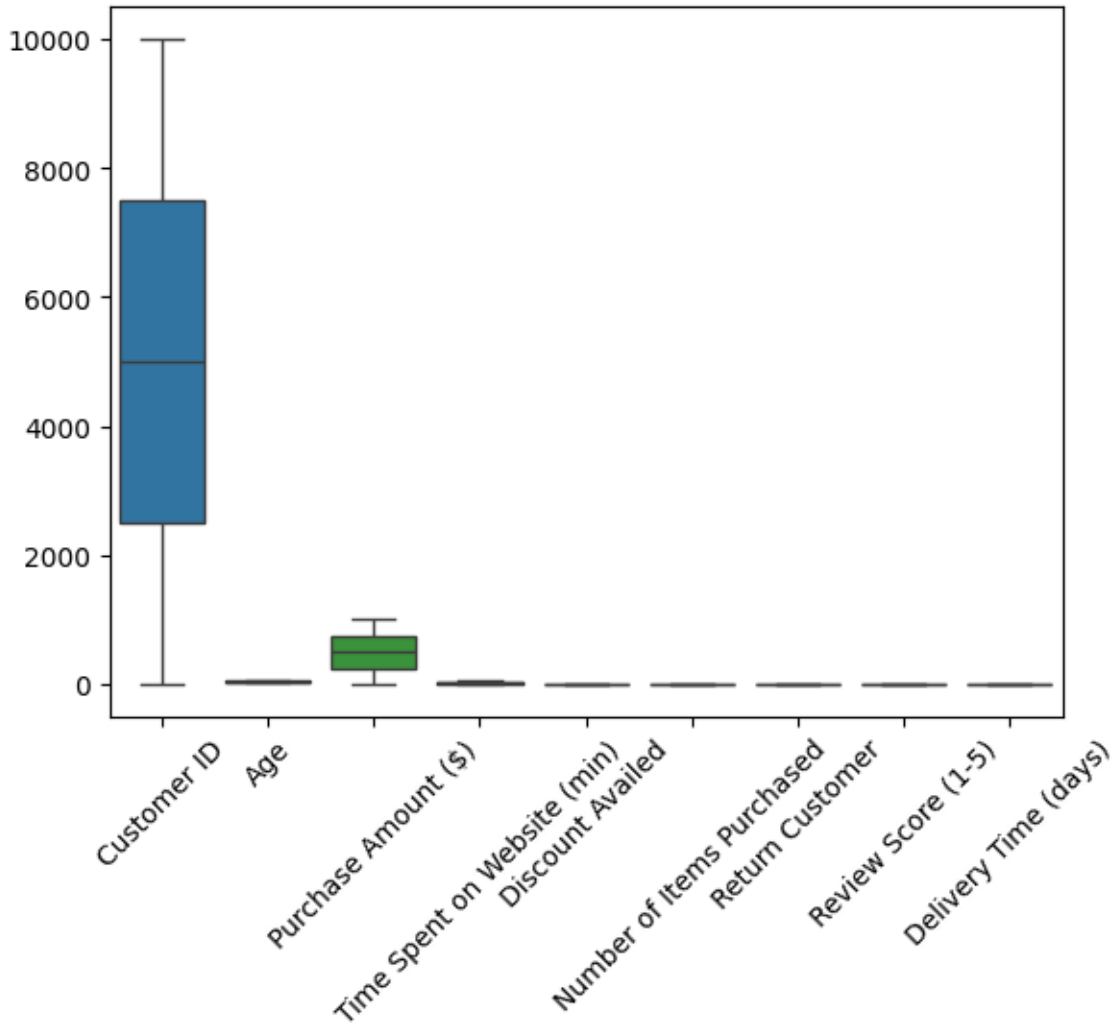

Figure : 1

Explanation of Figure-1 : This box plot is a visual tool for detecting outliers across various features of the dataset. The large box for **Customer ID** indicates a wide distribution, but no significant outliers are visible for this variable. **Purchase Amount ($)** has a smaller range. Other variables such as **Age**, **Time Spent on Website (min)**, and **Number of Items Purchased** have much smaller ranges, showing that their values are relatively consistent across customers.

