



Data Glacier

Your Deep Learning Partner

G2M Case Study

Virtual Internship

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Location: Spain

Team: Data and Analytics

15-Mar-2021

Background -G2M(cab industry) case study

- XYZ is a private equity firm in US. Due to remarkable growth in the Cab Industry in last few years and multiple key players in the market, it is planning for an investment in Cab industry.
- Objective : Provide actionable insights to help XYZ firm in identifying the right company for making investment.

The analysis has been divided into four parts:

- Data Cleaning and Understanding
- Forecasting profit for each cab type
- Finding the most profitable Cab company
- Recommendations for investment

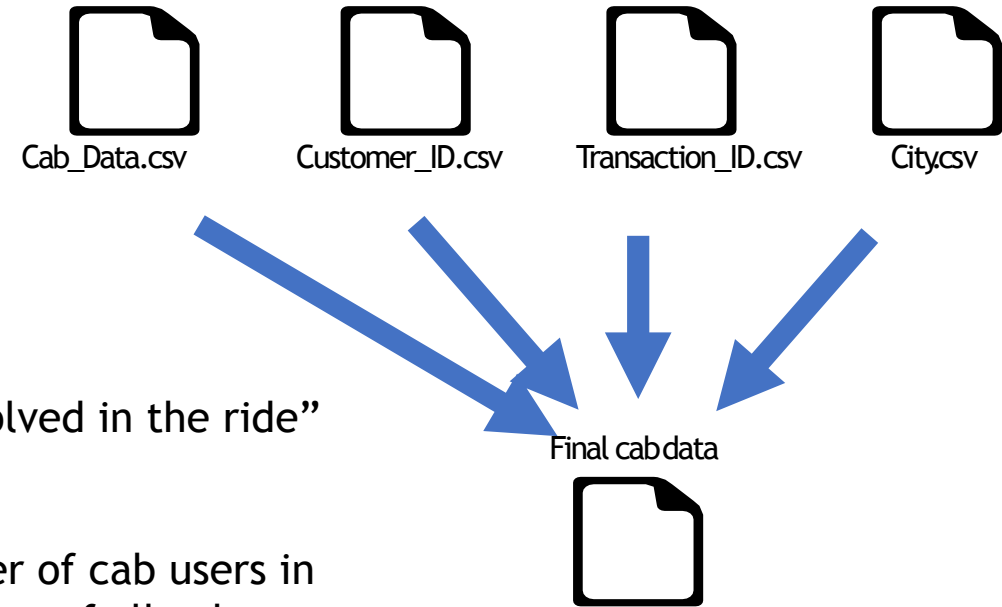
Data Exploration

- 17 Features(including 5 derived features)
- Timeframe of the data: 2016-01-01 to 2018-12-30
- Total data points :359392

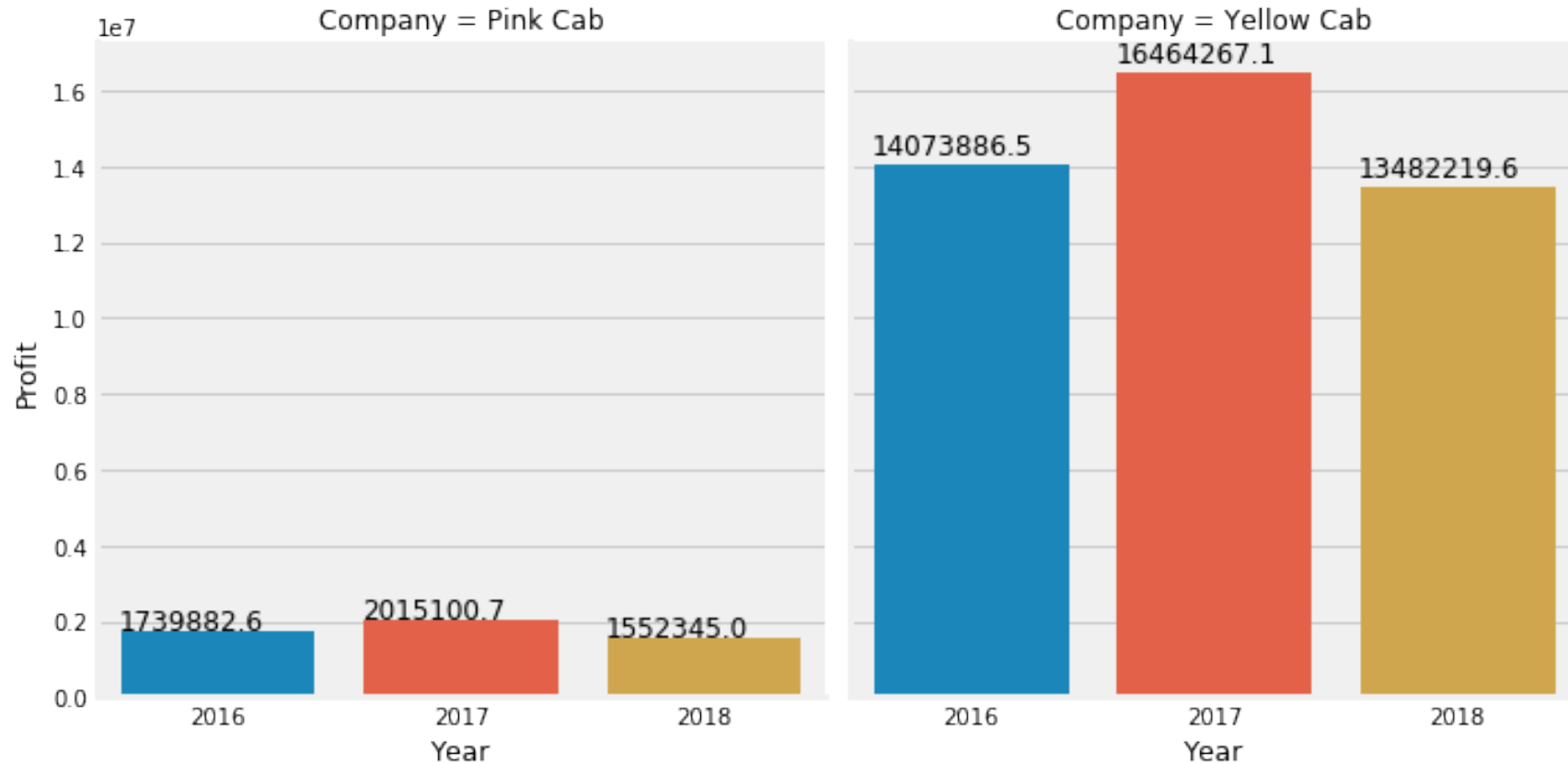
Assumptions:

