**Excel Project: Bike Sales Data Analysis**

**Introduction:**

This Project is an Excel Analysis of a Bicycle Company Sales Dataset, which is a free, open Dataset available on GitHub. It captures various details of a Bicycle Company's Customers, such as: Their Marital status, Gender, Commuting distance, Education, Occupation, Age, number of cars owned, Region of residence, and whether they purchased Bicycles.

**Here are the Key Questions I was interested in answering:**

* How far do the Customers who purchase these Bicycles travel (Commuting Distance)?
* Which Age brackets (Young, Middle Age, and Old) purchase bicycles the most?
* Does income affect whether Customers purchase a bicycle or not?

**I took the following steps to create my Analysis:**

1. **Setup:**
   * Created different sheets at the beginning of the project namely: Pivot Table, Dashboard, and Working Sheet for different purposes.
2. **Data Preparation:**
   * Created a duplicate of the original data and pasted a copy in the Working Sheet.
   * Removed duplicates.
   * Standardized the data, using the Find and Replace function to change the gender and marital status from letters to full texts (e.g., M = Male for Gender, M = Married for Marital Status, F = Female).
   * Changed the data type of some columns.
3. **Data Transformation:**
   * Created a new column using the IF function to populate the values of age groups, thereby creating different age groups for different age ranges to simplify the Visualization.
4. **Visualization:**
   * Created pivot tables and used them to generate various charts such as column charts and line charts.
   * Developed a dashboard by adding a header and slicers to filter data.
5. **Interactivity:**
   * Utilized slicers to filter the data on the dashboard using fields such as Marital Status, Region, and Education.

**Here are my Observations and Insights:**

* 1. **Age Bracket Insights:**

Middle-aged customers purchase more bicycles than other age brackets.

* 1. **Commuting Distance:**

Customers who travel a commuting distance of 1 mile or less tend to buy more bicycles than those who travel longer distances.

* 1. **Gender Distribution:**

Male customers are higher in number than female customers.

* 1. **Income Impact:**

For both males and females, those who purchased bikes have a higher average income compared to those who did not. This suggests that higher income individuals are more likely to purchase bikes.

**Interactive Dashboard.**

The Dashboard is fully interactive, Users can gain more insights on different demographics through the use of Slicers, enabling a deeper understanding of the data by filtering it based on specific criteria.

Thank you.

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