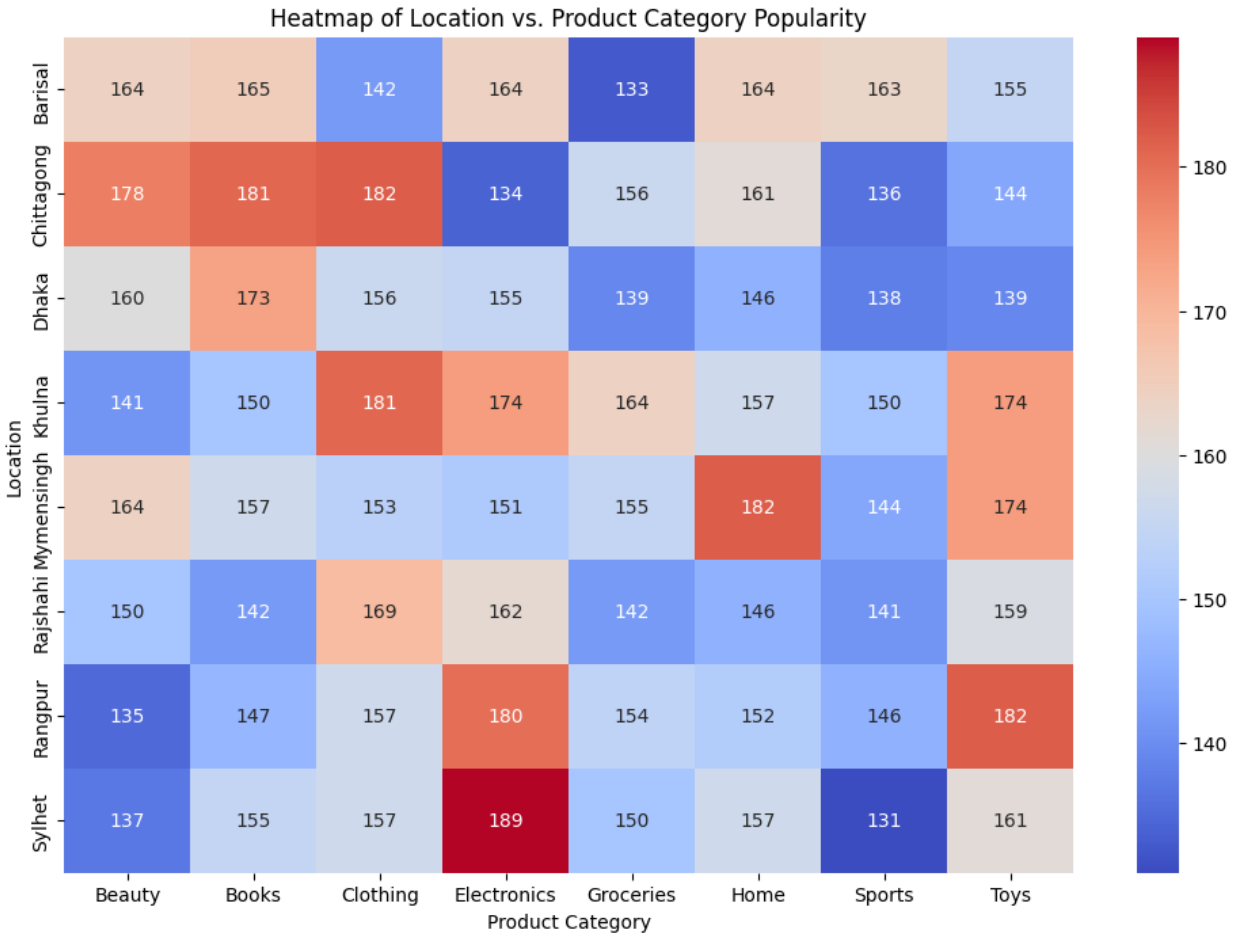

Figure : 2

Explanation of Figure-2: This heatmap illustrates the popularity of different product categories across various locations. The intensity of the colors shows which product categories are more popular in specific locations. For example, Electronics are highly popular in Chittagong and Sylhet, indicated by the darker red hues, while categories like Books and Beauty are less popular in these areas, represented by cooler blue tones. Groceries also have significant popularity in Khulna and Rangpur.

