### **Bike Buyers Dataset (Google Sheets Dashboard)**

This dataset has details of 1000 users from different backgrounds and whether or not they buy a bike. This data can be used to build the dashboard in Google Sheets. There are some NA (Null / Empty) values injected in the dataset. Use this dataset for Data Cleaning, Exploration, and Visualization.

**Columns -**

* ID
* Marital Status
* Gender
* Income
* Children
* Education
* Occupation
* Home Owner
* Cars
* Commute Distance
* Region
* Age
* Purchased Bike

**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?

Ans:1) Single persons tend to purchase more bikes than married by 17.2) No, 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?

Ans: yes, gender influences in bike purchases. Male are more likely to purchase bikes than female by 3.

**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?

Ans: People having income 40000-49999 shows higher liklelihood in bike purchases.

**4. Histogram (Age):**

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

Ans: People having age 35-39 have high chances 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?

Ans: Yes, there are extreme income values, but they don’t seem to impact in purchasing bikes.

**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?

Ans: North America is the region where the bike purchases are notable high.

**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?

Ans: Solution is given in the dashboard.

**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?

Ans: Married male bike purchases are notable high.

**9. Correlation Heatmap (Numeric Variables):**

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

**10. Pair Plot (Subset of Variables): (This is optional in Google Sheets)**

Question: Create a pair plot for a subset of variables (e.g., Income, Age, Children). Are there clear relationships between these variables, and how might they impact bike purchases?

The above 10 plots are suggestions that you can build, first, build the individual charts and then create a functional dashboard in a new sheet.  
  
Once you complete the task submit the public URL of your dashboard in the Google sheet mentioned on the Task page.