Erin Brown

Bike Sales Data Analysis

This project analyzes and visualizes bike sales data from the bike_buyers data set.

To begin the project in excel, for good practice purpose, I chose to keep the unchanged data in a one excel sheet and make a new sheet, “Working Sheet”, just in case I need to refer back to the original uncleaned data after saving, or if any mistakes were made that couldn’t be fixed.

In the working sheet the data was cleaned by;

1. Removing Duplicates
    a. 26 duplicates were found and removed
1. Changing M/S and F/M in the Marital Status and Gender to Married/Single and Female/Male
    a. This was done by using “command + H” (Find) and replacing all
2. Adding a new column, “Age Brackets” and using if statements to filter the ages into three categories for better visualization
    a. The three categories are Adolescent, Middle Age, and Old

Next a Pivot Table Sheet was created to store the pivot tables. Four pivot tables were created. For table 1, I wanted to see the relationship between gender and income, and how it impacted the bike sale (yes a bike was purchased, no a bike was not purchased). I chose to visualize this data in a bar graph and add a chart element to view the table on the graph. Pivot table 2 contains data relation between commute distance and whether a bike was purchased. Pivot table 3 shows the relationship between age brackets and bike purchases. Lastly, pivot table 4 was created to view individual age and bike sale purchases, however I decided that the graph made from this data was too complicated on the eyes to easily see the data being presented from a non-analyst perspective. Therefore, only Pivot Tables 1, 2 and 3 were used in the dashboard.

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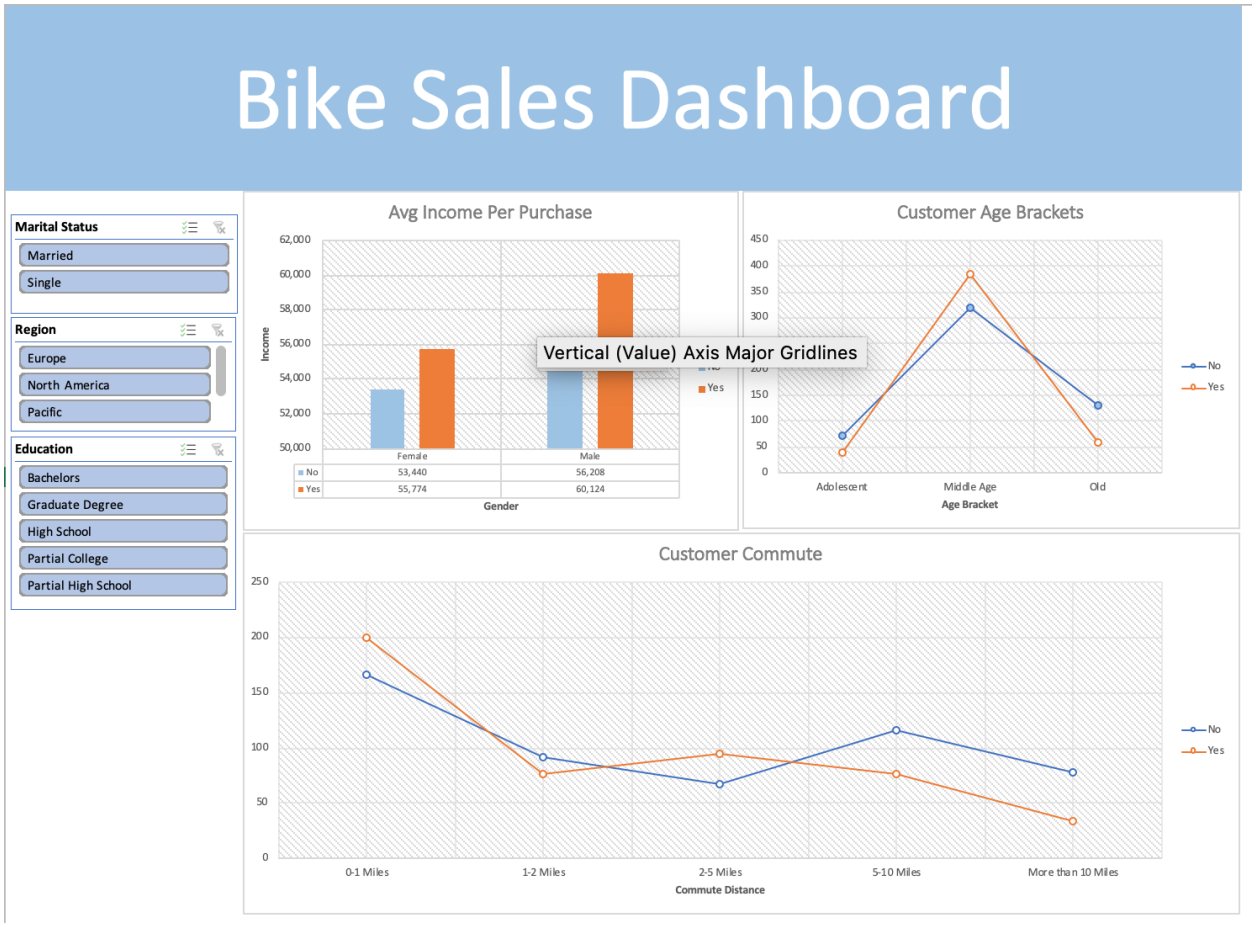

On the dashboard I used the three pivot tables created and added interactive data splicers to further narrow down data if necessary.

From the overall visualization (without use of the splicers), the insight on the bike sales data is as follows;

1. Average Income per purchase
    a. From this data we can see that income directly correlates with bike sales, females and males with a higher income were more likely to purchase a bike.
2. Customer Age Brackets
    a. The customer age brackets were divided as follows; <31 = Adolescent, 31 - 54 = Middle Aged, and 54> = Old.
    b. From the data we can infer that people of middle age are more likely to contemplate purchasing a bike, and that they're more likely to purchase than bike in comparison to adolescents and the elderly.

3. Customer Commute
    a. Those with shorter commute distances are buying more bikes on average than those who have a longer commute distance. It could be hypothesized that those with longer commute distances would rather drive a car for a quicker commute than to expend taxing energy on a longer bike ride to their destination.