

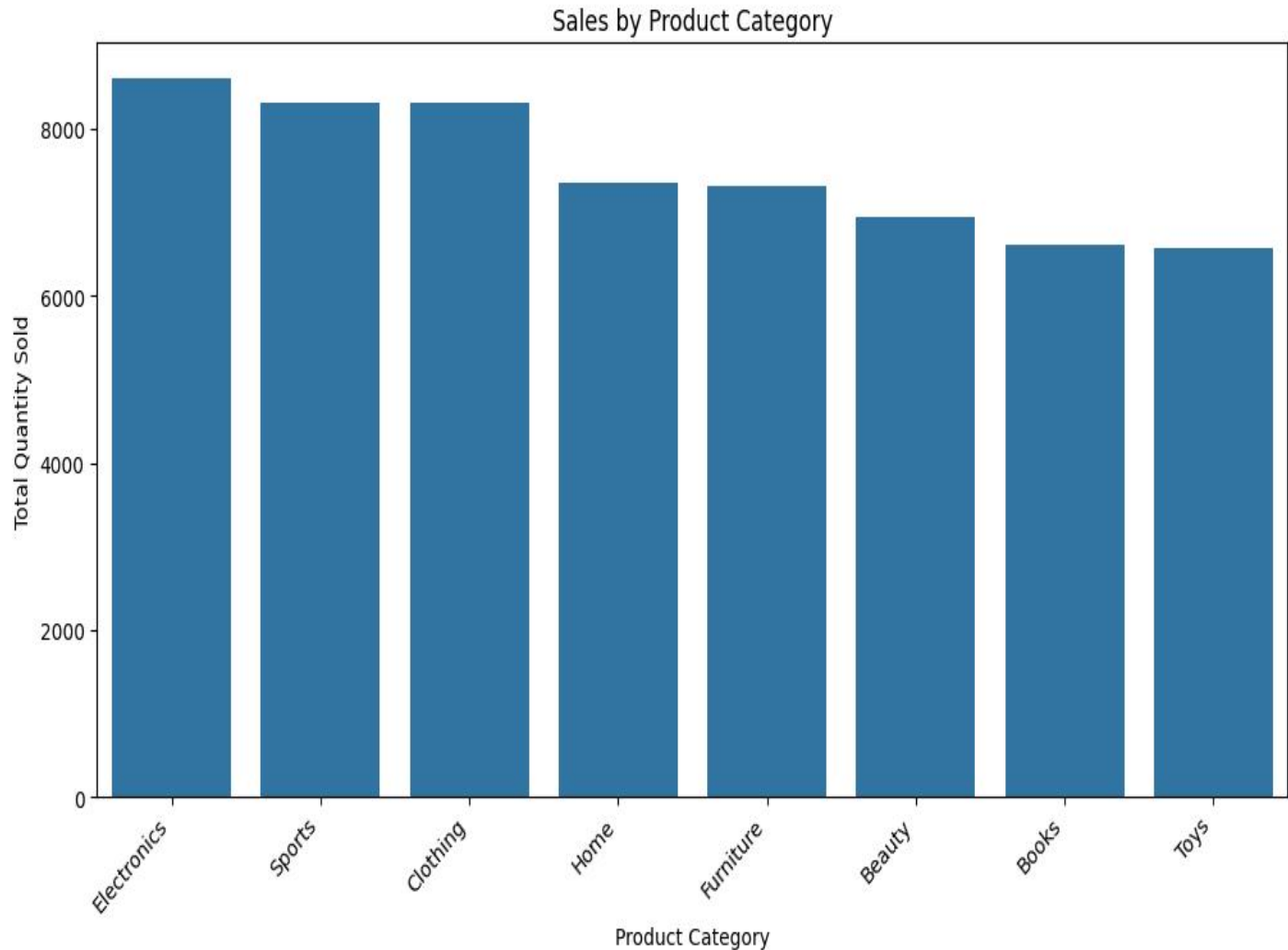
Customer Purchase Behavior Analysis Report

