### Customer Signups Over time-

The histograms shows the frequency of customer signup over time. If the plot shows the upward trend, it indicates customer growth. For example, a large spike in signups during the promotional campaigns shows its effectiveness whereas a dip might indicate the need to reevaluate the strategies.

#### Monthly transaction volume:

This line plot shows the total number of transaction per month. Peaks in the line shows the period of high transaction activity and dips shows lower activity. This information can be used for inventory management, staffing, targeted promotions like offer discount during lower activity to increase the activity

#### **Distribution of Product Prices**

The histogram displays the distribution of product prices. A right-skewed distribution indicates that most products are priced lower, with fewer high-priced items. A normal distribution suggests a more even distribution of prices. This information can inform pricing strategies, such as setting competitive prices within the market or identifying potential opportunities for premium or budget-friendly product.

# **Product Category Distribution**

This pie chart shows the proportion of products belonging to each category. Each slice of the pie represents a category, This plot reveals the popularity of different product categories. Larger slices suggests higher demand or a focus on those areas. This information can guide product development, marketing efforts (focusing on popular categories), and inventory management (ensuring sufficient stock for high-demand categories)

# Top 10 Selling Products

This bar plot shows the number of transactions for the top 10 selling products. This plot shows the best performing products. These products are important for revenue generation. These top sellers can also inform the development of new products or the improvement of existing ones.

#### Sales by Region

This bar plot displays the total sales for each region. This plot shows the regional distribution of sales revenue. Regions with higher bars contribute more to overall revenue. Low performing regions may require investigation. This insight allows for targeted regional strategies to increase sales and improve overall performance.