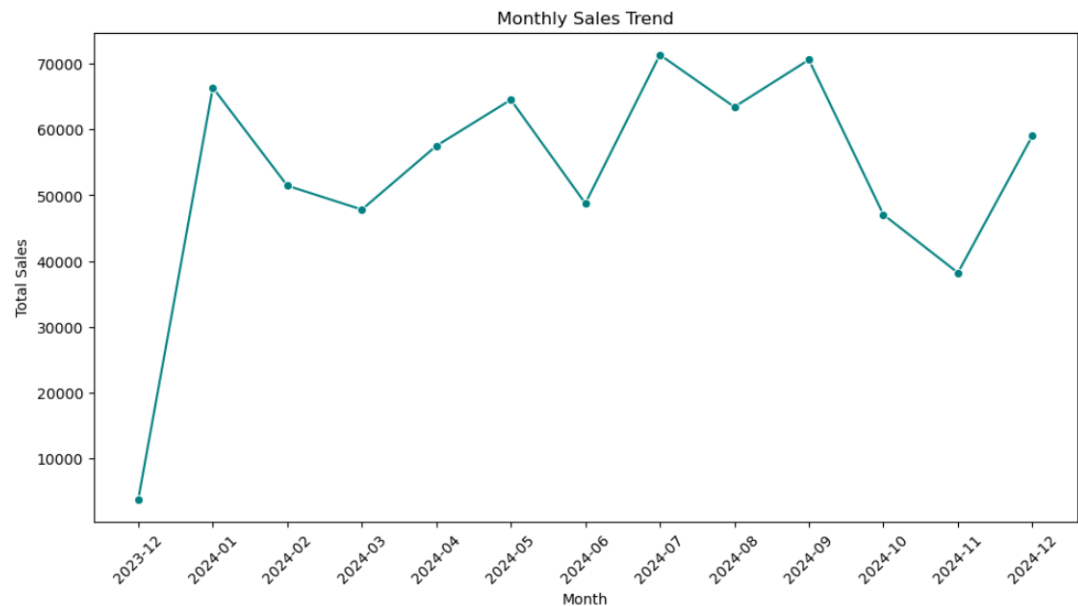


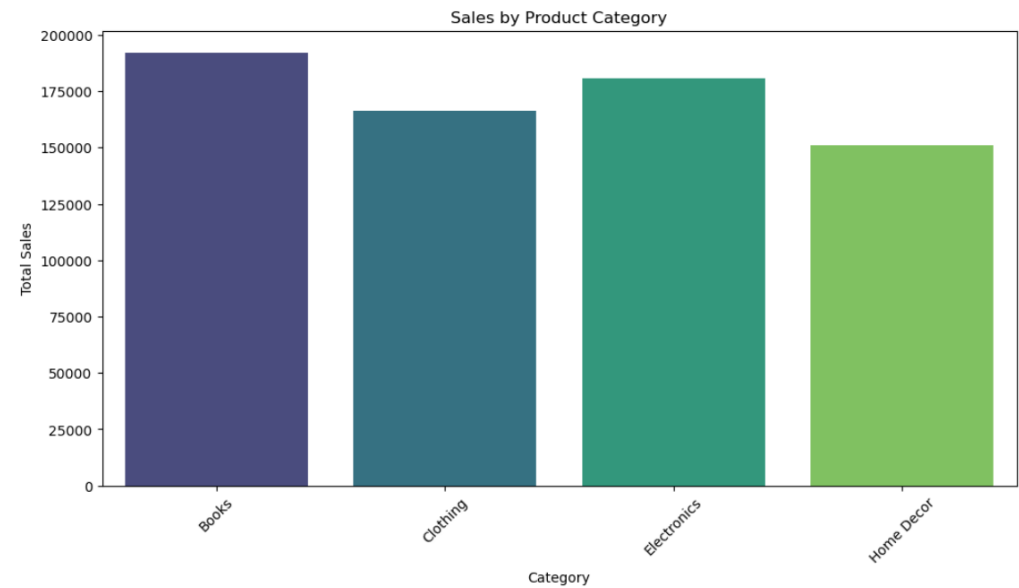
1. Seasonality in Sales

The data reveals a clear seasonality in sales as show in the below line plot, with specific months experiencing higher transaction volumes. This indicates a potential for higher profits during these months. Businesses can focus on targeted marketing and promotional campaigns during peak months to capitalize on the increased demand and boost revenue.