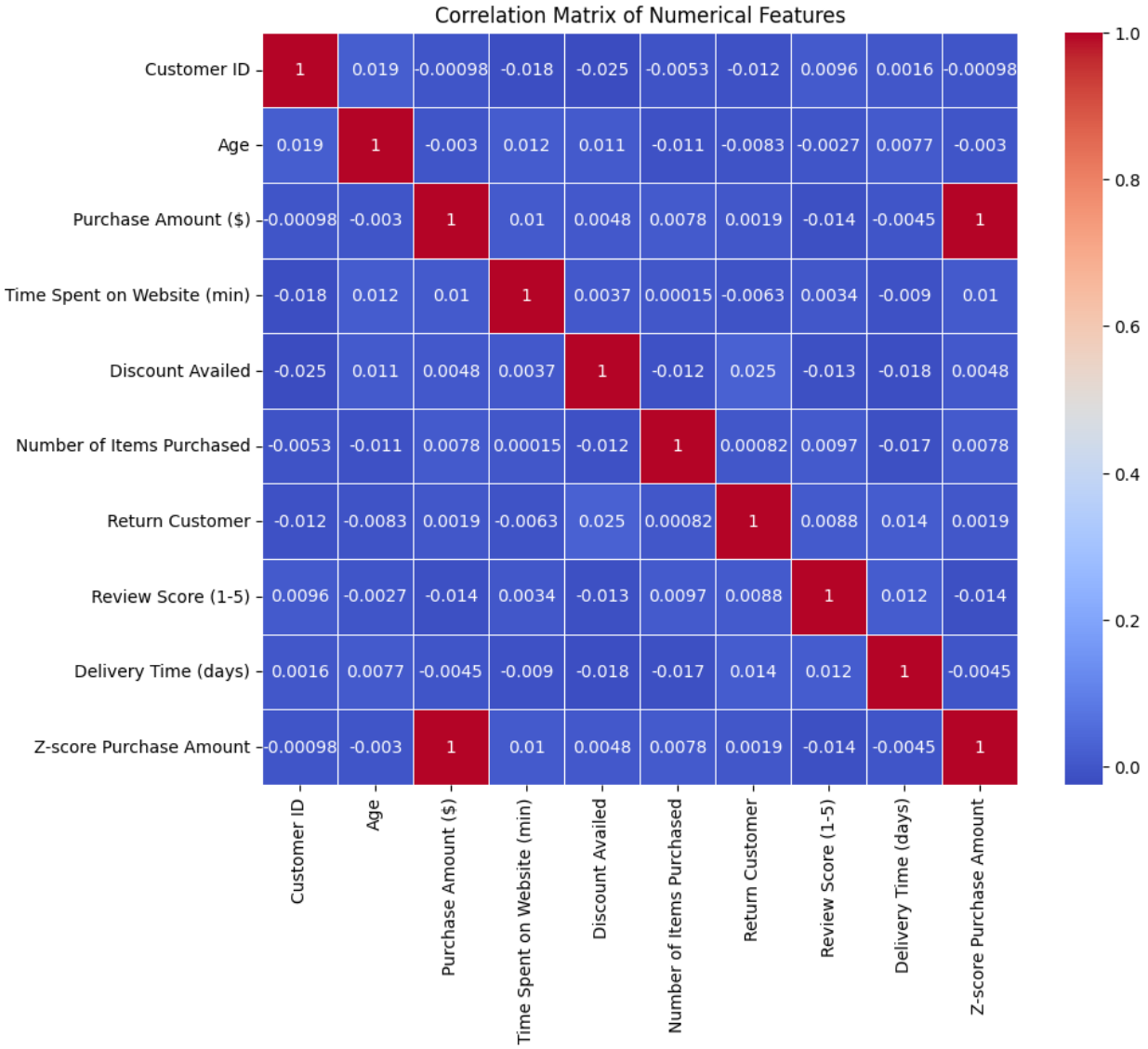

Figure: 3

Explanation of Figure-3: This correlation matrix visualizes the relationships between numerical features in the dataset. The values range from -1 to 1, where 1 indicates a perfect positive correlation, -1 indicates a perfect negative correlation, and 0 suggests no correlation. Most features show very low correlations with each other, as seen by the predominance of blue in the matrix. For example, Age and Purchase Amount ($) have almost no correlation, while Number of Items Purchased and Return Customer also show very weak correlations. The only perfect correlations (value of 1) are between identical variables, as expected. Overall, the low correlation between most features suggests that these variables are largely independent of one another in this dataset.

