

Visual Analysis of Ford Gobike System Dataset

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The dataset for this project is the Ford Gobike system data. Ford Gobike is a model for equitable bike share access in the US and an exploration has been carried out on the dataset. The dataset contains the following columns before exploration:

1. duration_sec
2. start_time
3. end_time
4. start_station_id
5. start_station_name
6. start_station_latitude
7. start_station_longitude
8. end_station_id
9. end_station_name
10. end_station_latitude
11. end_station_longitude
12. bike_id
13. user_type
14. member_birth_year
15. member_gender
16. bike_share_for_all_trip

Summary

The datatype for a number of the variables were changed to the appropriate datatype e.g the time variables were changed from string to datetime. Our exploration required adding additional time variables like start_weekday, end_weekday, start_year_month, end_year_month etc. This was done for deeper exploration of our dataset. The visual exploration followed the “Question-Visualisation-Observation” framework and the following are some of the findings as identified from the visual exploration of our dataset:

1. The dataset is a bike trip records for February 2019
2. There are more trips record for males than females.
3. There are more trip records for those who subscribe to the trip service than customers
4. The customers embarked on longer trips compared to those who subscribed to the service.
5. People within the age of 30 to 35 have the highest trips record.
6. There is a noticeable sharp decline in patronage from age 35 and above.
7. There is a similar age distribution between the subscribers and customers.
8. The weekend has the lowest trips record compared to other days of the week

Key Insights for Explanatory visualization.

1. Distribution of age by gender and user type for the top 10 start station
2. Trip duration in seconds by User type for the top 10 start stations.
3. Age distribution and Trip duration for the two user types for the top 10 Start stations