Bicycle rideshare services, such as Citibike, provide valuable methods of environmentally friendly transportation in urban areas. Jersey City officials requested an analysis of Citibike data for Jersey City, using data from 2022.

The popularity of electric bicycles has been on the rise in recent years. The first part of this analysis was to determine how popular electric bicycles were among Jersey City Citibike users.

* When looking at the rides per month, as expected, usage of both electric and classic bicycles was much higher in the summer months than in the winter. Peak ridership for electric bicycles was in June, while classic bicycles had their highest usage in August. While not entirely linear, generally, electric bicycle usage rose when classic bicycle usage rose.
* The analysis looked at rides by weekday, in an attempt to determine if usage was driven by commuters, who would use Citibikes Monday through Friday, or recreational users, who would utilize the service on the weekend. Interestingly enough, electric bicycle usage rose steadily throughout the week, peaking on Friday, before dipping again.
* Looking at the time of day for electric bicycle usage finds the evening hours are the most popular times, with 6:00 pm and 7:00 pm providing peak ridership. There is also a smaller peak at 8:00 am, indicating usage by morning commuters.
* Overall ridership for the year shows classic bicycles account for about 70% of overall rides.
* Finally, a look at the type of user (member or casual rider) shows that members strongly prefer classic bicycles, while, as a percentage, casual riders are more likely to ride an electric bicycle.
* Finally, the average ride duration is virtually identical for both bicycle types.

The second part of the analysis determines the most popular stations.

* Overlaying station popularity on city maps shows that the most popular stations (for both beginning and ending trips) tend to be in the downtown and waterfront areas.
* The top 10 starting and ending stations are nearly identical, with the most popular stations tending to be near public transportation, such as the PATH and Light Rail trains.
* Looking at the stations with average ride duration over 30 minutes includes none of the Top 10 most popular stations, as these stations tend to be away from the waterfront.

The analysis of Jersey City Citibike data from 2022 shows a healthy ridership, particularly in the summer months. There is a significant number of electric bicycle users, but member riders tend to prefer classic bicycles. One reason might be the increased cost of electric bicycle rental that may be prohibitive for the regular commuter. Using the information regarding the most popular stations, city officials should monitor these areas to ensure that adequate bicycles exist to meet demand, and that those bicycles are in good repair, since they receive heavy usage. Bicycles in the long duration stations should also receive attention and preventive maintenance.