Cost_of_Trip feature is considered as “all expenses involved in the ride” (including taxes and the part earned by the driver)

Users feature of City dataset is treated as “total number of cab users in the city at the end of 2018”(taking into account the users of all cab companies in the US)

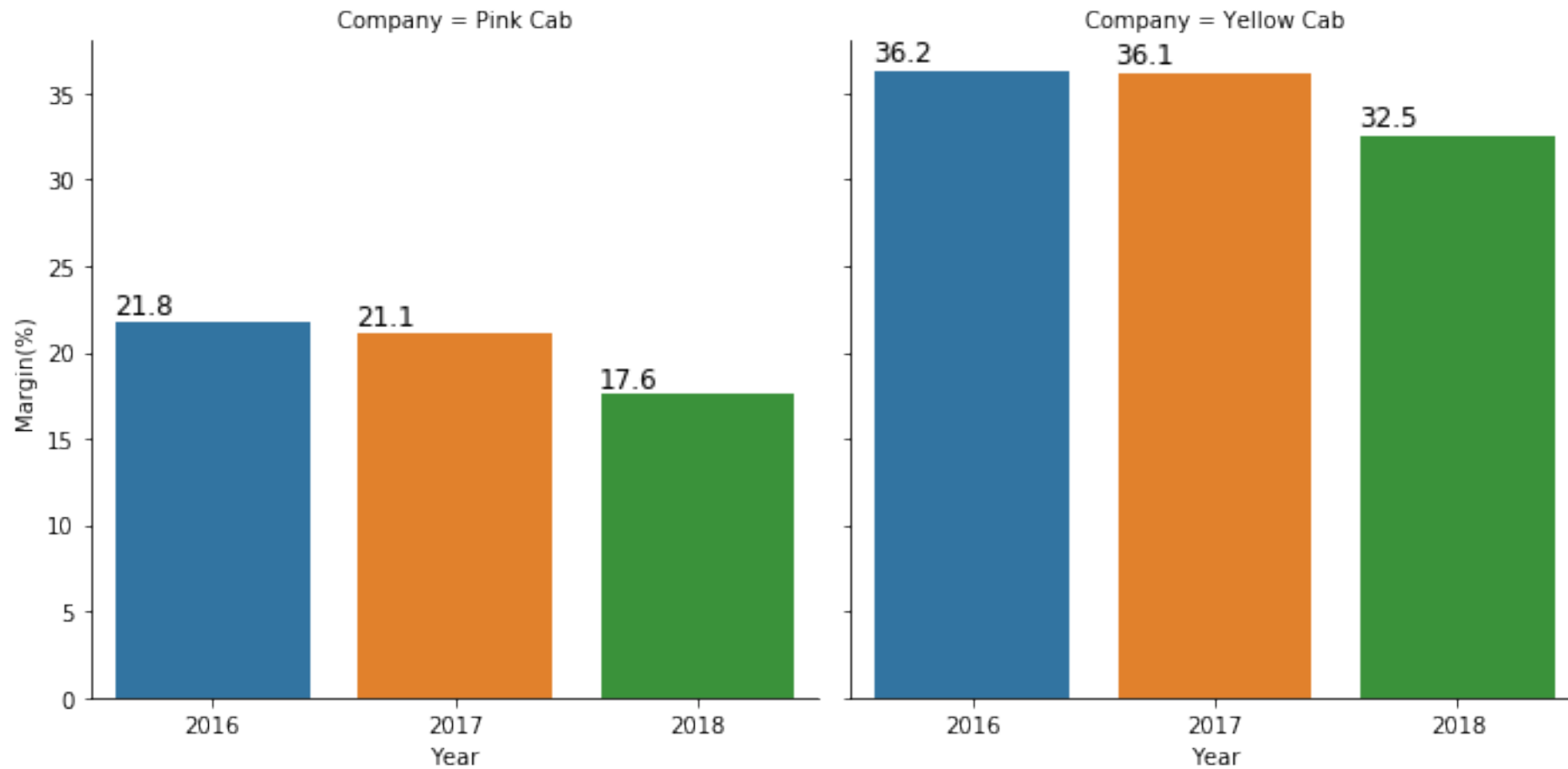


Profit Analysis

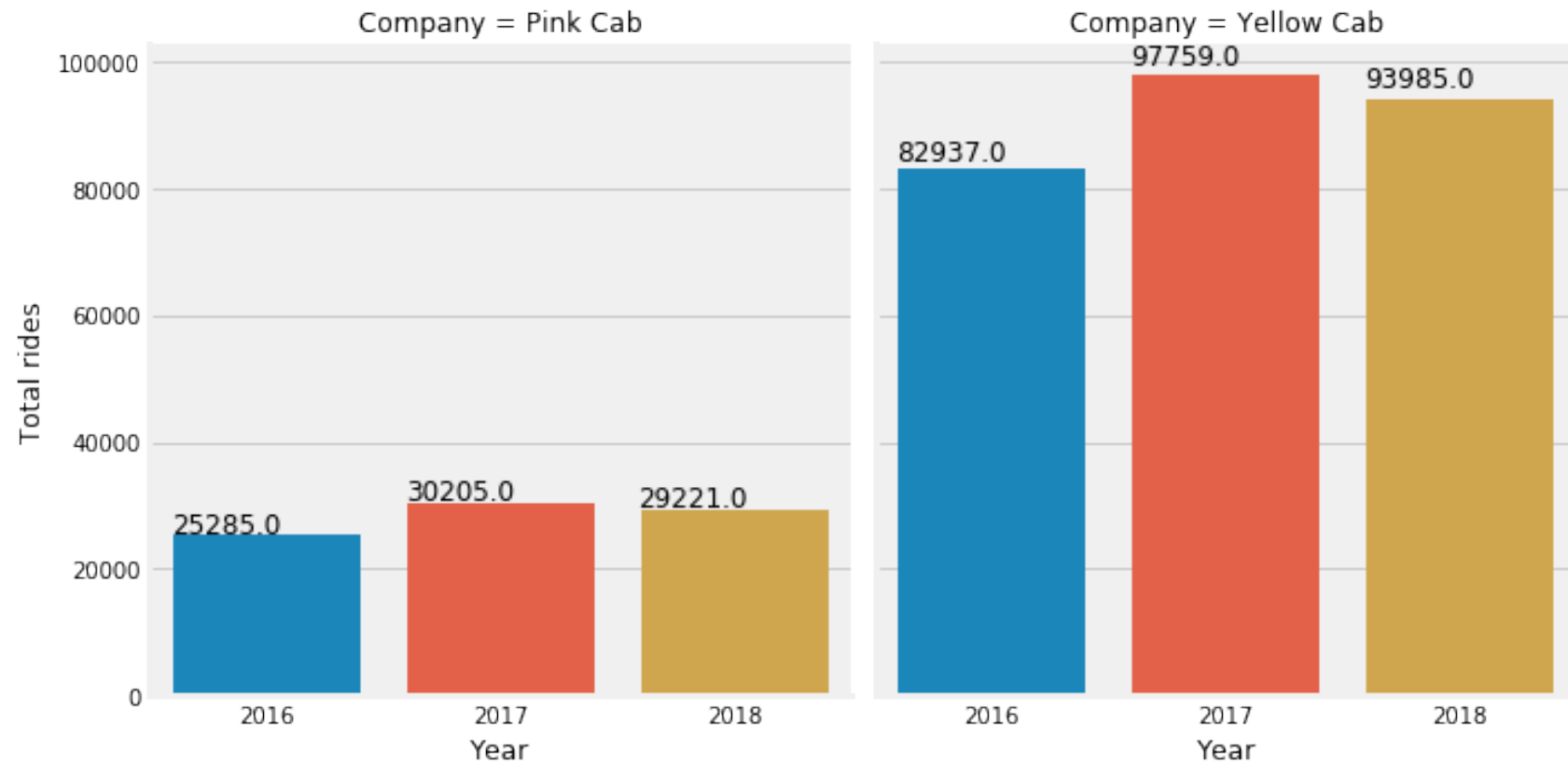


Company	Profit	Total Rides	Profit Per Ride	Margin(%)
Pink Cab	5.3 M	84711	62.65	20.15 %
Yellow Cab	44 M	274681	160.26	35 %

