# Tableau Homework

# Citibike Data Visualization

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## Data Collection

From the Citibike website, the New Jersey trip data from May 2019 to May 2020 (12 months) was downloaded. The set included 12 CSV files, one for each month. All the files were merged into one source file using Pandas.

## Data Filter

It was observed that birth years were not all available, so in Tableau for any visualization using Age, a filter was added to only use birth year from 1940 to the latest available birth year.

## Trip Duration in Hours

The source data reports the trip durations in Seconds. For the purpose of these visualizations, trip durations were converted from Seconds to Hours.

## Visualizations

Theme 1: gender

1. Monthly Trips by Gender

This visualization shows how bike usage is dominated by Male riders. A large proportion of riders in the 12 months, regardless of seasonality were Male.

1. User Types by Gender

This visualization compares the proportion of Male/Female/Unknown for each of the user

types Customer and Subscriber. Customer base is largely comprised of unknown gender,

perhaps during the rental process, the question about gender is not answered.

for Subscriber base, however, the majority of users are Male, and very small portion

have unknown gender. Female customer base is also low, so perhaps the company can

create promotional campaigns encouraging females to join the bike share program.

1. Trip duration by Age and Gender

Most trips are taken by Male riders are between 29 to 32. For Female riders the age range is between 27 to 31; very similar data to Male riders.

Most trips for non-specified gender are taken by people between 50 and 55

1. Monthly usage by gender

This visualization demonstrates total number of bike users for each month in the data set, segmented by gender. Across all genders, the peek usage in August and September, with Male riders leading the number of riders.

Theme 2: bikes and stations

1. 20 Least Utilized Bikes

This bar chart lists the least used bikes. The data is color coded to show the relevant year in which the ranking apples.

1. 20 Most Utilized Bikes

This bar chart lists the most used bikes. The data is color coded to show the relevant year in which the ranking apples. The company may consider checking these bikes for any repair, or maintenance work.

1. Popular start Stations Map

This map shows popular start stations in New Jersey, and includes a zip code layer.

1. Popular end stations Map

This map shows popular end stations in New Jersey, and includes a zip code layer

1. Top 10 Start Stations

This visualization shows the 10 most popular start stations

1. Top 10 End Stations

This visualization shows the 10 most popular end stations