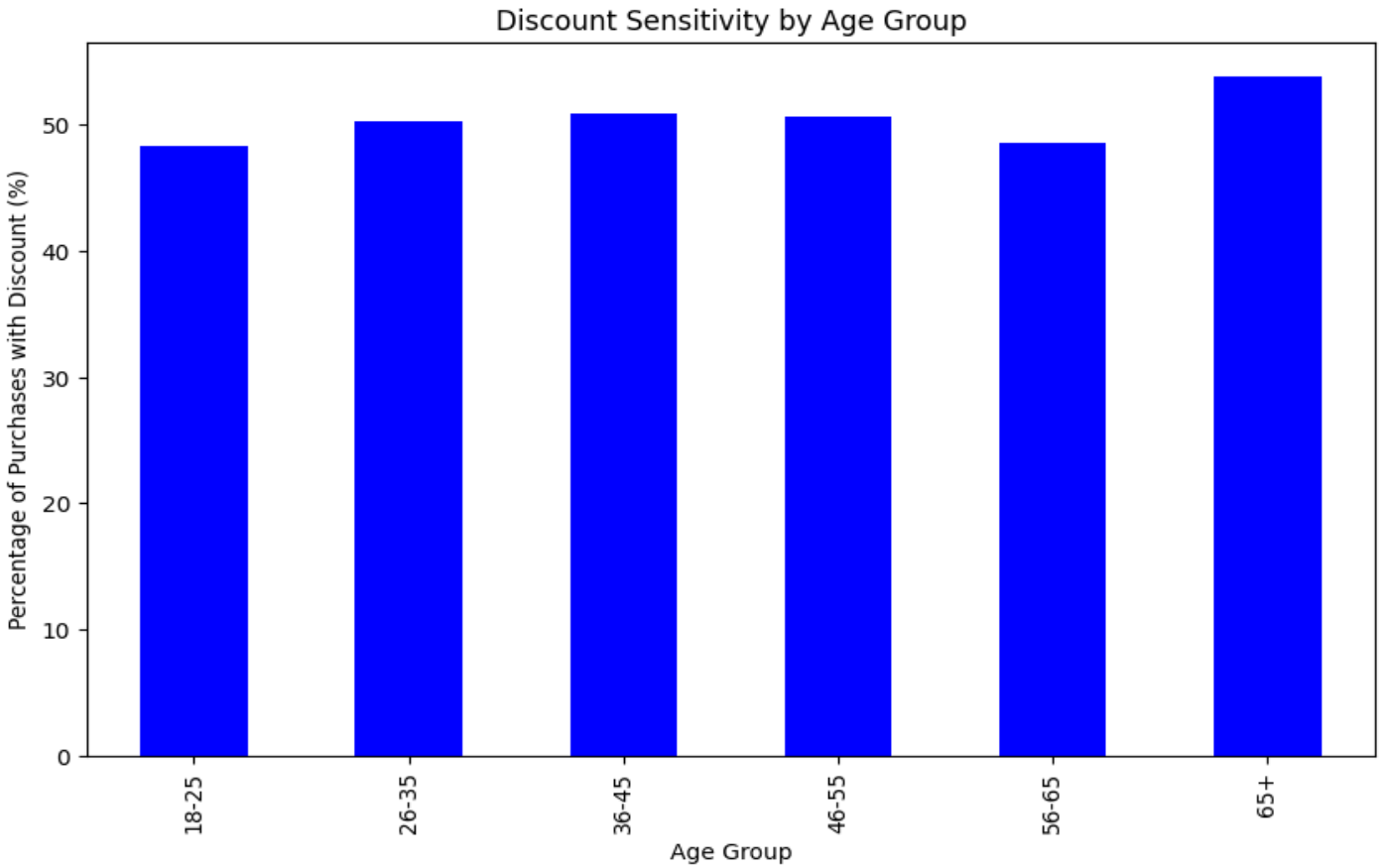

Figure: 4

Explanation of Figure-4: This bar chart illustrates the discount sensitivity across different age groups by showing the percentage of purchases made with a discount. The bar chart reveals that all age groups show a strong preference for discounts, with percentages consistently around 50%. The **65+** age group has the highest discount sensitivity, with over 50% of their purchases involving a discount. The **56-65** age group shows slightly less sensitivity compared to others but still maintains a high discount usage rate. Overall, the data suggests that discounts are a significant factor influencing purchasing decisions across all age groups, with older customers being particularly responsive.