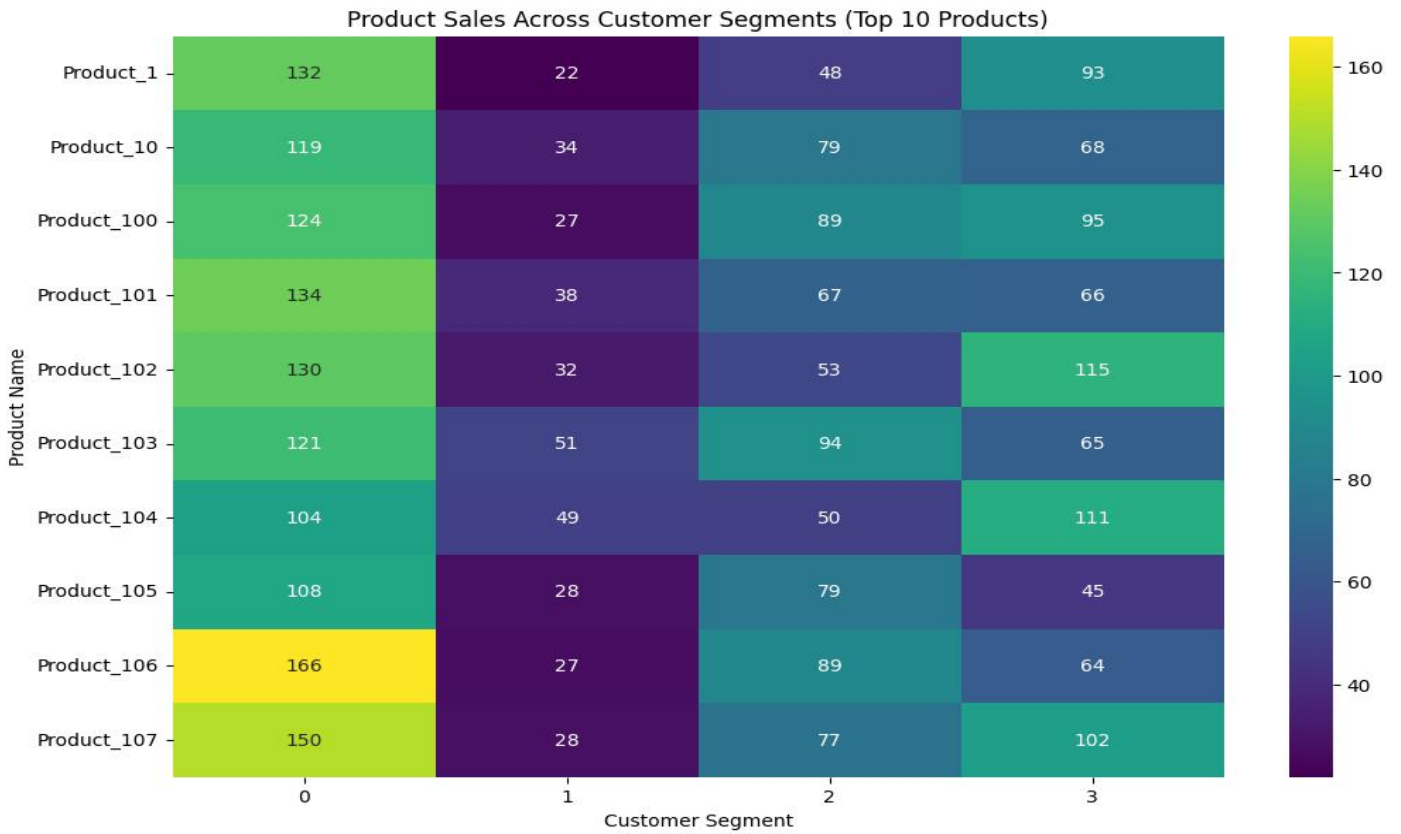
Key Insights -

A. Customer Segmentation Analysis:

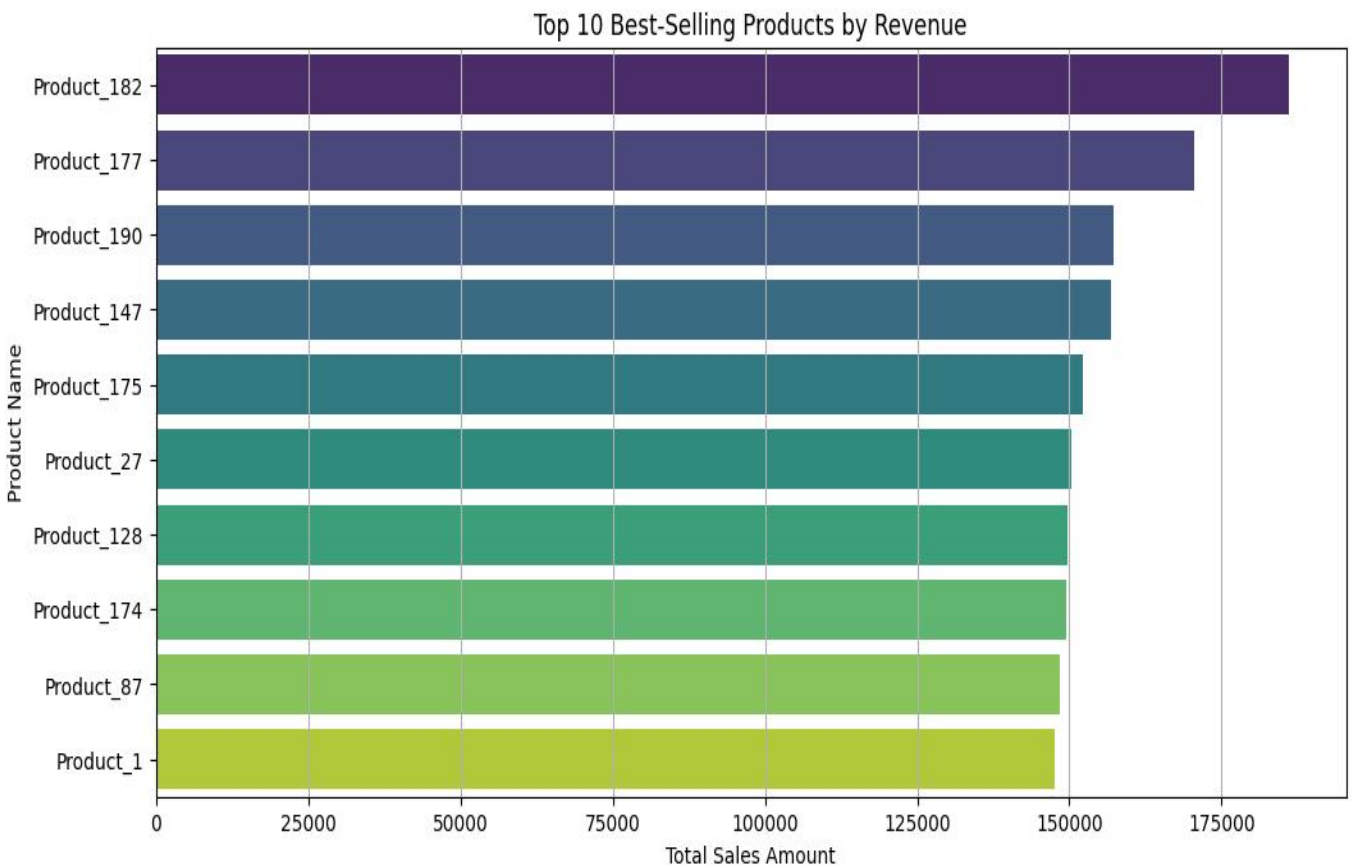
- Customers were segmented using **RFM (Recency, Frequency, Monetary)** analysis and **K-Means Clustering**.
- **Four distinct customer groups** were identified, with varying purchasing behaviors.
 - The **most valuable customer group** (Cluster 3) exhibited high spending, frequent purchases, and recent engagement.
 - A segment of customers showed low frequency and monetary values, indicating potential churn risks.

