As a Data Analyst for City officials, an analysis was conducted on Citi Bike trip data to determine user trends in Jersey City and New York City.

**Citi Bike History**

The dataset comprises 150,000 plus entries of Citi Bike trip histories recorded from July 2023 to January 2024.The dataset includes details such as ride ID, bike type (classic or electric), start and end date and time, start and end station names and IDs, start and end coordinates (latitude and longitude), and rider classification (casual rider or member).

**Member Dashboard**

The member dashboard displays a map indicating Citi Bike station popularity by user type, highlighting differences between July 2023 (mid-summer) and January 2024 (mid-winter). The map can be filtered by month and day, with circle sizes representing the most popular stations on a daily basis, comparing higher tourist activity in summer to lower activity in winter. Bar charts illustrate a significant decrease in total trips from summer to winter, attributed to weather conditions and a slow tourist season. Specifically, there is a 41.72% decrease in member users and a 76.20% decrease in casual riders in January 2024. These charts can also be filtered by day and month to identify busier days.

**Storyboard**

The storyboard incorporates the member dashboard and additional insights into seasonal usage differences. A line graph shows increased Citi Bike usage by members on Mondays and Wednesdays during summer, likely due to office commutes, with a 25.23% decrease from Monday to Tuesday and a 17% increase on Thursday, tapering off over the weekend. In contrast, casual riders increase usage by over 57% from Thursday through Saturday. During winter, casual rider usage is halved, while member usage peaks on Wednesdays, dropping to just over 3,000 users on weekends. A bubble chart presents the most popular stations by day for each season, and a pie chart shows preferred bike types by rider category, both filterable by month and day.

**Results**

The analysis suggests reallocating financial resources toward bike repairs, marketing, and station upkeep during winter months when usage is lower, to prepare for the summer peak. Filters can identify days and stations with fewer users, optimal for conducting bike and station maintenance before the high-demand summer season.

**Resources**

Wiki Page : https://en.wikipedia.org/wiki/Citi\_Bike

AWS Trip Data : https://s3.amazonaws.com/tripdata/index.html