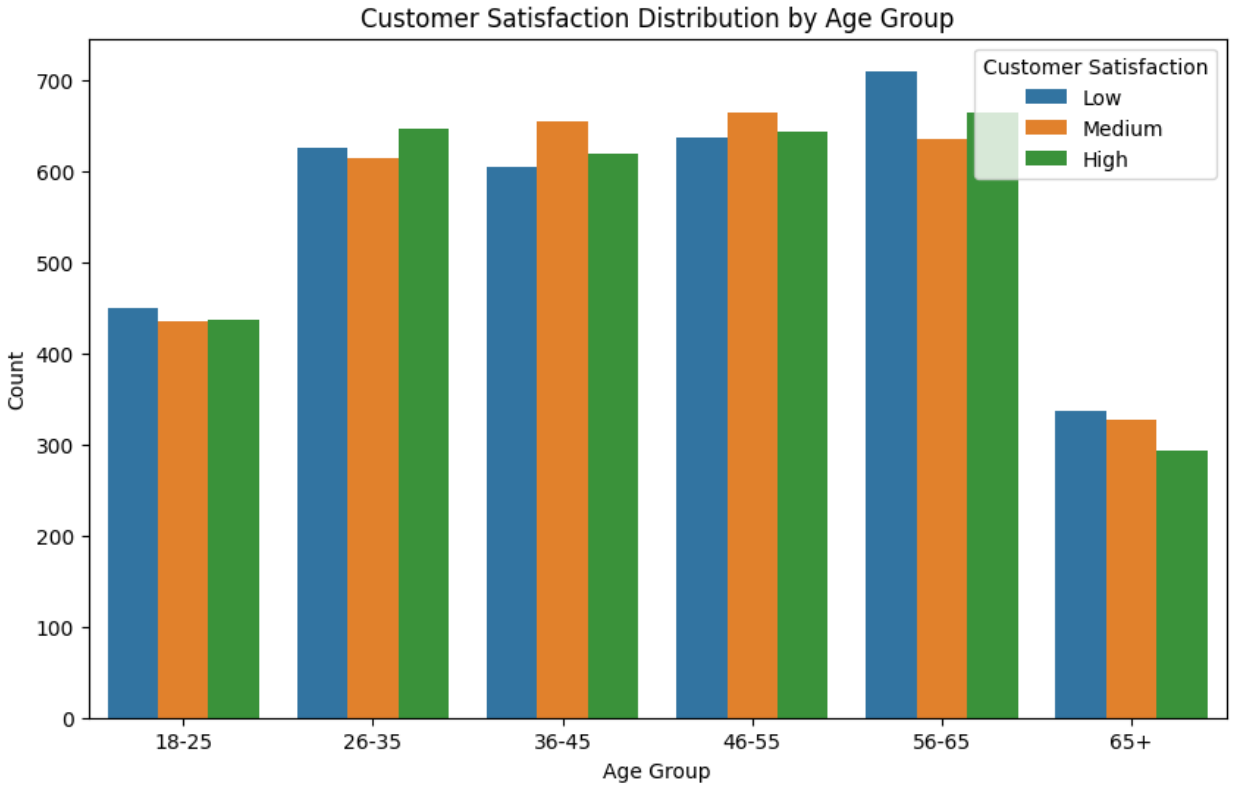

Figure:5

Explanation of Figure-5: This bar chart highlights the distribution of customer satisfaction (Low, Medium, High) across different age groups. A important insight is that the 56-65 age group has the highest proportion of customers with low satisfaction, suggesting potential dissatisfaction issues in this diagram. In contrast, the 36-55 age groups have a more balanced distribution, with a noticeable increase in high satisfaction, indicating higher contentment in these age ranges. The 65+ and 18-25 groups show smaller overall customer counts, but satisfaction is relatively evenly spread across the categories, with a slight skew towards lower satisfaction for the 65+ group. The 26-35 age group also shows a strong presence of medium and high satisfaction, suggesting relatively positive experiences for these customers.

