Module 5: A Written Analysis of the Results

Caitlyn Castillo

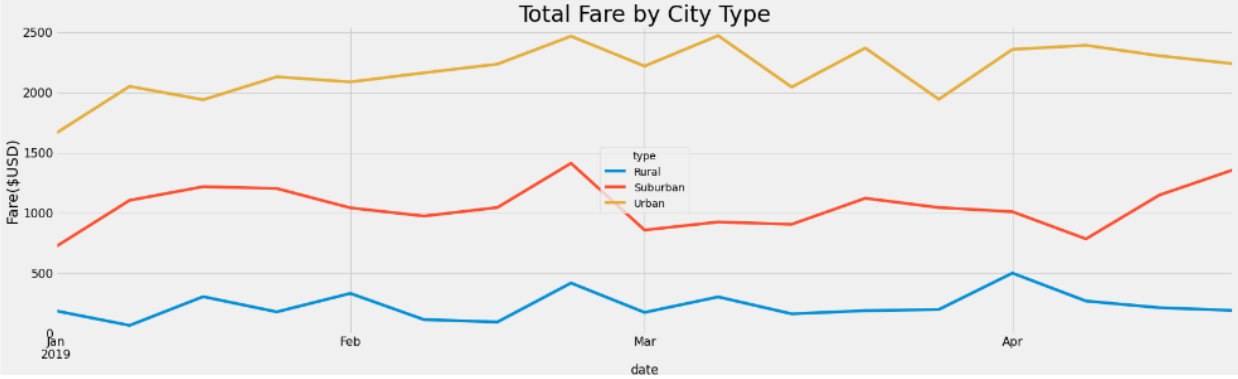
U of A Bootcamp

Overview

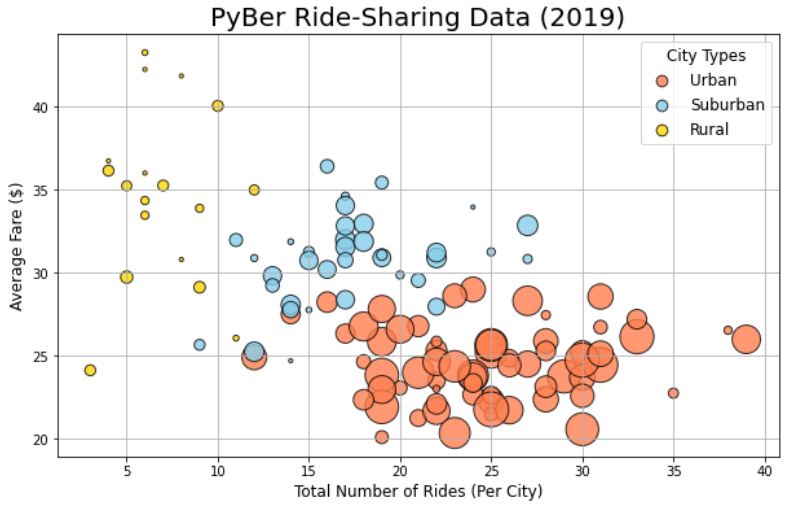
PyBer, a python based ride sharing company, has asked for an exploratory analysis and create visualizations to showcase a data story about types of cities, drivers and riders, and total fares from January to early May of 2019.

PyBer has requested that this initial analysis focus on creating a visual data story on the total fares by city types, Urban, Suburban, and Rural. The team also added total drivers and riders, and average fare per ride to the data story. PyBer will use this data to improve access to services and determine affordability in underserved neighborhoods.

Results



Above is the condensed data story that was requested by PyBer, showcasing fares by city type, Urban, Suburban, and Rural. It can be seen that Urban ride fares cost significantly higher than both Suburban and Rural rides. This may be due to several factors, including difficulty in navigating to the destination, and people density.



Note: Circle size correlates with driver count per city.

Above is a bubble graph formed from raw driver data, showing the density of rides per city types. It can be seen that the highest number of rides given is in the Urban city areas. This is also supported by the following graph.

	Total Rides	Total Drivers	Total Fare	Average Fare per Ride	Average Fare per Driver
Rural	125	78	4327.93	34.623440	55.486282
Suburban	625	490	19356.33	30.970128	39.502714
Urban	1625	2405	39854.38	24.525772	16.571468

While Urban fares are the lowest average, Urban rides are almost double of Suburban and Rural combined.

Summary

Based on the results, here are three suggestions on Pyber's future business to address disparities among the city types.

First, creating a city type rotation to ensure that drivers are not only focusing on Urban areas but also supporting Suburban and Rural areas as well. Data shows that total rides in the Rural area outnumbers drivers.

Second, a deeper dive into costs in each area. Rural area drivers average $35 per ride, compared to Urban drivers at $24 per ride. This may be due to distance traveled, difficulty accessing destination, scarcity of drivers, or an unknown factor. To ensure that fees are comparable to the service given, Pyber should know what influences these prices.

Lastly, a deeper dive into impacts the calendar may have on rides and drivers. In the multi-line graph, there is a uniform increase at the end of February and a uniform dip at the beginning of March. Once a cause is found, this can help Pyber prepare for future influxes of riders and include this in driver areas and fares.