**Bike sharing**

Using tableau to analyze bikeshare data in NYC

**Overview of our Analysis**

The purpose of our project is to see if the bike rental business is worth investing in for a different city (which the customer is requesting). One of the key factors we need to look at is trip duration. Finding out how long the trips are in the month of August will give us a good analysis on when the bikes are rented, how long they are rented and what times are the most popular times to rent a bike. Before we do any of this there needs to be a change made in the csv to change the column that records the trip duration in seconds to hours, minutes, and seconds. Once this was completed, I uploaded the new CSV into tableau with the converted trip duration column.

**Results:**

Using tableau, I created 7 different visualizations using the total number of trips, the types of users and the trip duration. Here's what we found:

* To see all my visualizations please click the link below:

<https://public.tableau.com/app/profile/hetal.bhuta/viz/Bikesharing_16326829517920/ThursdayisthedaytorideinAugust>

New York Citi Bike data visualizations for August 2019

[Website

Description automatically generated with medium confidence](https://user-images.githubusercontent.com/68669675/97826309-e77f3100-1c86-11eb-8503-e40691cd6fe0.png)

* There were over 2.3 million rides for the month of August 2019.
* 81% of the users were subscribers. 65% of the users were confirmed males and 25% were confirmed females.
* There is a wide range of the age of the users. Younger users tend to use the service for longer rides.
* Top ride starting locations are in the most touristic and busy areas, as we see here in Manhattan.

**August Peak Hours**

[Chart, bar chart

Description automatically generated](https://user-images.githubusercontent.com/68669675/97826311-e8b05e00-1c86-11eb-8240-ab05bc3cb61f.png)

* Highest activity hours are from 5:00 PM to 7:00 PM and require the most resources mobilized.
* The activity from 2:00 AM to 5:00 AM is low so this would be the window for bike maintenance.

**Checkout times for users**

[Chart, line chart

Description automatically generated](https://user-images.githubusercontent.com/68669675/97828088-b7865c80-1c8b-11eb-9c03-91ad942a6daa.png)

* Bikes are mostly checked out for 4 to 6 hours.

**Checkout times by gender**

[Chart, line chart

Description automatically generated](https://user-images.githubusercontent.com/68669675/97828090-b8b78980-1c8b-11eb-947f-87486da03b73.png)

* Male users take approximately 3 times more rides than the female users.

**Trips by weekday and gender**

[Graphical user interface, treemap chart, PowerPoint

Description automatically generated](https://user-images.githubusercontent.com/68669675/97826316-e9e18b00-1c86-11eb-814c-b558ed34335d.png) [Graphical user interface, application, PowerPoint

Description automatically generated](https://user-images.githubusercontent.com/68669675/97826317-e9e18b00-1c86-11eb-9559-f06b93418b58.png)

* Most weekday rides are around 7:00 AM to 9 AM and 5:00 PM to 7:00 PM.
* Weekend rides are highest from 10:00 AM to 7:00 PM.
* Those rides are mostly taken by male users.

**Summary**

Once I completed my visualizations in tableau the one thing that stood out to me was Thursday is the most popular day to take a bike ride. It would be a good idea for our customer to start the bikeshare business in a different city because whether people are biking to get to work or just doing it for fun there are lots of users/ customers who will buy in. Although I think we have enough evidence to convince our customer to do this even if we are only looking at one month, there are some other visualizations that can further back this claim. If we were to look at the colder months in the city to see how many riders we have in November/December so that the customer can prepare for those months, one other visualization I would like to make is the average distance between customers home location and the bike renting location which would allow the customer to adjust for potential biker locations.