**Bike Purchase Problems**

**1. Bar Chart (Marital Status):**

Question: How does the count of bike purchases vary among different marital statuses? Are married individuals more likely to purchase bikes?

**Answer** :

The data indicates that Singles are more likely to purchase bikes compared to Married by 17 bikes.

The Married are less likely to purchase bikes.

**2. Bar Chart (Gender):**

Question: Build a bar graph to compare the count of male and female customers. Does gender influence bike purchases, and if so, to what extent?

**Answer :**

Males show a higher count of bike purchases compared to females. This suggests that gender does play a role in influencing bike purchases to a certain extent.

Difference in bike purchases between the two genders is by 3 bikes.

**3. Histogram (Income):**

Question: What is the distribution of income among bike buyers? Are there specific income brackets that show a higher likelihood of bike purchases?

**Answer :**

The histogram provides a clear overview of the income distribution among bike buyers. The data reveals that income with 68548.39 INR shows a higher Likelihood of bike Purchase.

**4. Histogram (Age):**

Question: Create a histogram to understand the age distribution of bike buyers. Are certain age groups more inclined to purchase bikes?

**Answer :**

Age Group Of 35-38 are more inclined to purchase Bikes.

**5. Box Plot (Income):**

Question: Identify outliers in the income distribution of bike buyers. Are there any extreme income values, and how might they impact purchasing behavior?

**Answer :**

Yes there are extreme income values and Identifying these outliers is crucial, as they don”t seem to impact on purchasing behavior.

**6. Pie Chart (Region):**

Question: Represent the distribution of bike purchases by region using a pie chart. Are there regions where bike purchases are notably higher?

**Answer :** North Americaregion have notably higher number of bike purchases.

**7. Scatter Plot (Income vs. Age):**

Question: Create a scatter plot to investigate the relationship between income and age. Do individuals with higher incomes tend to be in specific age groups?

**Answer :**

Yes, Individuals with higher income tends to be in age group of 35-55.

**8. Stacked Bar Chart (Marital Status & Gender):**

Question: How does the distribution of bike purchases differ when considering both marital status and gender simultaneously? Are there notable patterns?

**Answer :**

For married individuals, there is a higher proportion of bike purchases among males compared to females. Conversely, among single individuals, the distribution is more balanced, with both genders showing similar engagement in bike purchases**.**