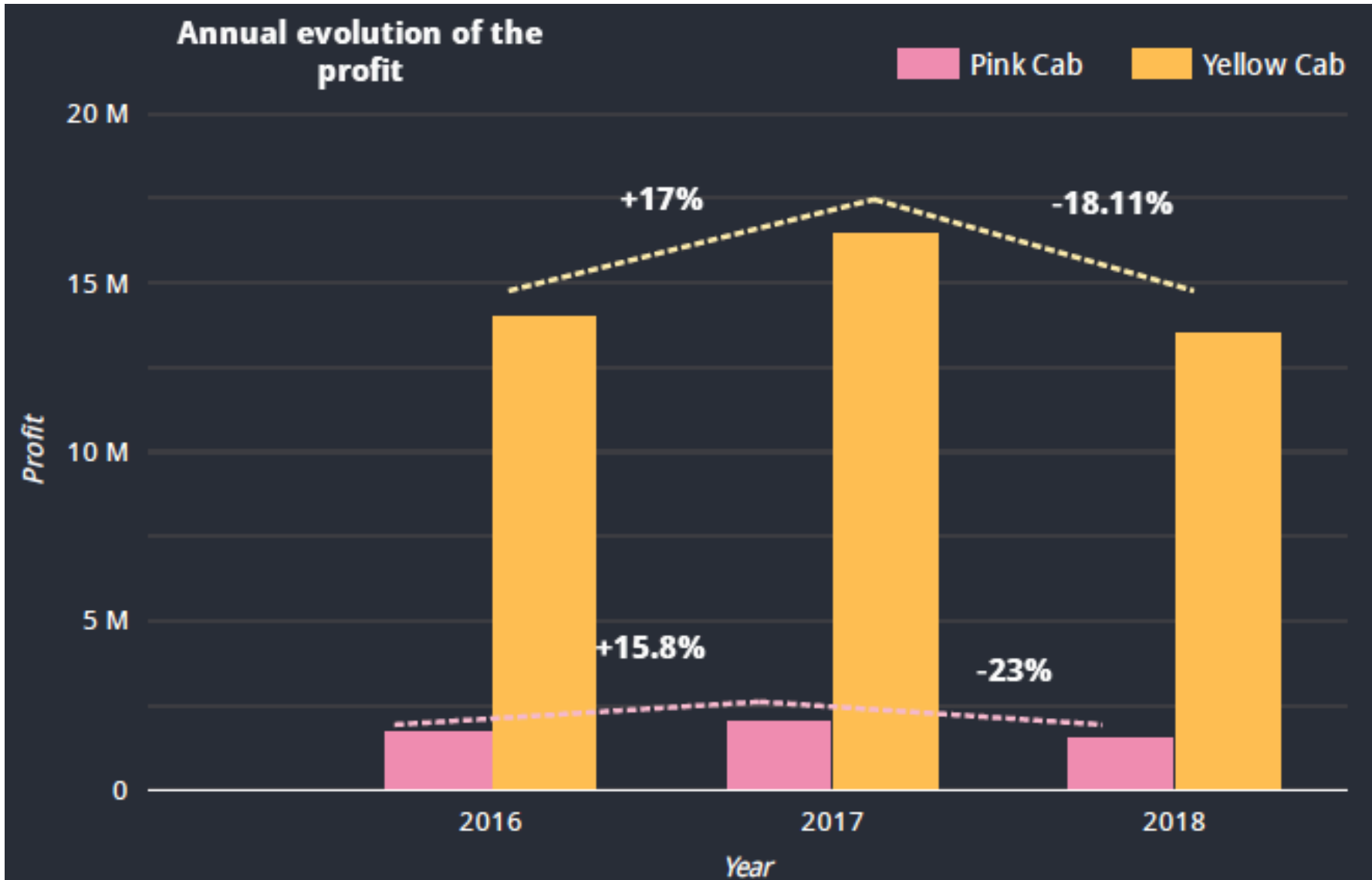
Profit Analysis



Demand Analysis



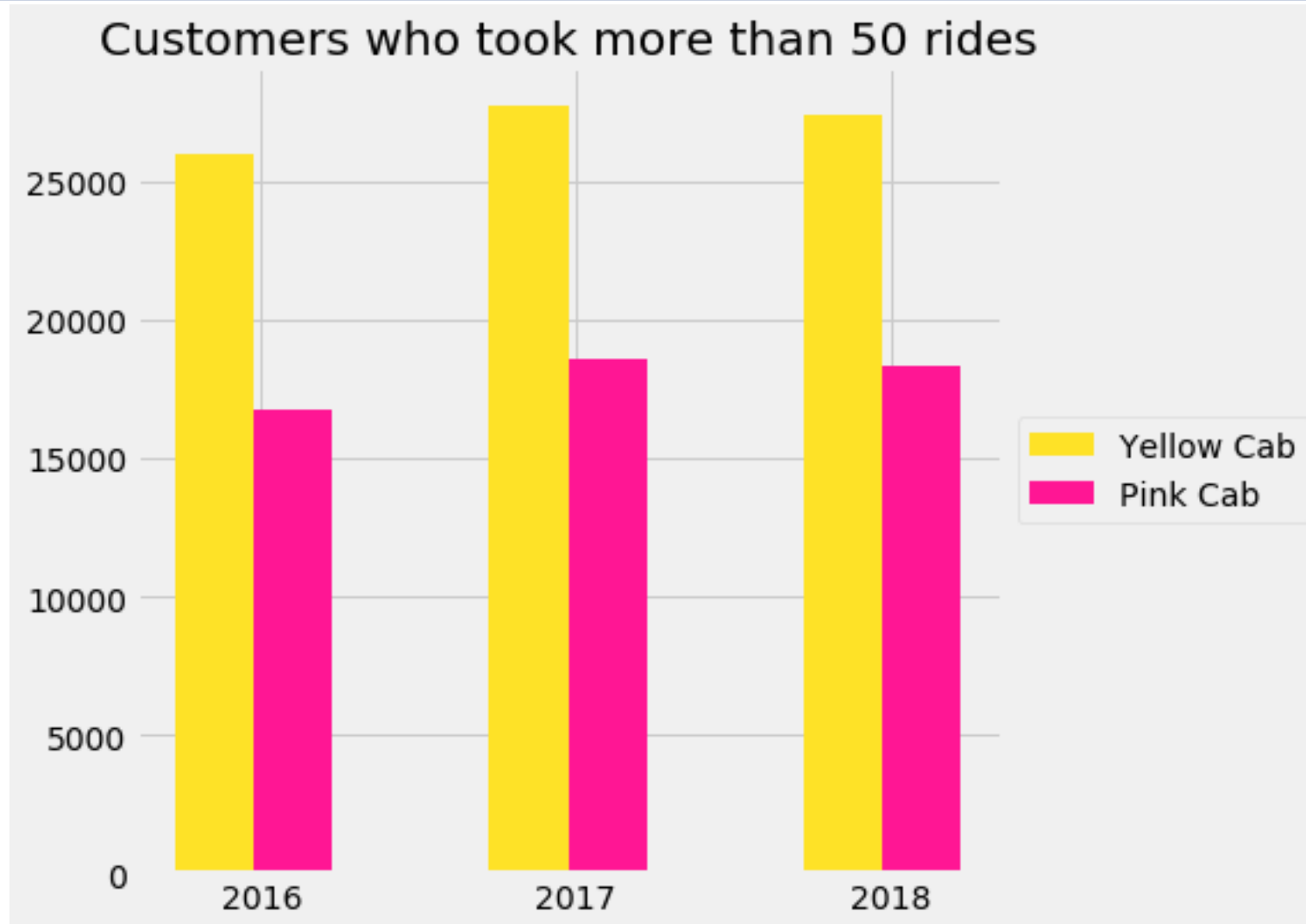
Yearly Profit Analysis



Both companies faced gain from 2016 to 2017 and loss from 2017 to 2018 in the profit.