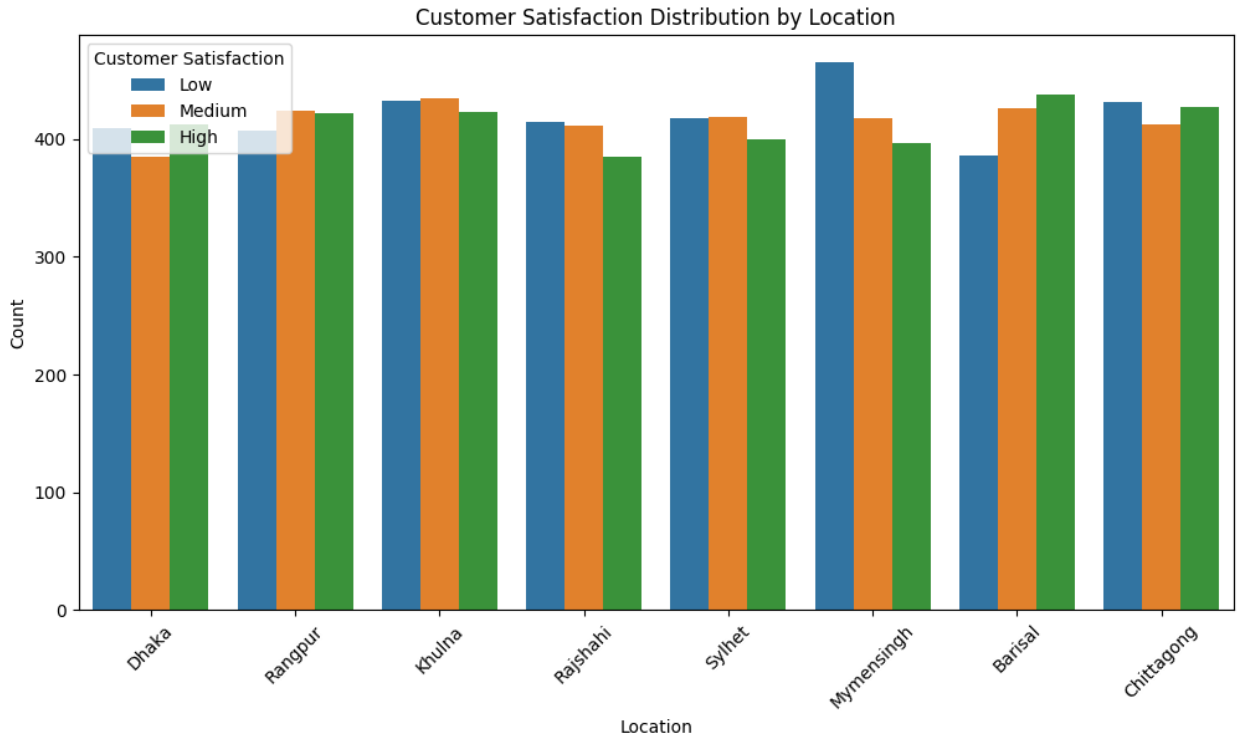

Figure : 6

Explanation of Figure-6: This bar chart illustrates the distribution of customer satisfaction levels (Low, Medium, High) across various locations. Notably, Mymensingh has the highest count of customers with low satisfaction, while Barisal and Chittagong show higher levels of high satisfaction compared to other locations. Sylhet, Khulna, and Rajshahi have a more balanced distribution of satisfaction levels, with similar counts across all three categories. In contrast, Dhaka and Rangpur show slightly higher numbers of medium satisfaction customers. Overall, the chart suggests regional differences in customer experiences, with some locations like Barisal and Chittagong performing better in terms of customer satisfaction.