B. Product Performance Analysis:



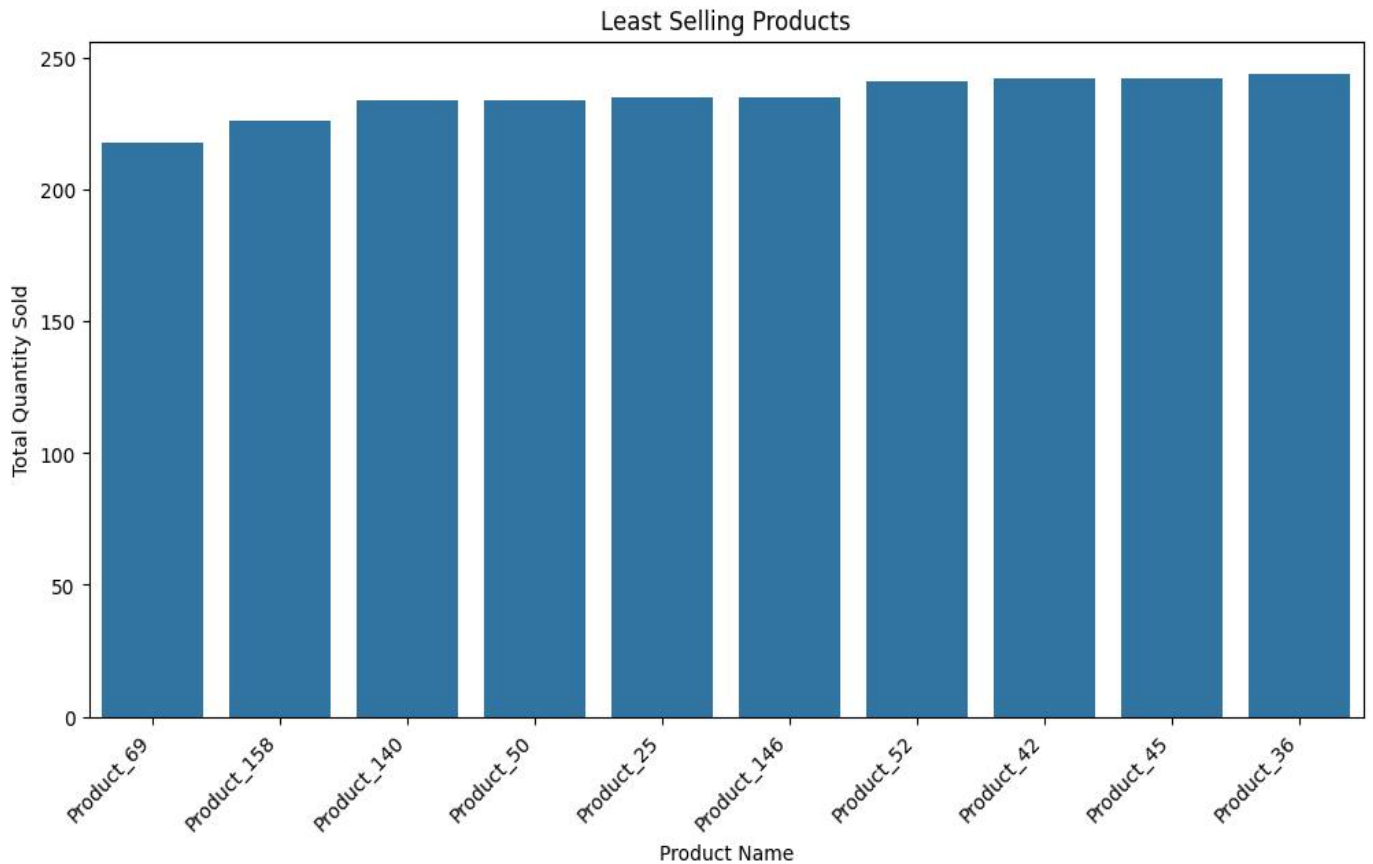


- **Top 10 Best-Selling Products by Revenue:**
 - These products account for a significant portion of total sales, highlighting their importance in driving revenue.



