**Module 5 Challenge**

**Ride sharing data analysis using chart**

**Overview of the analysis:** We have to create a summary DataFrame of the ride-sharing data by City type. Then, using Pandas and Matplotlib, we have to create a multiple-line graph that would show the total weekly fares for each city type from the month of January to April for the year of 2019.

**Results:**

***The Dataframe: pyber-summary\_df shows us:***

* **Total Rides, Total Drivers and Total fares are highest in Urban cities.**
* **But Average Fare Per Ride and Average Fare Per Driver is highest in Rural cities.**

***The Multi-Line chart shows us*:**

* **Second week of March is the best time for the company as we have the highest total fare for this week for Urban, Suburban and Rural individually.**
* **In Urban cities, there is steady increase in total fare from the month of Jan. to Feb.**
* **In the last week of Feb. and the second week of March we had highest Total fare for Urban cities.**
* **In rural cities, we have highest total fare in the first week of April.**
* **In Suburban cities, we have highest total fare in the last week of Feb and last week of April.**

**Summary:**

There are three recommendations that I can give to CEO to increase the revenue:

* For Urban cities, Average Fare Per Driver is very low. I would just advise you to apply the Surge Price on peak hours to increase the revenue and this will help the drivers to have more money in their pocket too. We can’t ignore drivers because a company’s progress is dependent on them too.
* I would also advise to increase the frequency of service during the peak hours and service to underserved areas (rural areas) will help in increasing the revenue.
* I would also recommend to extend the operating hours of service.
* For Rural cities, the Average Fare Per Driver is very high. I would recommend to increase the driver count. I would also recommend to decrease the Average fare per ride (by $2) to increase the ridership. By looking at the numbers, I think there are very less number of drivers and there is possibility that sometime users didn’t find the drivers at right time.