Power BI on Hubway Dataset~ Team 1

Datasets Provided:

Hubway_trips

Hubway_stations

Data Cleansing done in R:

```r
library(MASS)
library(ISLR)

#to read the csv file to a dataframe.

cleandata <- read.csv("hubway_trips.csv")

#To remove 0 or lesser valued duration entries.

cleandata<-cleandata[(cleandata$duration>0),]


cleandata


write.csv(cleandata,"C:/Users/Shafee/Desktop/Hubway/Hubway_Trips_Clean.csv")
```

This provides a dataset with no negative values or zero values of “duration”. Therefore, only the valid trips are retained in the final dataset called “Hubway_Trips_Clean.csv”.

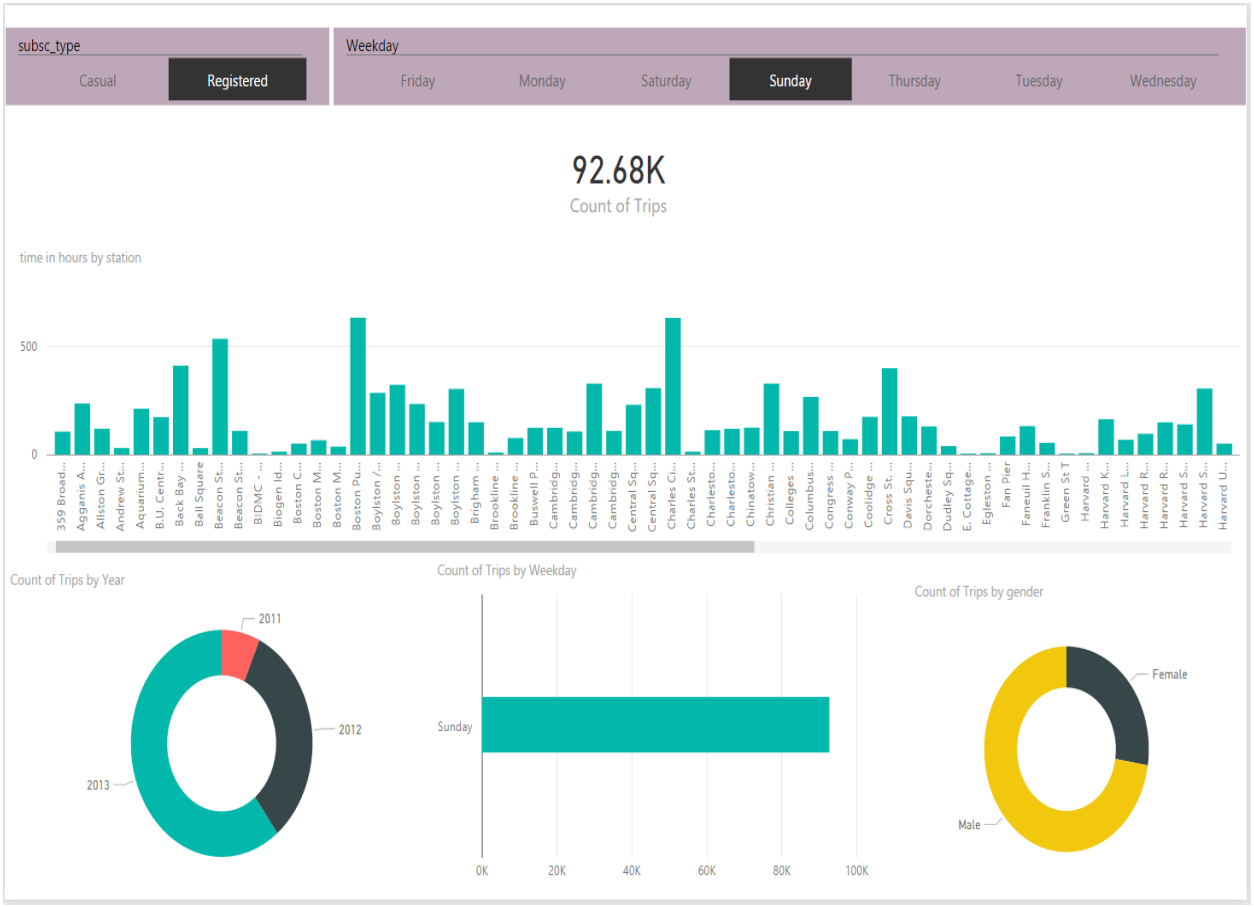
Data Cleansing done in Power BI:

- Assigns the columns “duration”, “strt_date”, “end_date” to DateTime format.
- This line of code converts the duration which is in seconds to Hours.

```
time in hours = ([duration]/3600)
```

- Created Calculated columns:
    1. “year”: stores the year from “strt_date”
    2. “Weekday”: stores the days of the week of the trips.
    3. “Time in hours”: converted duration from seconds to hours and stored.

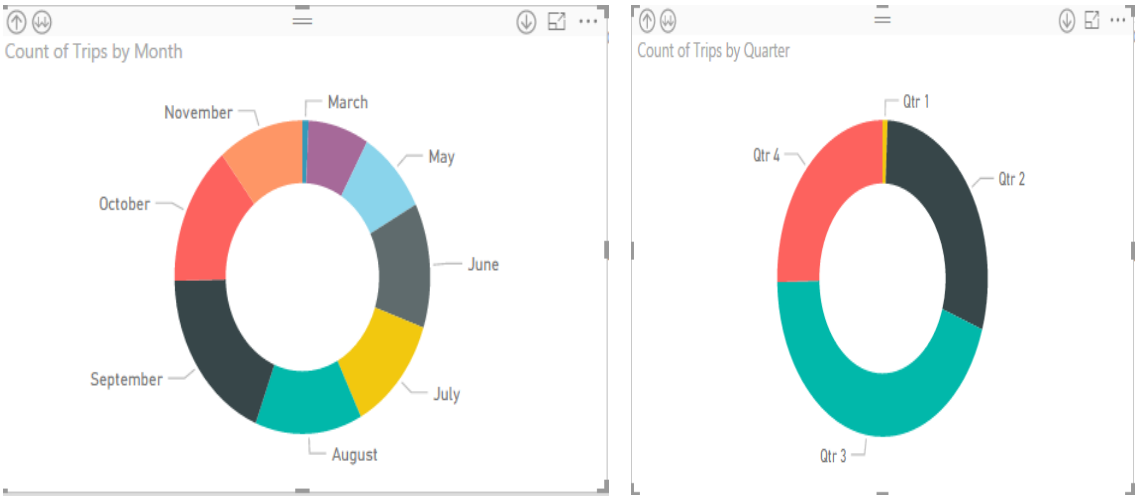
Dashboard 1:



- This dashboard has 2 filters-
    1. Subscription Type (casual users, registered users)
    2. Weekdays (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday)
- One card:

  Which gives the count of trips there are.
- 4 Graphs:
    1. Visualizes the how many hours of trips have been taken from a particular station.
    2. Number of trips made per year from 2011-2013

       This is a drill own graph displays by Quarter and Month too.