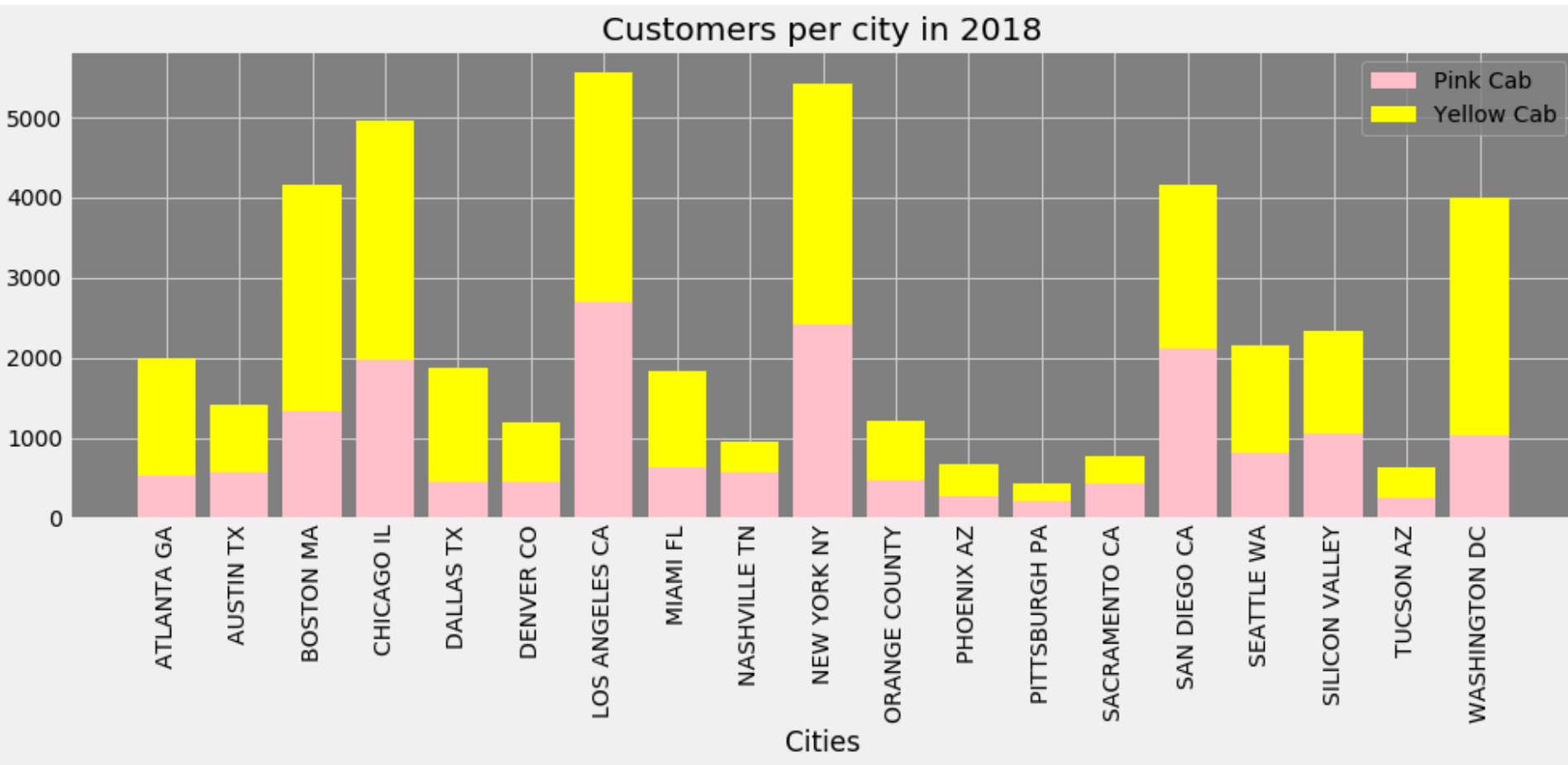
However, Yellow Cab's profit rose more than Pink Cab's profit did in the first period and went down less in the second period.

Customer Retention



- Customers who took at least 50 rides of the same cab company are considered in the picture.
- Clearly Yellow cab is able to retain their customers better than Pinkcab.

