

## Questions

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

Ans)(Chart:Count of marital status) The no of people who actually purchased the bikes is slightly higher in single people than married, and the married people are more probale to not purchase the bike.

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

Ans)(Chart: Count Of Gender) The No. of Male Buyers are 0.63% higher than the No. of Female buyers, This tells us that male Buyers are more likely to buy a bikes, and the difference is not very much.

3)What is the distribution of income among bike buyers? Are there specific income brackets that show a higher likelihood of bike purchases? Ans)(Chart: Income Range) The Income bracket 65K to 70K are more Likrly to Buy the bikes

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

Ans)(Chart :Age) The Age Range between 34 to 36 are more likely to buy the bikes

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

Ans)(Chart: Income) There are no outliers in the charts.

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

Ans)(Chart: Region) the buys are notably higher in North America

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

Ans)(Chart: Income Vs Age) The middle age category has a higher income than others.

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

Ans)(Chart: Marital Status and Gender) Here the chart shows us that men buy bike when they are married and women buy bikes when they are single.

9)Use a heatmap to visualize the correlation matrix between numeric variables. What variables show a strong correlation, and how might this influence purchasing behavior?

Ans)(Chart: Correlation Heatmap) Age and Income are highly Correlated with each other, and the higher the age, the more the income and that leads to more sales in highly aged people.