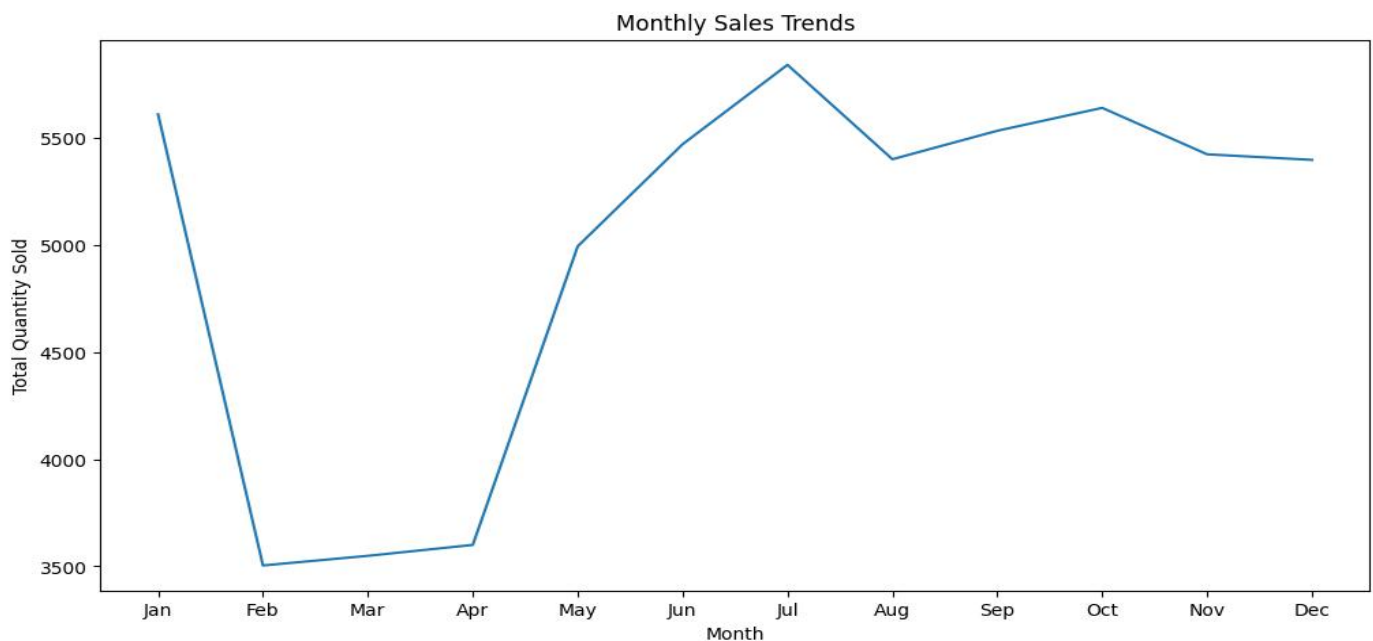
- **Least-Selling Products:**

- Identified products with the lowest sales, suggesting the need for promotional strategies or reevaluation of their place in the inventory.

