

## **Explanatory Data Analysis**

Using Python and its libraries, I gathered data from Ford GoBike System as provide for this project. This data set includes information about individual rides made in a bike-sharing system covering the greater San Francisco Bay area. The dataset had 183,412 rows and 16 columns which was a record for Ford Gobike System covering san francisco bay area. Each record describes a unique trip with its columns or features. These datasets were cleaned, analyzed and visualized. The dropna function was applied to the dataset to drop null value columns to avoid errors.

The Members' Age were gotten from the given Members' Birth Year. There were as many as 174,000 Ages hence the need to categorize them . Age categories/Groups were created in the range Young Adults (21-45 years), Middle-aged Adults (46-69 years) and Elderly (70 years, and above).

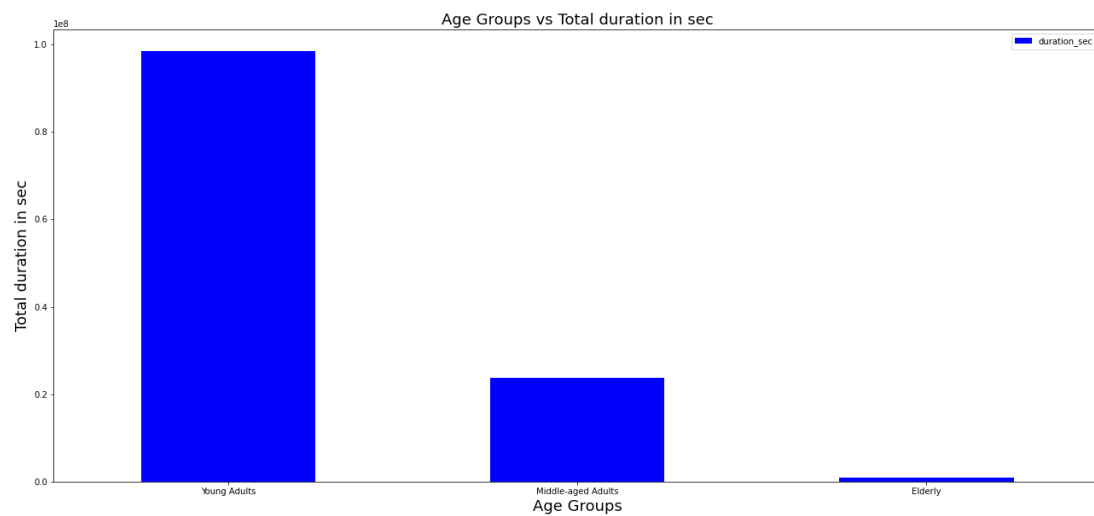
Afterward, the columns that would not be relevant for this analysis were dropped. A copy of the cleaned data was converted to csv file to be submitted.

### **Three (3) of the insights from this dataset were:**

1. The Young Adults Members have the highest Total trip duration. Using the Age category [Young Adults (21-45 years), Middle-aged Adults (46-69 years) and Elderly (70 years, and above)]
2. Young adults category accumulated similarly high trip duration across the Members' gender types. The Female gender accumulated the most trip duration among the Middle-age Adults. The male gender accumulated the most trip duration among the Elderly.
3. The Subscriber category had similarly high Age across the Gender types. The Female gender had the highest Age in the Customer category.

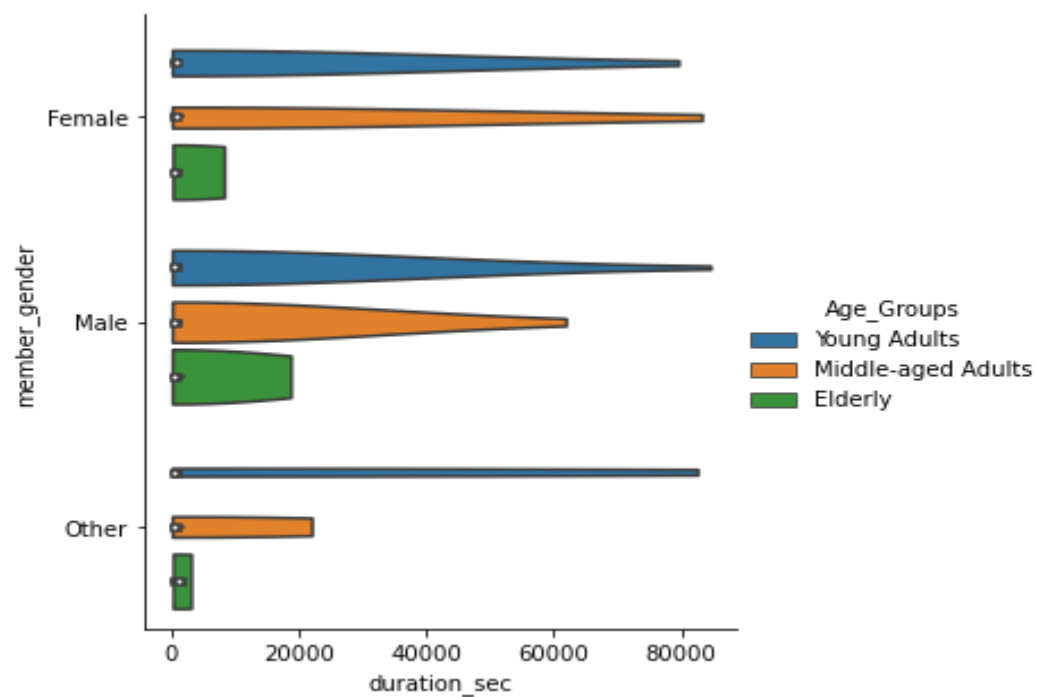
### **1. The Young Adults Members have the highest Total trip duration. Using the Age category [Young Adults (21-45 years), Middle-aged Adults (46-69 years) and Elderly (70 years, and above)]**

<b>S/N</b>	<b>Age Groups</b>	<b>Total duration in sec</b>
1	Young Adults	98,482,125
2	Middle-aged Adults	23,693,241
3	Elderly	989,848



This bar chart showed the total duration (in seconds) accumulated by the Members' Age Groups. Young Adults had the highest at 98,482,125 seconds.

**2. Young adults category accumulated similarly high trip duration across the Members' gender types. The Female gender accumulated the most trip duration among the Middle-age Adults. The male gender accumulated the most trip duration among the Elderly.**



**3. The Subscriber category had similarly high Age across the Gender types. The Female gender had the highest Age in the Customer category.**