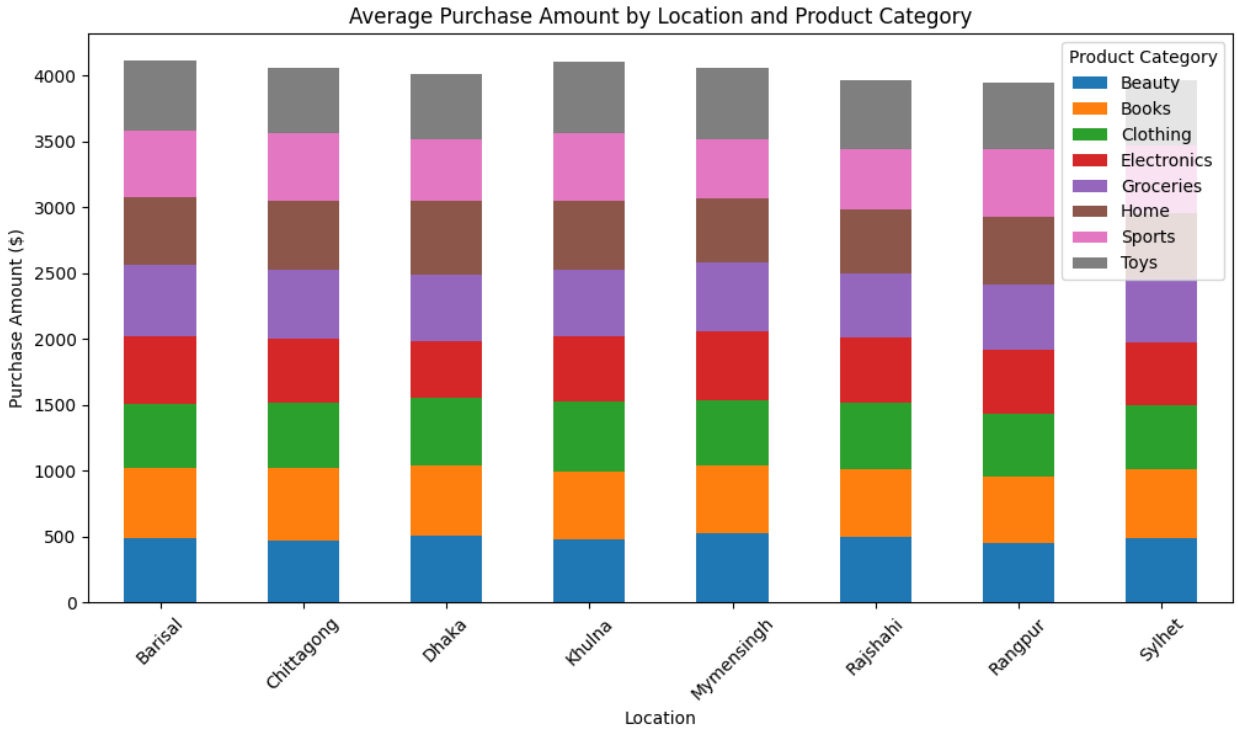

Figure:7

Explanation of Figure-7: This stacked bar chart shows the average purchase amount by location and product category. Across all locations, the average purchase amount is relatively similar, with totals around $4000. Each location has a fairly balanced distribution of spending across categories, though there are some variations. Clothing and Beauty consistently make up a significant portion of spending across locations, while Electronics and Home also contribute notable shares. Books and Toys represent smaller but consistent categories across all locations. Overall, the chart suggests that customer spending patterns are quite consistent across regions, with no major deviations in category preferences or total purchase amounts.

