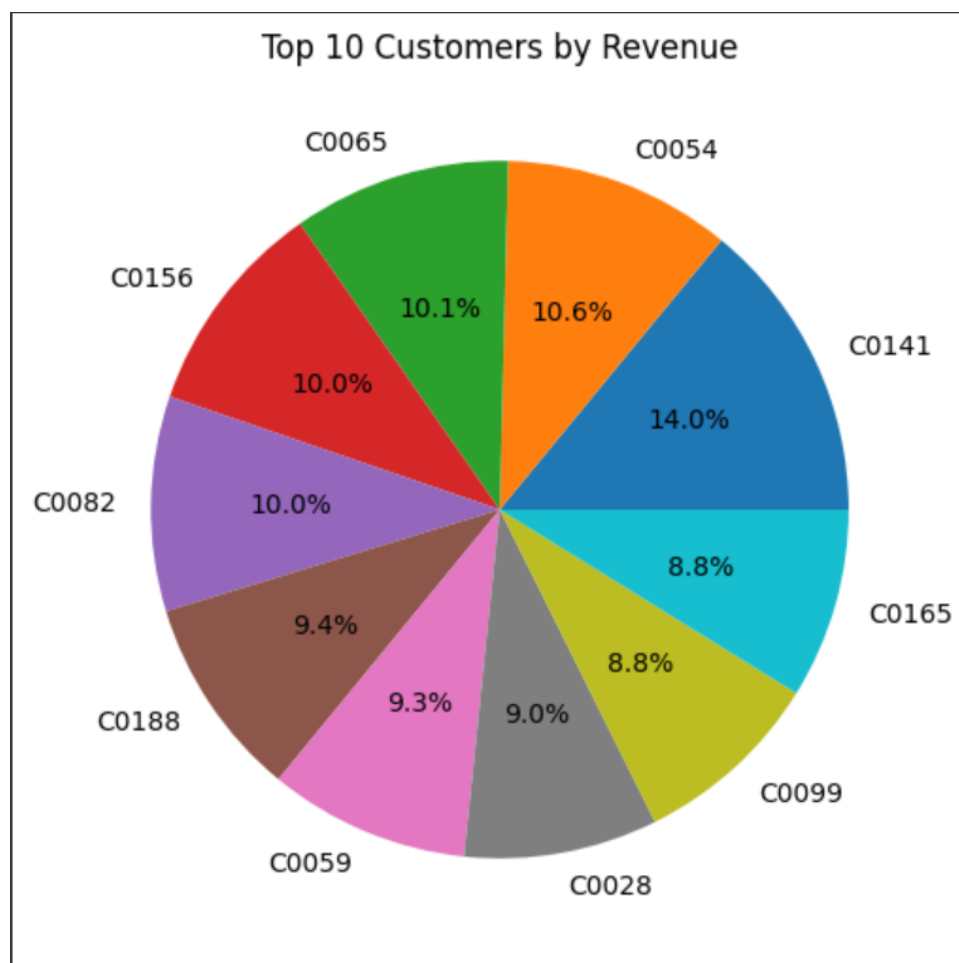


Figure 4: Customer Trends as Spenders

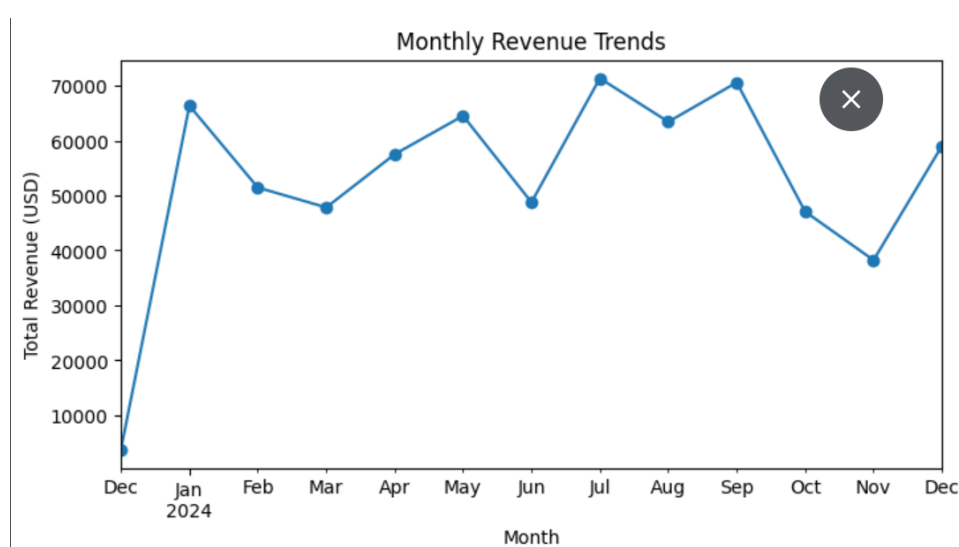


Figure 5: Seasonal Trends in Revenue

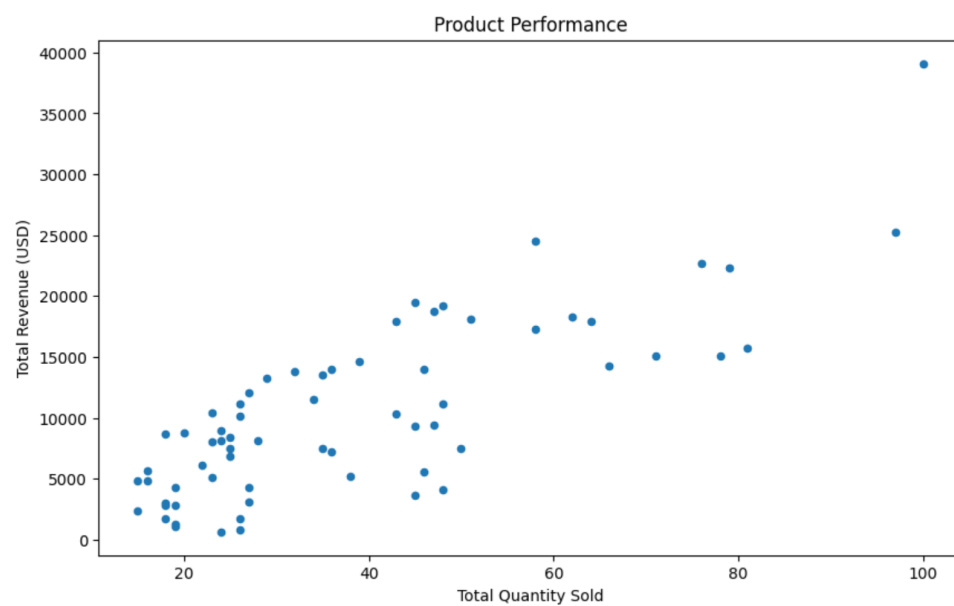


Figure 6: Product Performance in terms of quantity sold

2.5 Underperforming Products

Insight: Certain products have low sales and high inventory levels.

Highlights:

- Unsold inventory increases storage costs and reduces profitability.

Actionable Strategy:

- Offer discounts and clearance sales to clear old inventory.
- Reduce procurement of consistently low-performing items.

2.6 Repeat Customers vs. One-Time Shoppers

Insight: Repeat customers generate higher lifetime value.

Highlights:

- A significant percentage of customers only purchase once.

Actionable Strategy:

- Re-engage one-time shoppers through email campaigns.
- Introduce loyalty rewards to encourage repeat purchases.

2.7 Top Products by Profit Margin

Insight: Some products generate high profits despite lower sales volumes.

Highlights:

- Electronics & Premium Home Decor items have high profit margins.

Actionable Strategy:

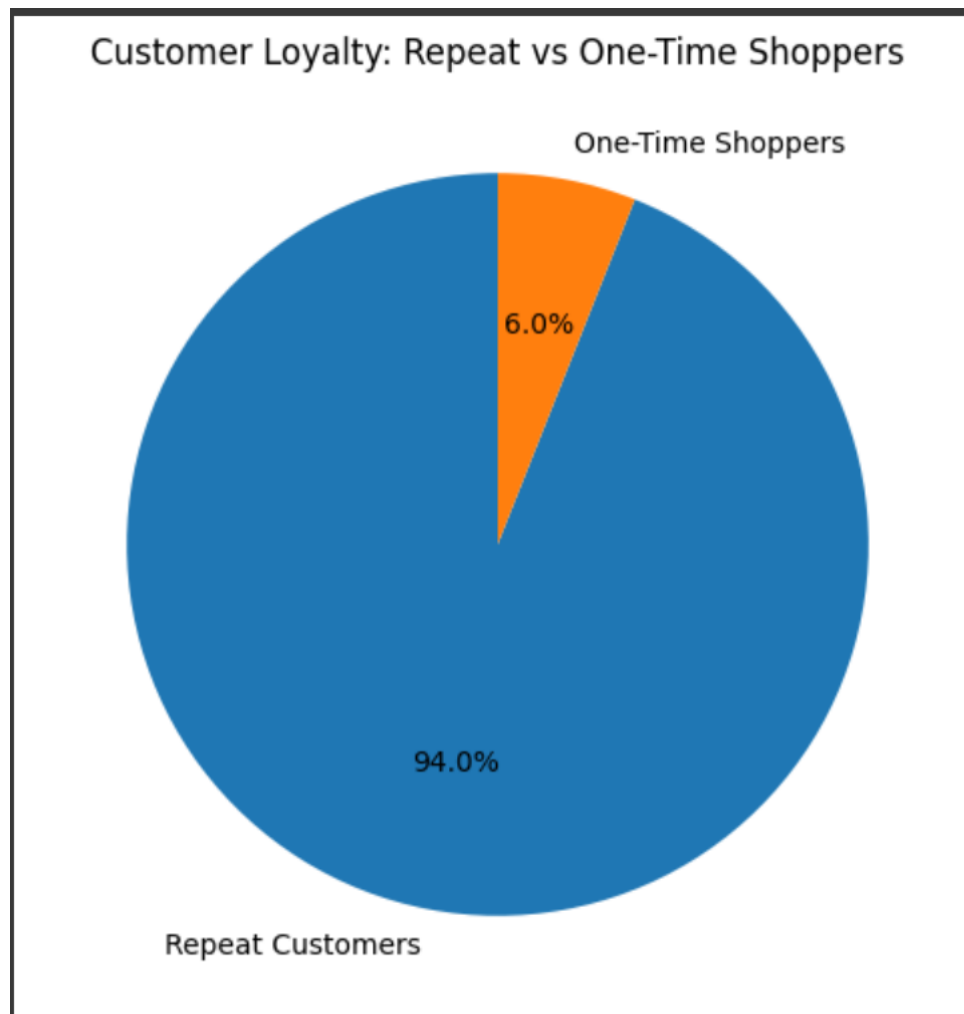


Figure 7: Repeat Customers vs. One-Time Shoppers

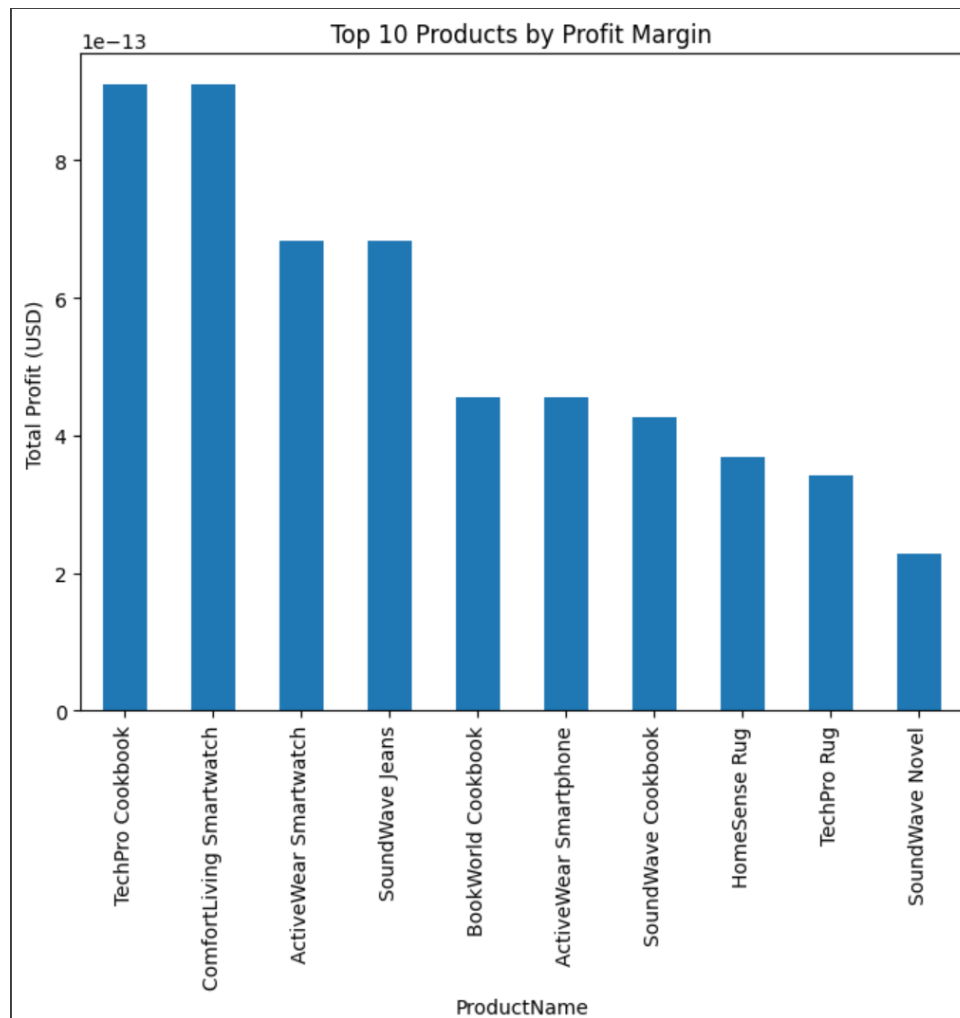


Figure 8: Top Products by Profit Margin

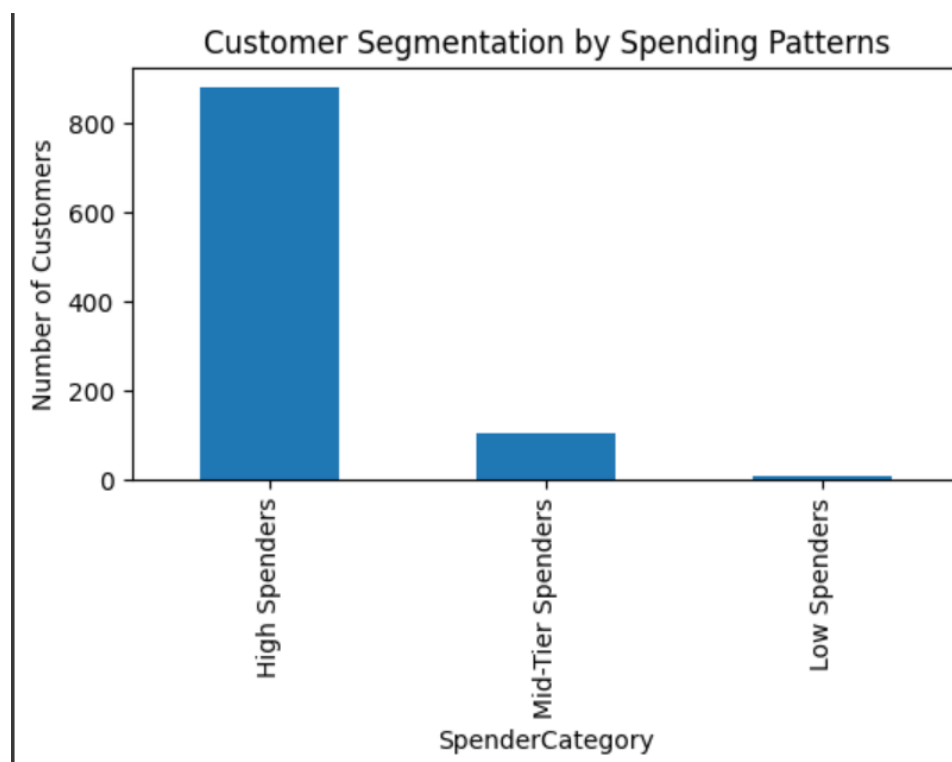


Figure 9: Customer Segmentation by Spending patterns

- Focus marketing efforts on high-margin products.
- Test dynamic pricing strategies for premium products.

3. Conclusion

The insights derived from EDA provide actionable strategies to optimize revenue, improve customer engagement, and streamline operations:

- Increase marketing efforts in high-performing regions and categories.
- Retain high-value customers through loyalty programs and personalized offers.
- Address underperforming products and capitalize on seasonal trends.

By implementing these strategies, businesses can achieve measurable improvements in revenue and customer satisfaction.