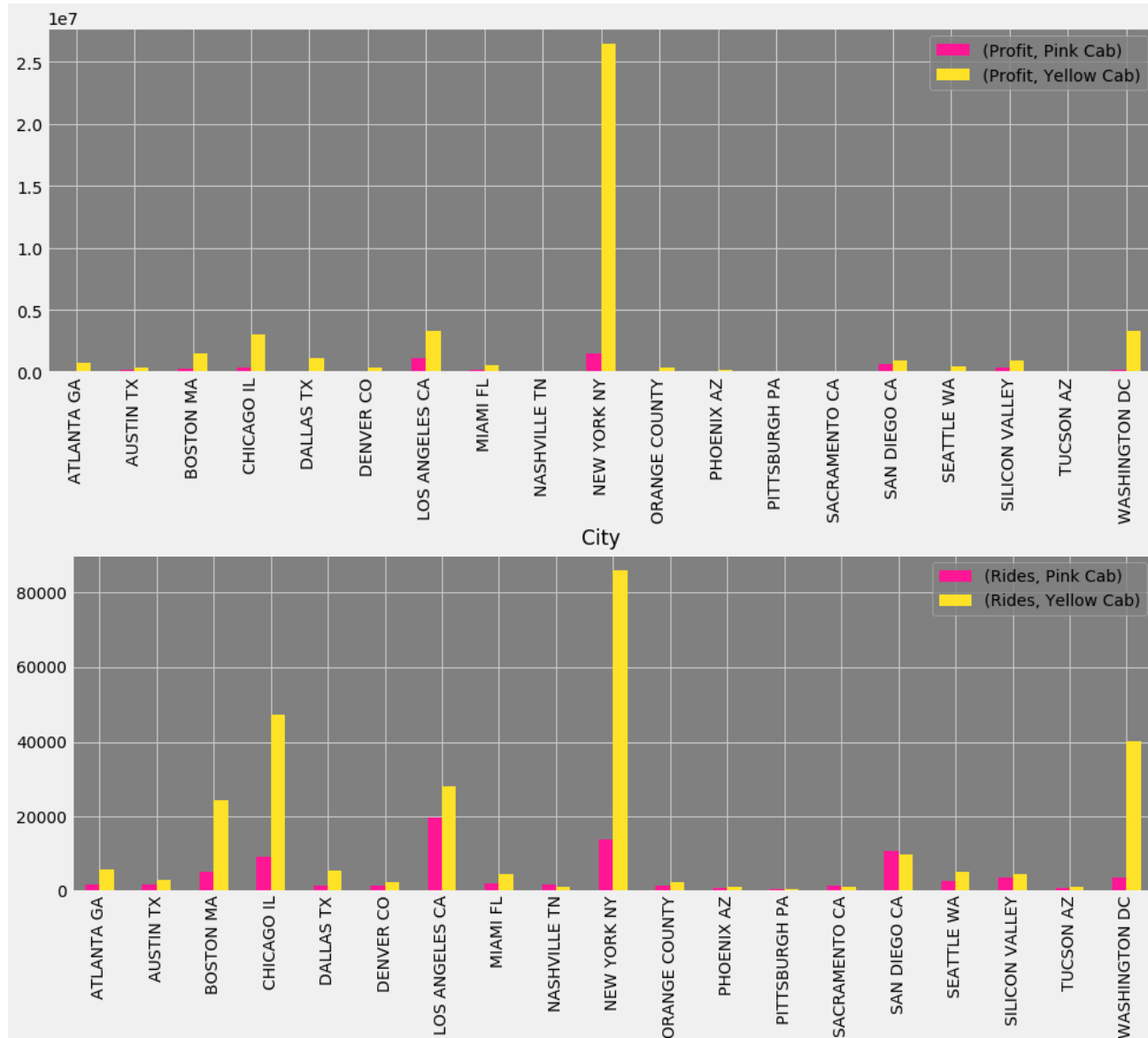
City Wise Cab Users Covered By Company



- This is the number of users covered by Yellow and Pink cab In each city at the end of 2018.

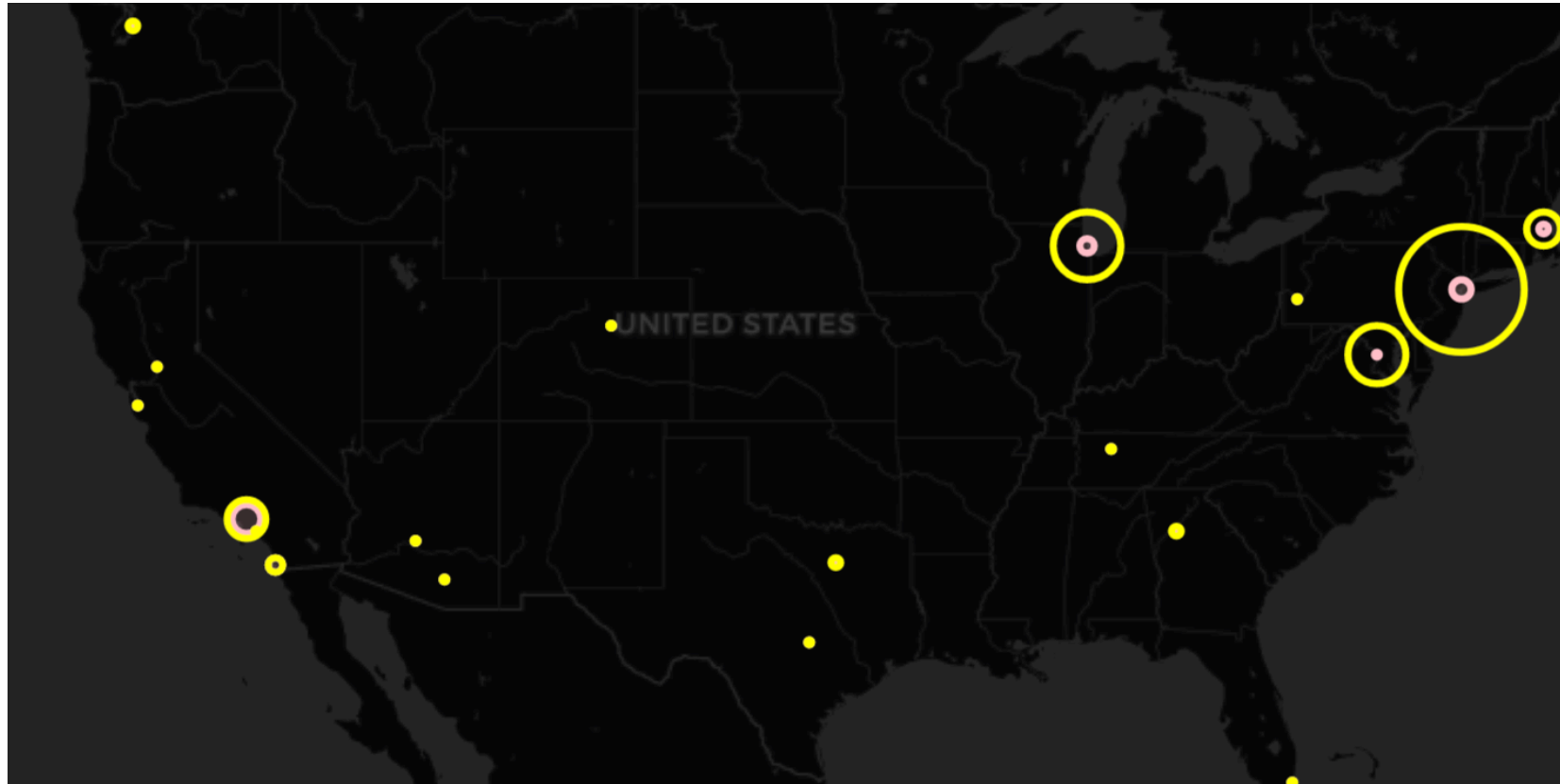
Yellow Cab has more users than Pink Cab in 13 out of 19 cities.