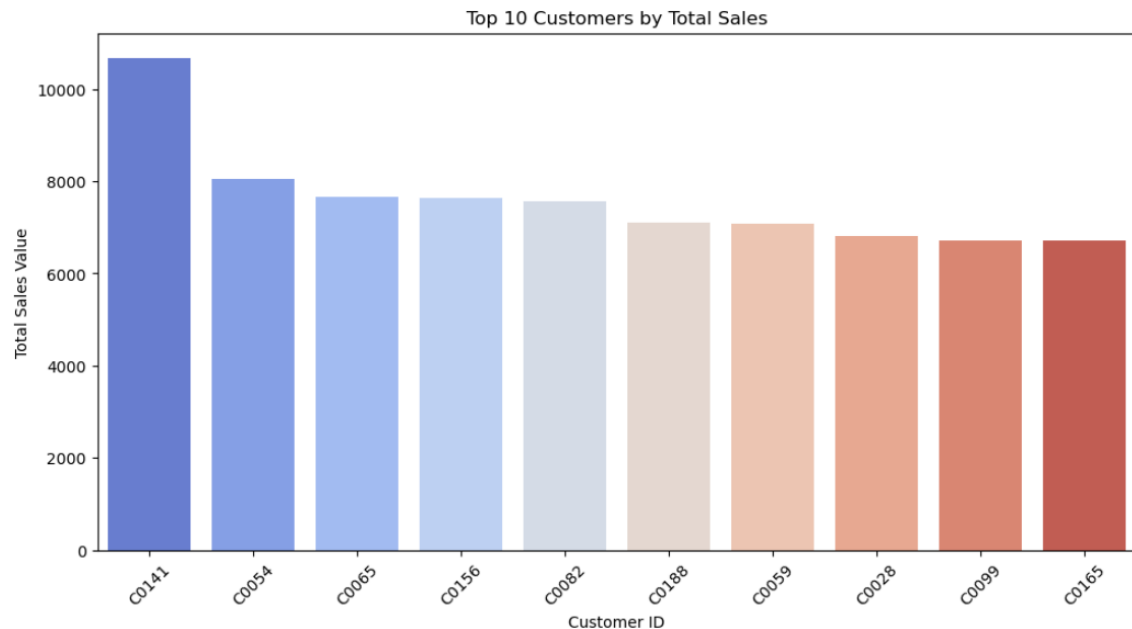
2. Product Performance

Certain products consistently perform better as shown in bar plot below , generating higher total sales value. These products likely meet higher customer demand or are priced attractively. Focusing on optimizing the inventory of these high-performing products can further increase sales and reduce the need for markdowns on slower-moving items.



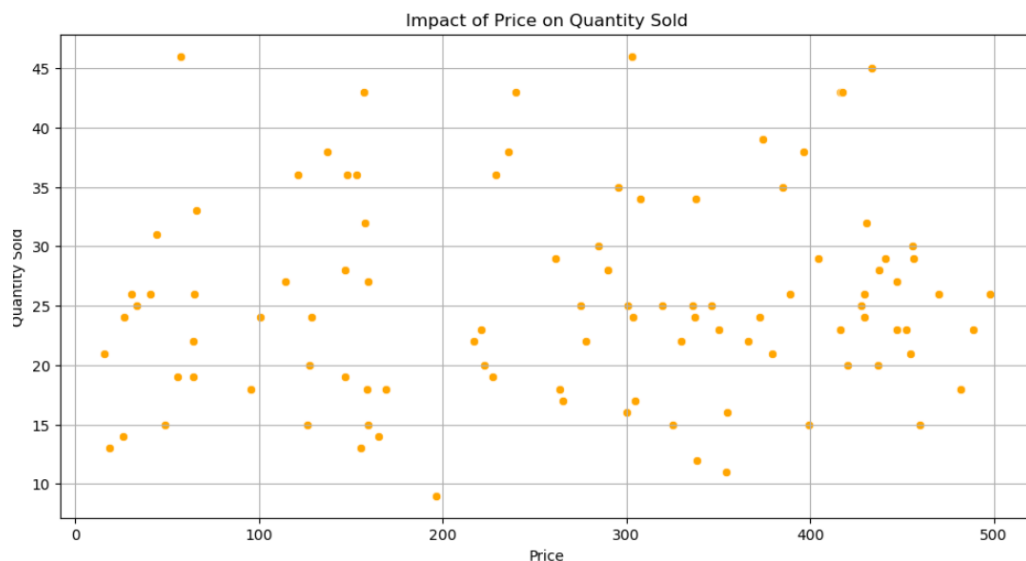
3. Customer Segmentation

A significant pattern of repeat customers has been observed as shown in bar plot below. This highlights a loyal customer base that can be obtained through loyalty programs or personalized offers. By leveraging customer data, businesses can create targeted marketing campaigns to enhance customer retention and increase their lifetime value.



4. Impact of Pricing on Sales

The analysis shows that products within a certain price range tend to sell in larger volumes as shown in scatter plot below. This highlights the importance of strategic pricing. Offering discounts, bundling products, or adjusting prices for underperforming items can help boost sales and attract price-sensitive customers.



5. Inventory Optimization

The most popular products tend to have adequate stock levels as shown in the bar plot below. However, instances of stockouts for high-demand products indicate missed sales opportunities. Aligning stock levels with product demand through better inventory management can prevent both overstocking and understocking, ultimately increasing profitability.

