Background

Citi Bike has provided a collection of data open to the public that have been downloaded through [their site.](https://www.citibikenyc.com/system-data) More specifically, all of the 2019 data was downloaded per each month and combined using python to create a consolidated 2019 dataset. The features included are:

* Trip Duration (seconds)
* Start Time and Date
* Stop Time and Date
* Start Station Name
* End Station Name
* Station ID
* Station Lat/Long
* Bike ID
* User Type (Customer = 24-hour pass or 3-day pass user; Subscriber = Annual Member)
* Gender (Zero=unknown; 1=male; 2=female)
* Year of Birth
* Calculated felids:
  + Trip Duration in minutes
  + Trip Duration in hours
  + Label for Gender (“Male,” “Female,” or “Unknown”)
  + Age (in 2019)

Questions and Insights

**What stations record the most activity?**

For New York City the most popular stations that users grab a bike are generally the most popular stations to drop off or end their trip. Grove St Path ranked #1 for both pickup and drop off station.

**When do people generally ride?**

Regardless of the season, peak hours are around 8am and around 6pm. Which corresponds to general rush hour times of people heading into and leaving work. It shows users are using it as or as part of their work transportation. It also comes as no surprise that the months seeing the most activity are between June and October, where generally the weather is most bike-friendly (and not during winter months).

**Who used Citi Bikes the most?**

For this section considering genders, the category where it was unknown not included. Female customers (not subscribed) had longer rides based on average minutes, while subscribed male users had the most total trips. Male subscribers also showed strong peak hours as seen previously, during rush hour and may be using it mostly to transport to work. Citi Bike appeals to younger people, with the general age regardless of gender are users between 25-39 years old. They may generally be more active and/or might be more cost effective for the type of transportation they need.

**Which bikes were used the most?**

Depending on how often bikes are maintained or repaired, looking at the most frequently used bikes can give insight onto which bikes need attention. If updated regularly, we can see which bikes were used the longest total hours by quarter or by month.