Data Visualization Assignment 1. Reflection on Divvy data

Provide your thoughts on the following question: “What stories do you anticipate the data used in this course will unlock for Divvy?” (you will find the data here)

With the Divvy data, I anticipate the below stories will be unlocked.

1. What is the **duration** of a causal rider vs an annual member?
2. What **activities** do the annual members use the bike in comparison to casual riders?
3. What are the **busiest** days/months for bikers? Are those casual riders or annual members?
4. Ruling out the extreme weather in Chicago during the winters, how much impact has **weather** on the bikers? Are the bikers more on a sunny day or a cloudy day?
5. Do the sporting events or recreational events in the area cause a surge in bike usage?
6. Will the data on **traffic peak hours** (Car, bus, train, taxi data) be used to advantage Divvy’s inventory management in those places, thereby addressing the problems of
    a. **No bikes at the bike station** - Can the provided data unveil that the shortage of bikes is due to any specific events or month/days in a year or the inventory is not sufficient in the location?
    b. **Overcrowded bikes** - We can use the old_station_id and new_station_id (if available, in case parked on a stand) from the bikes that are overcrowded and understand where our bikes were taken. We can also analyze the events tabs (sports events, public health, etc) and see if any specific events led to the surge in the bikes and if the bikers just piled up the bikes as there were not enough bike stands available to parking. Can we see if we can have some kind of measures taken by Divvy (locking the account under the last biker) if the bikes are not returned/parked at the station - Like you pay until the bike is parked at the stand for the casual biker and a member, if he/she exceeds the duration more than 2 hours, Divvy can be considered as parking violations and incur the charges of a lost or stolen charge of $1200 or charge a slightly higher rate than the normal $0.15/min for every extra time more than 45 mins at a time or a flat $25 for parking violations.
7. If the causal riders (single ride/ day pass) are visitors/travelers, Divvy cannot convert those to an annual membership. This needs to be acknowledged. But, on

the other hand, if they reside in Chicago, Divvy can make efforts to convert them to annual memberships.

8. Divvy can introduce some **‘Rewards’** program to attract riders - a points system that would add up based on duration, consistency (daily vs occasional), casual biker vs member.
9. Divvy can **work with event organizers** across Chicago to organize bike stations in and around major events.
10. Divvy’s marketing team can organize ‘**Campaigns**’ during seasons (bike safe) targeting colleagues or events and creating awareness on Divvy and membership/casual bike plans.
11. Divvy can work with corporates in metropolitan areas, install Divvy bike stations around these areas and come up with some ‘**Incentive plan**’ for taking Divvy bikes to work.
12. Divvy can work work with ‘The Chicago Department of Public Health’s **Pollution Prevention Unit**’ and promote the usage of Divvy’s e-bikes to reduce emissions in the city.
13. While annual members bring in more revenue to Divvy, casual (single ride /day pass) is also equally significant. Analyzing the ‘Top Divvy Station ENDS’ data can help understand the ‘**Popular tourist locations**’ and maximize the bike inventory at the ‘To’ and ‘From’ locations.
14. If we can analyze and get the **age range of members**, and combining with the population data, Divvy can work on installing new bike stations with bikes in population-dense areas.
15. Is there any impact of biking based on the crime rate of different locations in Chicago (no data in the current dataset)? Bikers would want to go to safer places and, Divvy can work on their **app to guide the bikers through crime safer routes**.