City Wise profit and demand by Company



Clearly, Yellow Cab performed better in the majority of the cities

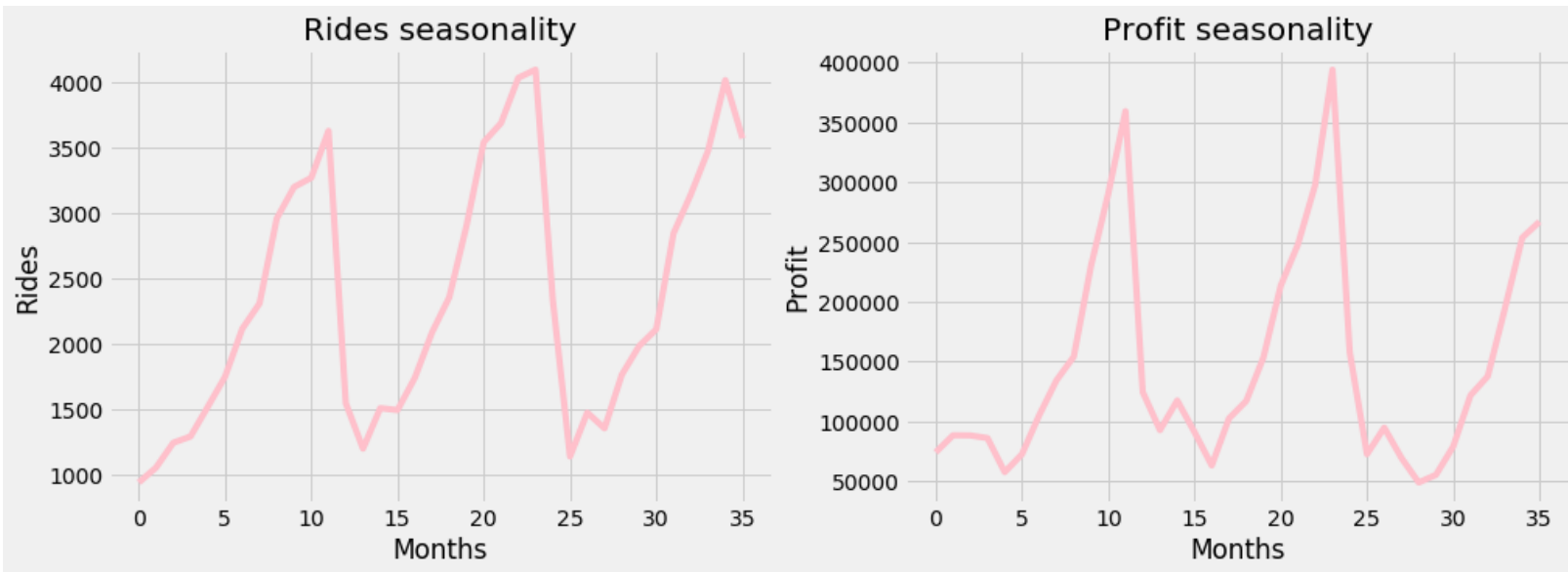
City Wise demand by Company



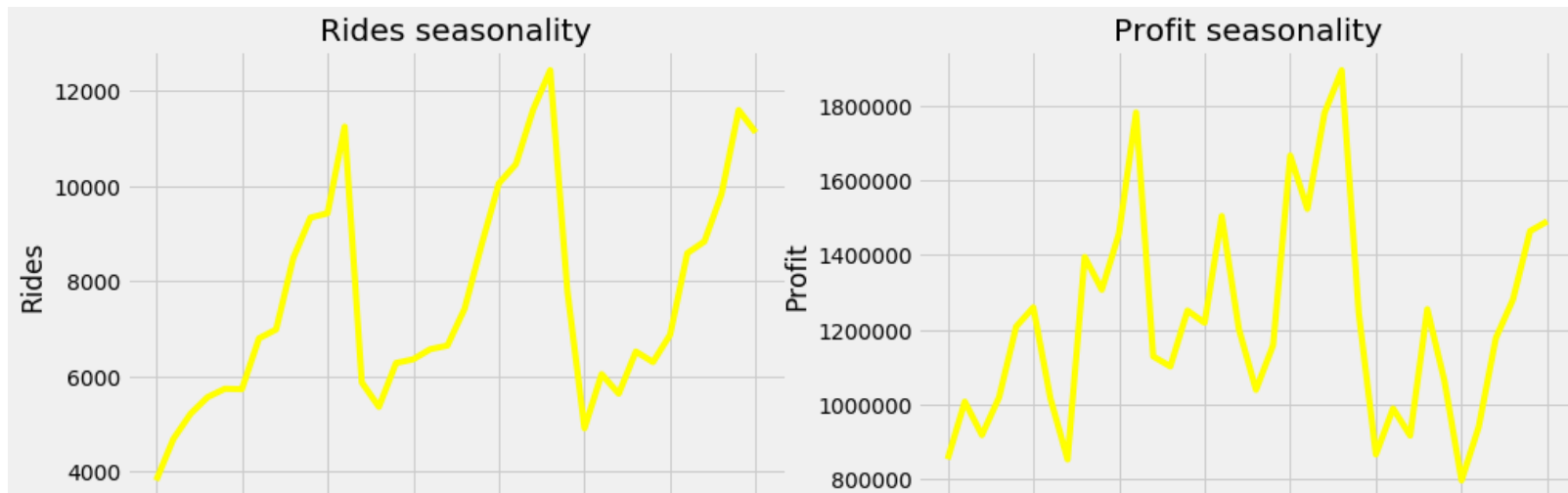
This is the number of rides of each company in each city

One can observe that indeed Yellow Cab performed far away better than Pink Cab did in almost every city.