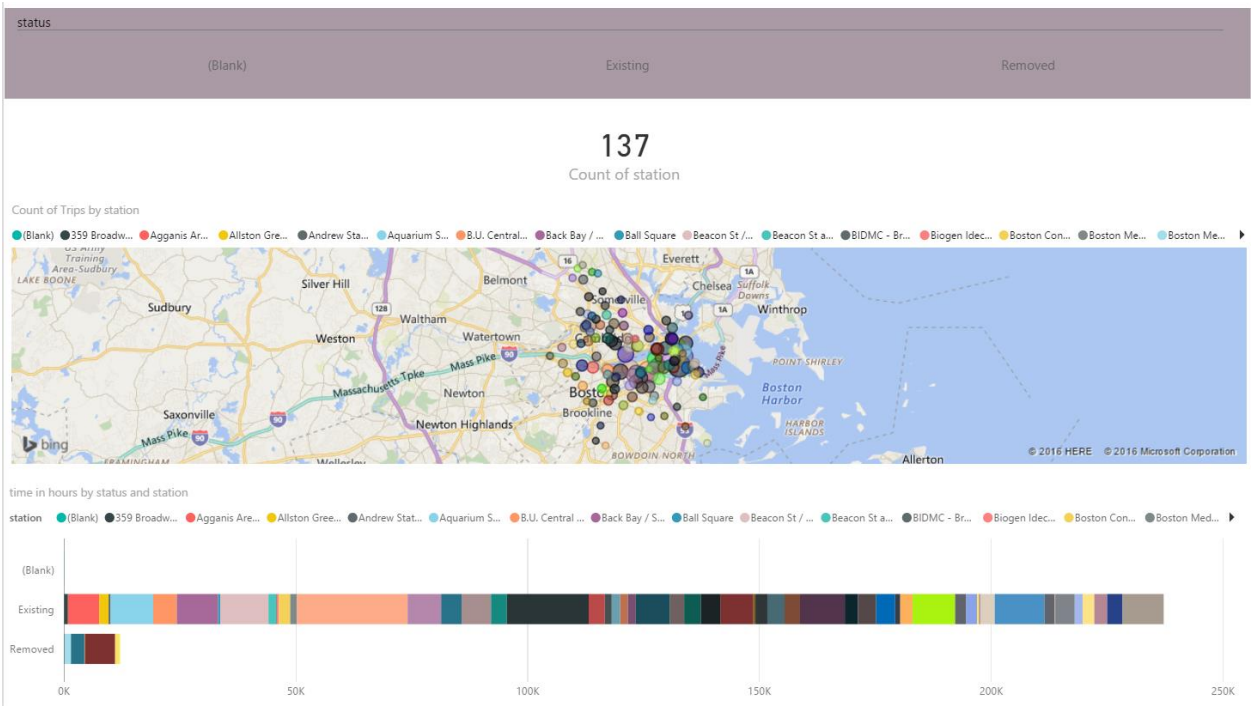


3. This graph provides visualization for the number of trips taken per day of the week.
4. This graph provides visualization for the number of trips taken according to gender (male, female, unknown).

<u>Business Logic</u>: allows Hubway to visualize how their users pattern of renting bikes vary according to the day of the week, by gender, importance of each station and also helps them visualize their growing customer usage pattern as more number of trips have been made in the year 2013 compared to 2012 or 2011.

Hubway can also visualize whether more of their users are causal users or registered users. For example, the dashboard shows that on weekends more the casual users rent out bikes as compared to the registered users.

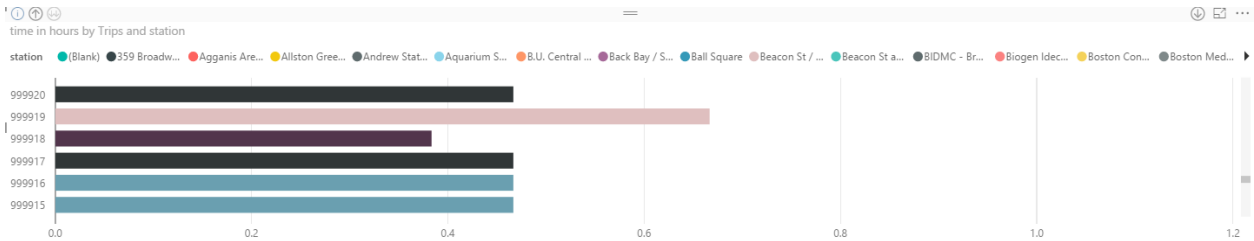
Dashboard 2:



- This dashboard has 1 filters-
    1. Status Type of Station (Existing, Closed)
- One card:

  Which gives the count stations there are.
- 2 Graphs:
    1. Users a geo map to locate all the stations there are and on hover it displays the number of trips that are made from the station.
    2. Visualizes the accumulative time of the trips taken by the station name and also by station status type.

       On drilling down it gives a breakdown of the hours per terminal in the station.



Business Logic: **allows Hubway to visualize which stations are important from their business point of view and if the removed stations make a difference. This can be explained by viewing the number of hours or trips that were from the stations that were removed. They can also check if any of their existing stations do not have as many trips or hours clocked under them.**