**PyBer Module 5 Challenge**

**Overview of the Project**

**Purpose:**

The purpose of this analysis is to present my employers at PyBer with an in-depth a look at rideshare data collected across the United States between January and May of 2019. This data will help PyBer better understand how many drivers they have, how many rides they give in different city types, and what the average ride fare is in those different locations.

**Results**

**At a glance**

Based on my analysis, it is clear that what type of city a ride is given in has a significant influence on the number of available drivers and the cost of the ride. Looking at the PyBer Summary table we can see that more densely populated areas have more drivers and more rides given. As we can see from the table below, urban areas had over 10 times the number of rides than rural areas. This makes sense as urban areas are more densely populated. Table

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**The impact of population density**

Something to note between urban and rural areas is the number of drivers. In urban areas during this time period, more drivers existed than there were rides given. This meant a significant number of PyBer’s drivers were not making any money during this time. Contrast this with the rural areas and some drivers were able to conduct multiple rides for PyBer clients. Additionally, Less densely populated areas had a higher average fare per ride and fare per driver than in urban areas.

**Conclusion**

While this data is important, it does not reflect the whole picture. As we can see in the table above and the chart below, rides from urban cities account for most of the money made from fares during this period of time. Although the average fare per ride was lower each time, significantly more rides were conducted than in other areas. Based on these visuals and the data collected, it would be safe to encourage the PyBer execs to invest further in urban cities with the aim of increasing the number of rides given.

Chart, line chart

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**Summary**

**Business Recommendations**

**Invest in expanding PyBer to more Urban Cities**

Based on the analysis above, PyBer makes a significant portion of its profits from urban cities. The best way for PyBer to increase the number of rides it served and overall profits, PyBer should invest further into expanding into more urban cities. This would include significant marketing campaigns to increase the number of rides given in each city. Something to note is that urban cities can become saturated with drivers. While this is great for riders who will have easy access to a ride, this will likely mean many drivers become discouraged and stop working with PyBer. For this reason, PyBer may find it beneficial to limit the number of drivers in an urban city until the number of rides given begins to exceed the total number of drivers.

**Further expand into Suburban Cities**

While suburban areas are not as profitable as urban cities, they still do serve a great deal of rides and pull in a decent amount of money. I would recommend expanding further into suburban areas, particularly those near urban cities as riders will likely go between the two. Additionally, I would increase the number of drivers in suburban cities in the spring and summer months>. As we can see from the line chart above, suburban cities saw a steep increase in the number of rides given between March and May.

**Don’t invest heavily in Rural Cities**

While rural fares seem profitable on paper, there are likely not enough of them conducted to justify significant investment in those areas. The costs of marketing and hiring new drivers would be too high to justify such low margins. I would not recommend PyBer continue to expand into rural cities.