Seasonality in the demand and the profit

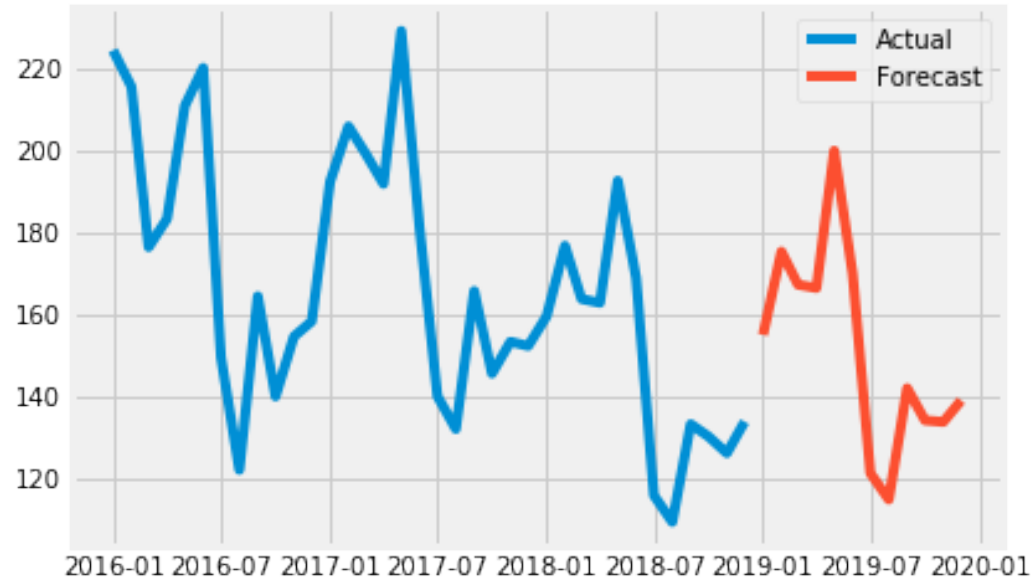


- Seasonal component is present in both companies. As far as the rides trend is concerned, one can see that pick-ups rise between January and September and go down from that month onward. Regarding profit, there is a little slope from January to May and it goes up until the end of the year.

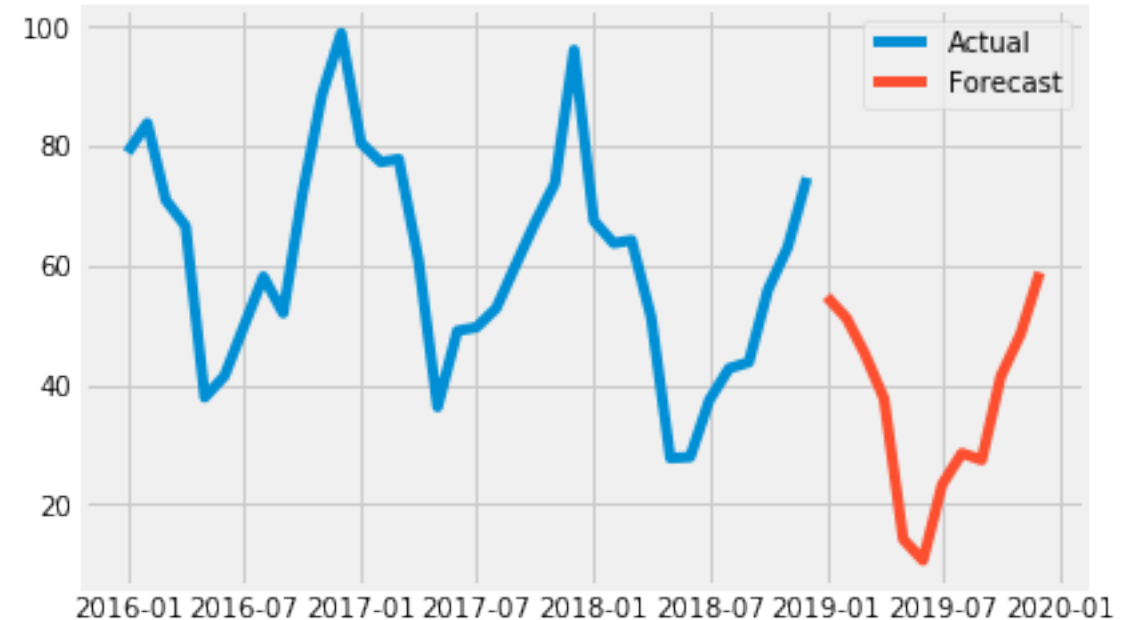


Profit Forecasting for 2019

Yellow Cab. Forecast (2019) of the average profit per month



Pink Cab. Forecast (2019) of the average profit per month



We can see that Pink Cab's monthly profit is going down until June and rising from that moment onward. Yellow Cab's profit experiences a huge fall from April to July. However, the minimum of Yellow Cab's profit is greater than any value of Pink Cab's profit. So, we can say that forecast for Yellow Cab gives us more confidence.

Recommendations

We have evaluated both the cab companies on following points and found Yellow cab better than Pink cab:

- **Profit Analysis:** Not only did Yellow Cab have higher profit in recent years but also this company had higher margin than Pink Cab.
- **Customer Reach :** Yellow cab has currently more users than Pink Cab in the majority of the cities We have also observed that Yellow cab is generating higher profit and giving more rides than Pink Cab in 13 out of 19 cities
- **Customer Retention:** We have analyzed the following segment : at least 50 rides same cab company. And we found that Yellow cab is doing far better than Pink .
- **Profit Forecasting :** Pink Cab's monthly profit is going down untill June and rising from that moment onward. Yellow Cab's profit experiences a huge fall from April to July. However, the minimum of Yellow Cab's profit is greater than any value of Pink Cab's profit. So, we can say that forecast for Yellow Cab give us more confidence

On the basis of above points , we will recommend Yellow cab for investment.

Thank You