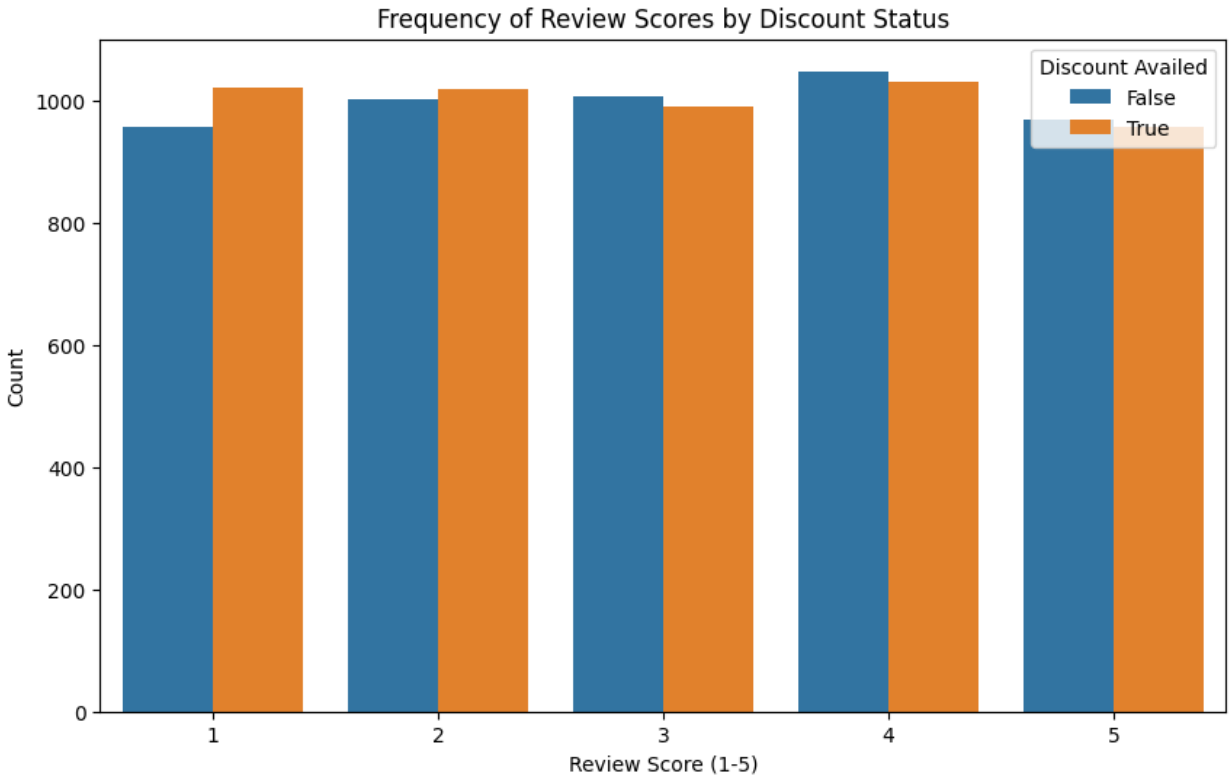

Figure:8

Explanation of Figure-8: This bar chart compares the frequency of review scores (1 to 5) based on whether a discount was availed (True) or not (False). A key insight is that customers who availed a discount tend to give slightly higher review scores overall. For example, the count for review scores of 4 and 5 is higher among those who used discounts compared to those who didn't. However, even for the lower scores (1 and 2), the number of reviews is still significant for both discount and non-discount groups, indicating that discounts don’t always guarantee high satisfaction. The data suggests a correlation between discounts and higher satisfaction, but it's not absolute, as customers still give lower scores even when discounts are applied.