**# PyBer\_Analysis**

**Overview of the Analysis**

V. Isualize has given me and Omar a brand-new assignment. Using my Python skills and knowledge of Pandas, I am tasked to create a summary DataFrame of the ride-sharing data by city type. Then, using Pandas and Matplotlib, I am asked to create a multiple-line graph that shows the total weekly fares for each city type. Finally, I will submit a written report that summarizes how the data differs by city type and how those differences can be used by decision-makers at PyBer.

**Results**

Based on the analysis, we are able to conclude the following statements regarding the differences in ride-sharing data among the different city types.

* There are 5 major components to PyBer\_Analysis (Total Rides, Total Drivers, Total Fares, Average Fare per Ride and Average Fare per Drivers.
  + Total Rides, Total Drivers and Total Fares were consolidated using the data included in the file and using groupby’ function (twice).
  + Average Fare per Ride and Average Fare per Driver was derived through a formula of “driver\_avg\_fare = type\_fares\_count / type\_drivers\_count”
* Reference below for CyBer Summary DataFrame (If the images are not properly working, please refer to the images in ‘Resources’)
  + Table

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* Based on the information, we can conclude that
  + 1. Urban drivers earn the least compared to Rural and Suburban drivers. This is mostly due to higher supply compared to demand due to higher number of total drivers and the type of rides (frequent riders, shorter distance).
  + 2. On the contrary, Rural drivers records highest margin due to the opposite reasons of Urban environment (higher demand due to lower supply & longer distance)
  + 3. In between stands Suburban area.

**Summary**

Based on the analysis, here are three business recommendations to the CEO.

1. Marketing initiative recommended in Rural and Suburban areas to increase drivers to meet appropriate demand. (Please refer to ‘% of Total Drivers by City Type’ under ‘Resources’ file if the images are not properly working)

Chart, pie chart

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2. Expand riding opportunities in Urban areas where fare is the highest and consistent. (Please refer to ‘% of Total Fares by City Type’ under ‘Resources’ file if the images are not properly working)

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3. Expand fares and increase profit margin in the rural areas as fares never intersect. Chart, line chart

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