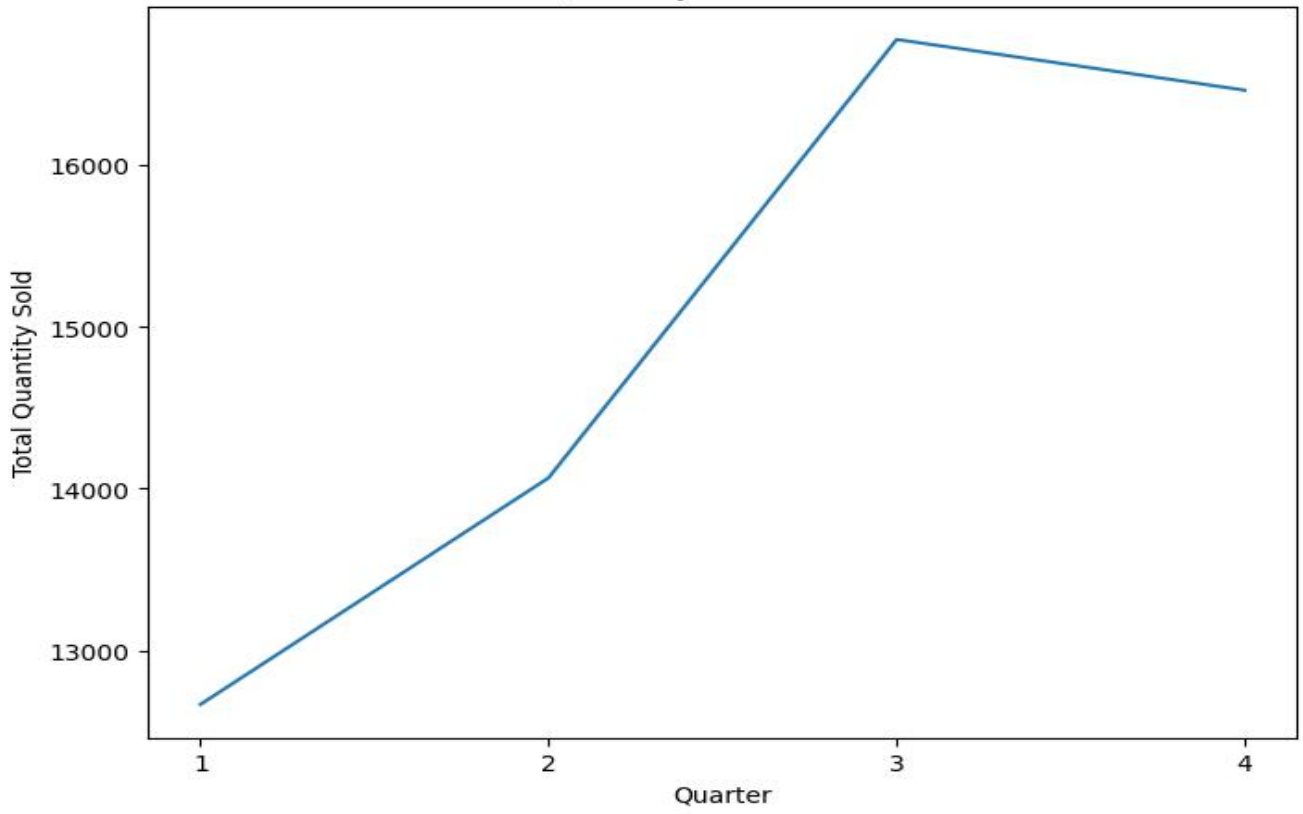


C. Seasonal Trends & Sales Analysis:

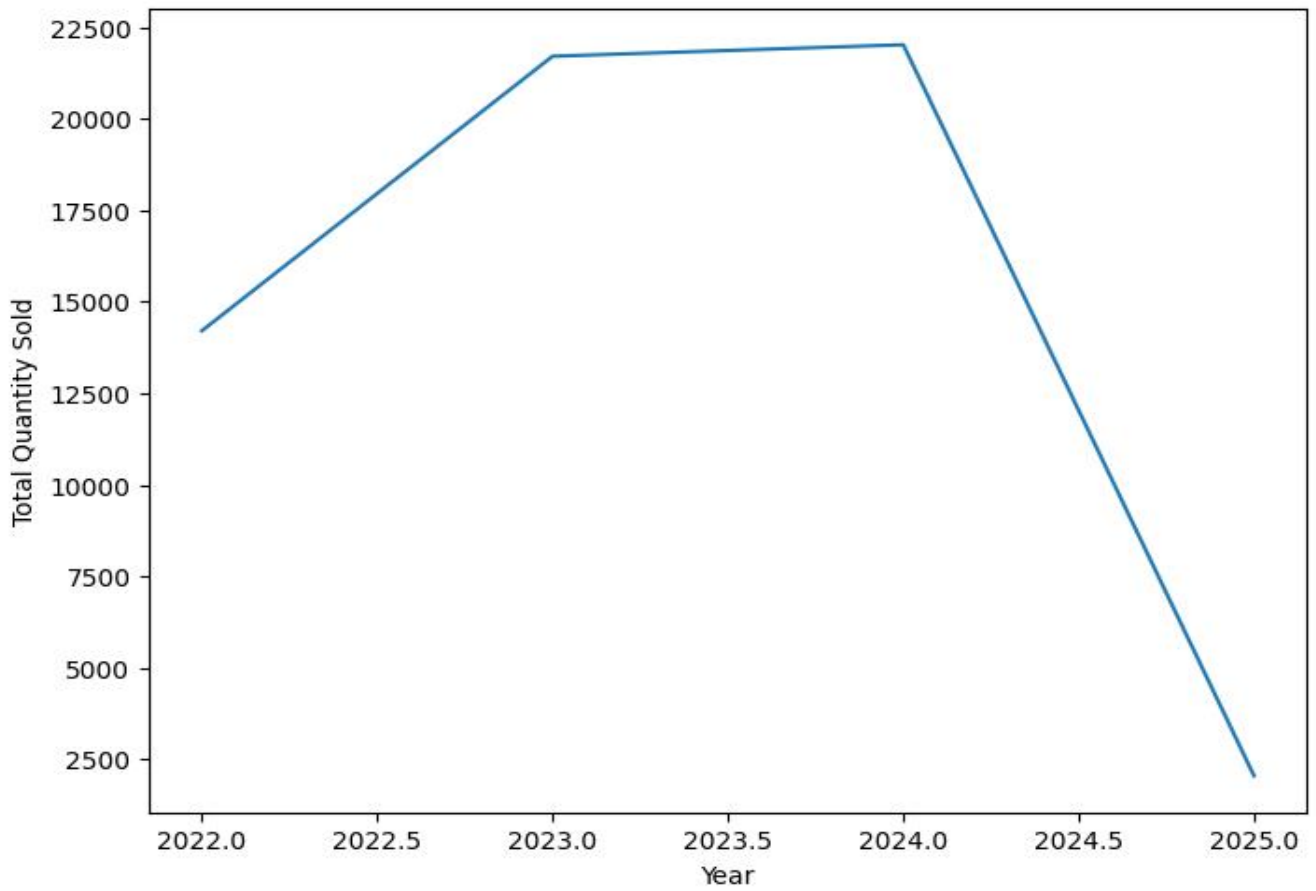
- Clear **seasonal spikes in sales** were identified during specific periods (e.g., holidays, promotional events).
- Sales trends indicated opportunities to optimize stock levels and marketing campaigns around peak seasons.

