Module 3 Individual Assignment
Divvy Dataviz

William Kelly
MBA 562

Instructions

For this assignment, you will use the datasets chosen in the Module 2 Individual Assignment and create two (2) charts from the data using Excel, Tableau or any other data visualization tool with which you are comfortable. You are recommended to read the recommended textbook Part 4 – Lesson 4 in *Digital Marketing Analytics: In Theory And In Practice* to gain insight into the connection between data patterns and visual form.

Step 1: Choose the data- You are free to use any portion (or all of) the datasets chosen in Module 2. The Minto Pyramid you produced in that assignment featured at least 3 factual statements (i.e., insights) and a number of supporting data points and sources for those data. It would be a good idea to base your visualizations on one (or more) of these datasets. **(3 points)**

Step 2: Create two (2) data visualizations using a dataviz tool (or tools)- Select a tool (or tools) that can create data visualizations. Tools could exist on the web or on your computer (e.g., commercially available software that you have installed on your PC). Produce two (2) data visualizations using the tool or tools you selected and the data you chose in Step 1. **(4 points)**

The visualizations you create could include (but are not limited to):

- Line chart
- Bar chart
- Histogram
- Pie chart
- Bubble chart

Experiment with the various visualization options of the tool you choose to use (e.g., graphic sizing, color change, labeling, etc.), but be sure you pay close attention to the simple rules to creating inviting visualizations discussed in this week's lecture video.

Step 3: Evaluate the use of contrast in your data visualization - Explain how you used contrast in your visualizations to reveal patterns found in your data. Be sure to identify which contrast technique you are using – size, color, shape, or contrived. Review Part 5 – Lesson 3 of *Digital Marketing Analytics: In Theory And In Practice* for an explanation of various contrast techniques available to analysts. **(10 points)**

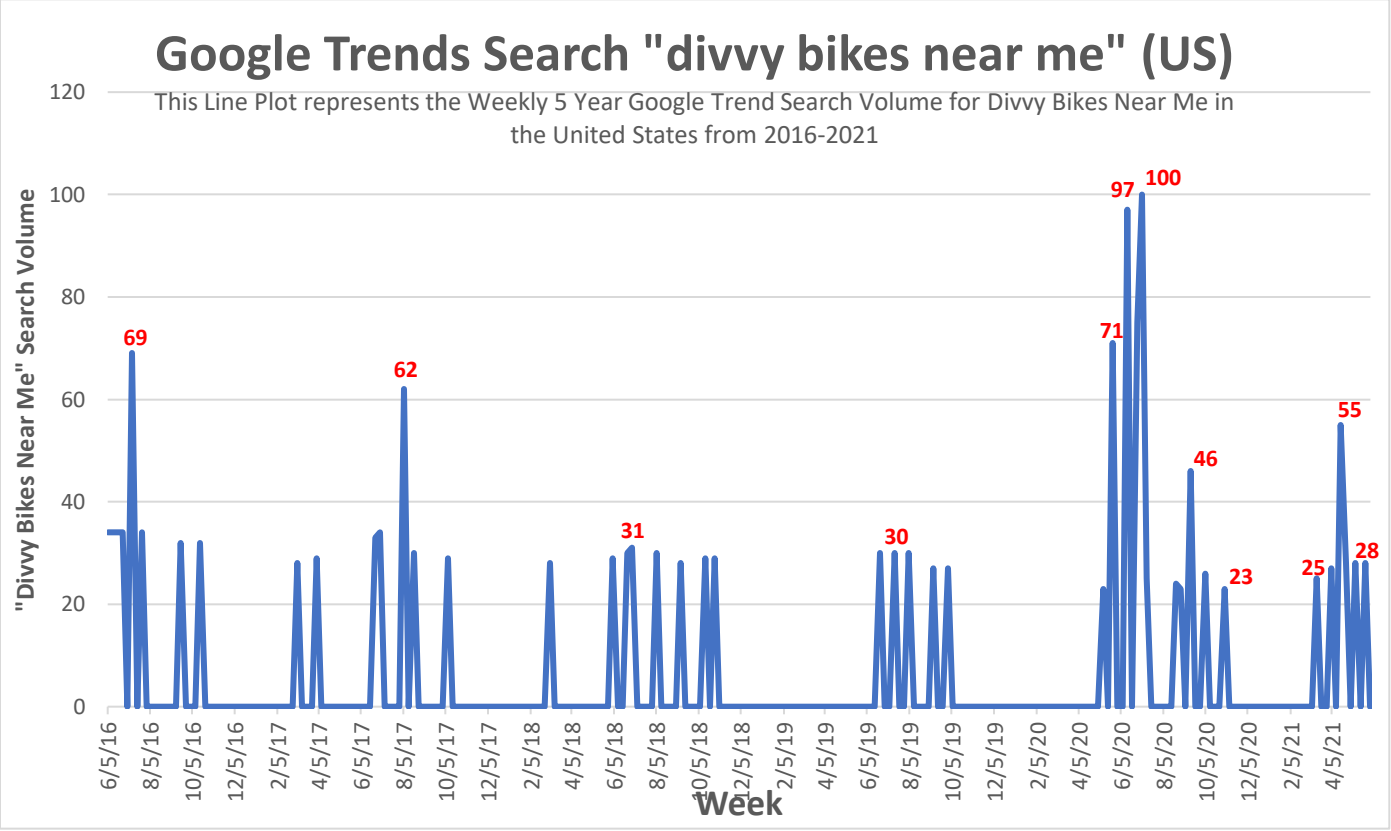
Please submit a write-up that includes (1) the two (2) data visualizations you created and (2) your evaluation of the dataviz. You can either create a table or write short paragraphs for this evaluation.