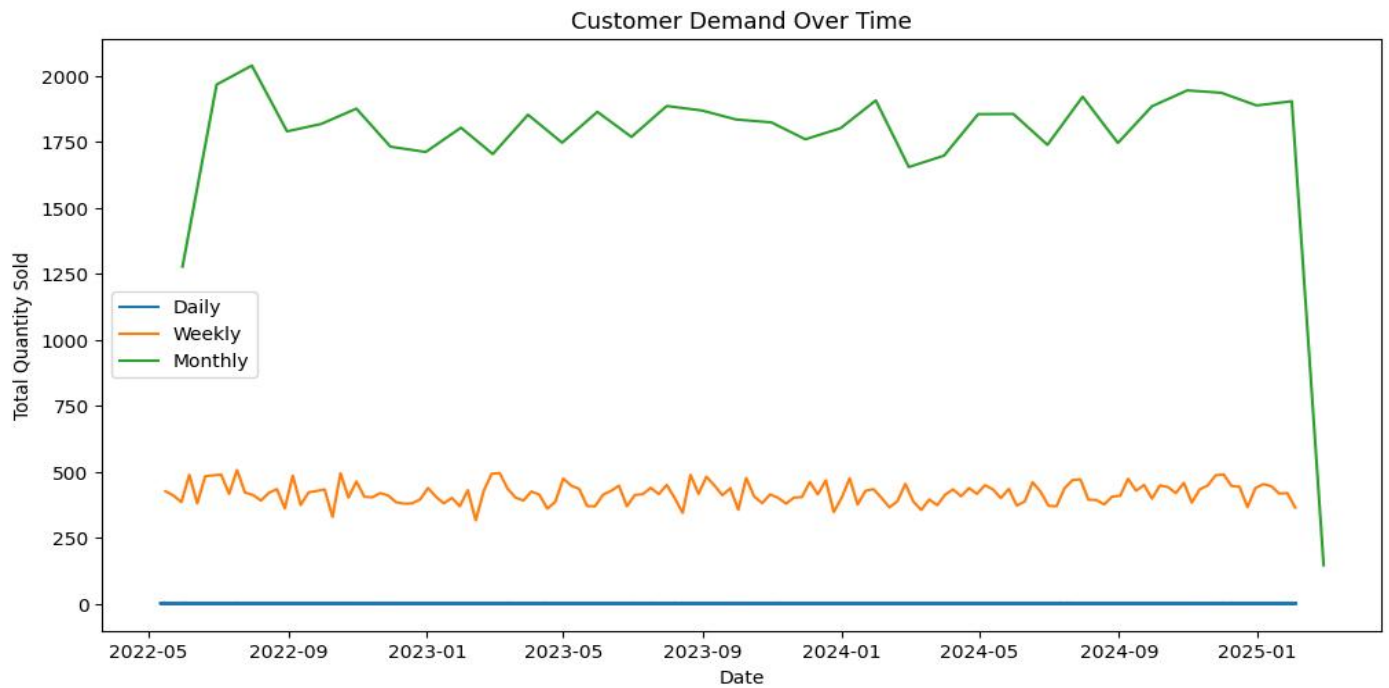


Quarterly Sales Trends



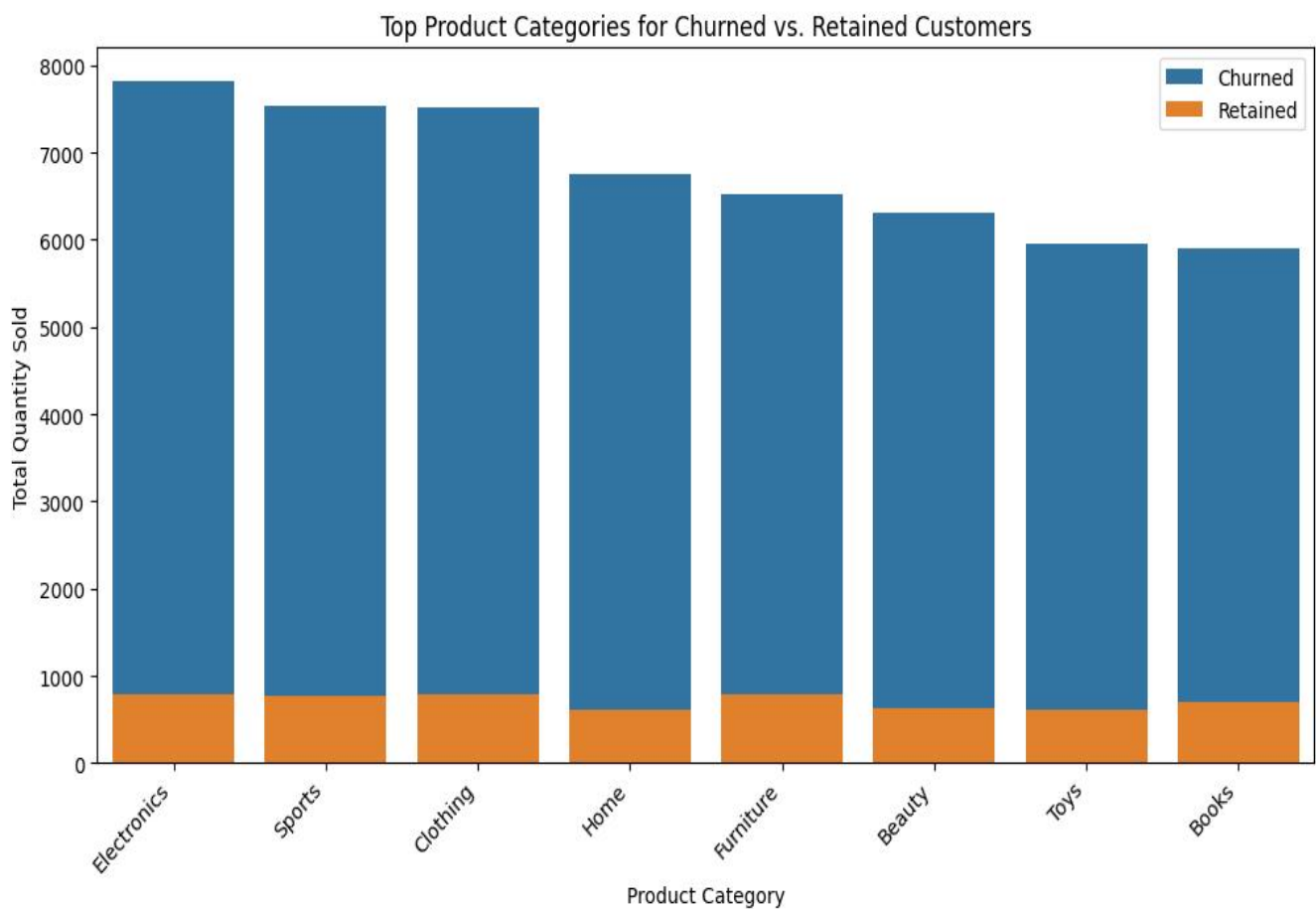
Annual Sales Trends





D. Customer Retention & Churn Analysis:

- **Churn-prone customer groups** were identified based on low recency and frequency metrics.
- Factors contributing to churn included lack of engagement and infrequent purchases.



Business Recommendations -

A. Improve Customer Retention:

1. Personalized Communication:

- Implement targeted email campaigns based on customer purchase history.
- Send personalized product recommendations and exclusive offers.

2. Loyalty Programs:

- Introduce tiered loyalty programs offering rewards for frequent purchases.
- Provide exclusive benefits to high-value customer segments.

3. Exceptional Customer Service:

- Enhance customer support channels (e.g., live chat, proactive outreach).
- Address feedback promptly to build trust and loyalty.

B. Boost Product Sales:

1. Promote Best-Selling Products:

- Highlight top products in marketing campaigns and cross-sell opportunities.

2. Revitalize Least-Selling Products:

- Offer discounts or bundle deals to increase the appeal of underperforming products.
- Reevaluate product listings based on market demand.

C. Optimize Seasonal Campaigns:

1. Leverage Peak Seasons:

- Align marketing efforts and stock levels with identified seasonal trends.
- Run special promotions during high-sales periods to maximize revenue.

D. Reduce Customer Churn:

1. Re-engagement Campaigns:

- Send win-back emails with special offers to inactive customers.

2. Tailored Offers for High-Risk Segments:

- Provide customized incentives to demographics identified as churn-prone.

3. **Continuous Monitoring:**

- Regularly track customer retention metrics and adjust strategies accordingly.

Conclusion

By leveraging insights from customer segmentation, product performance, and churn analysis, businesses can implement targeted strategies to boost revenue, enhance customer loyalty, and optimize operational efficiency.