For this assignment I used the data from Google Trends and DIVVY SYSTEM DATA.
Reference: [1] GOOGLE TRENDS [2] DIVVY SYSTEM DATA

For my first Dataviz from Google Trends Data [1], I searched for the Trend of “Divvy Bikes Near Me” searches. This resulted in an analysis of the Google search volume over a certain amount of time. In my case I created a criterion of 5 years from 2016 to 2021. This resulted in learning what dates throughout the year customers are searching for the use of Divvy bikes in their area which helps analyze when the most popular times of the year occur which would help gain information on when to target the Divvy customer base.

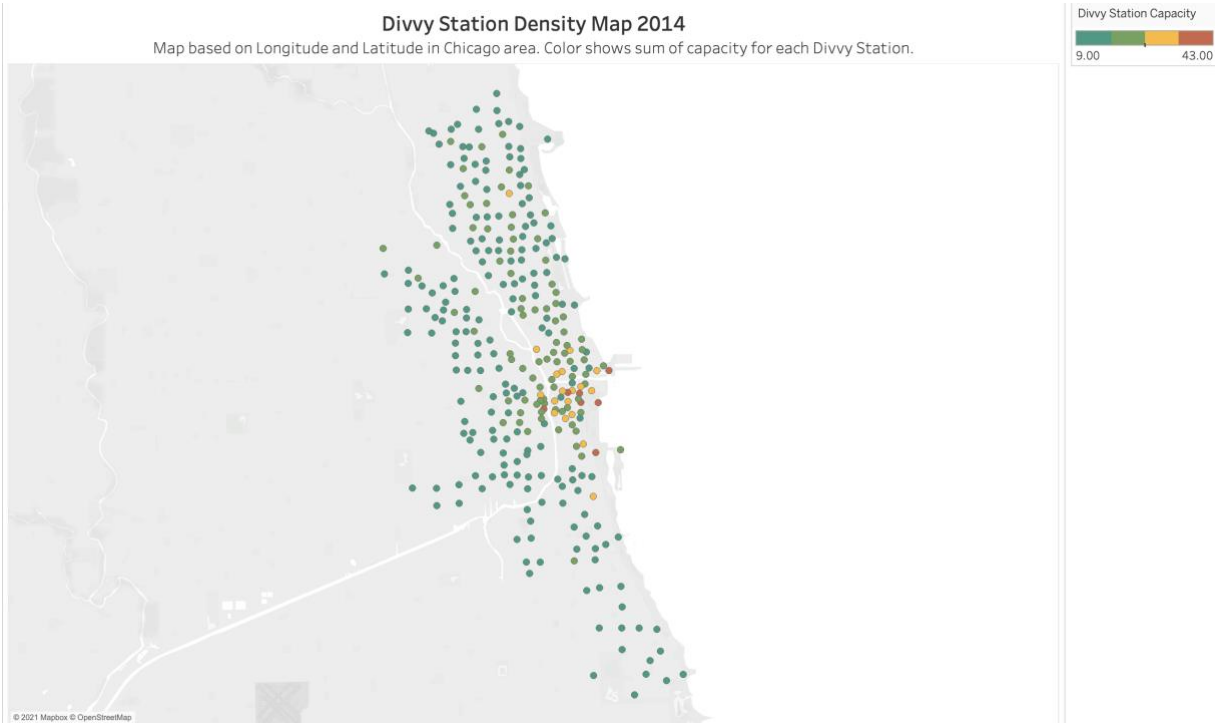
For my Google Trends analysis, I used Microsoft Excel to plot a line chart over the 5 years and found that most of the flow of searches occur during the summer months averaging from May to November and usually peaking around June & July months.

In terms of contrast within the plot I made sure to include an annotation under the title, Bold & Increased font size of chart title and bold the axis titles to stick out to the readers. Also added different colors for the line (blue) and the direct data labels at each peak value (red) throughout the trend line in order to accentuate the peak google search values and pointing to which weeks have the most searches. Below is the plot of the Google Trends line plot over the 5 years.



For my second Dataviz analysis I used the Divvy System Data [2] to analyze the amount of Divvy Stations in certain areas throughout the Chicagoland area. I utilized the tool Tableau to create a density map to show what areas have a higher capacity of Divvy bikes versus other areas. Also using tableau, the data contained Latitude and Longitude coordinates which I put in for the rows and columns to create the dataviz map representation of Chicago's Divvy bike station capacity. Then put in the Capacity of each station in the Color Marks setting to bring out the dispersion of Divvy stations. This would help understand the areas to target users due to higher traffic flow and market to those people for annual memberships since there is a wide availability of bikes to use in that area.

In terms of contrast, I used color shading to make the densely populated Divvy station areas show as red and yellow while the less densely populated areas show as green & blue shades. In tableau is used the Temperature Diverging setting to set the color shades. In addition, I added an annotation below the chart title to explain to the readers what the chart is showing.



References:

[1] "*Google Trends*", Google.Com/trends, https://trends.google.com/trends/explore?date=today%205-y&geo=US&q=divvy%20bikes%20near%20me

[2] "*Divvy-Tripdata"*, DivvyBikes.Com, https://www.divvybikes.com/system-data
File Used: Divvy_Stations_Trips_2014_Q1Q2.zip