



Data Glacier

Your Deep Learning Partner

G2M insight for Cab Investment firm Case Study

Virtual Internship

07-Jan-2022

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: To help XYZ firm in identifying the right company for investing.

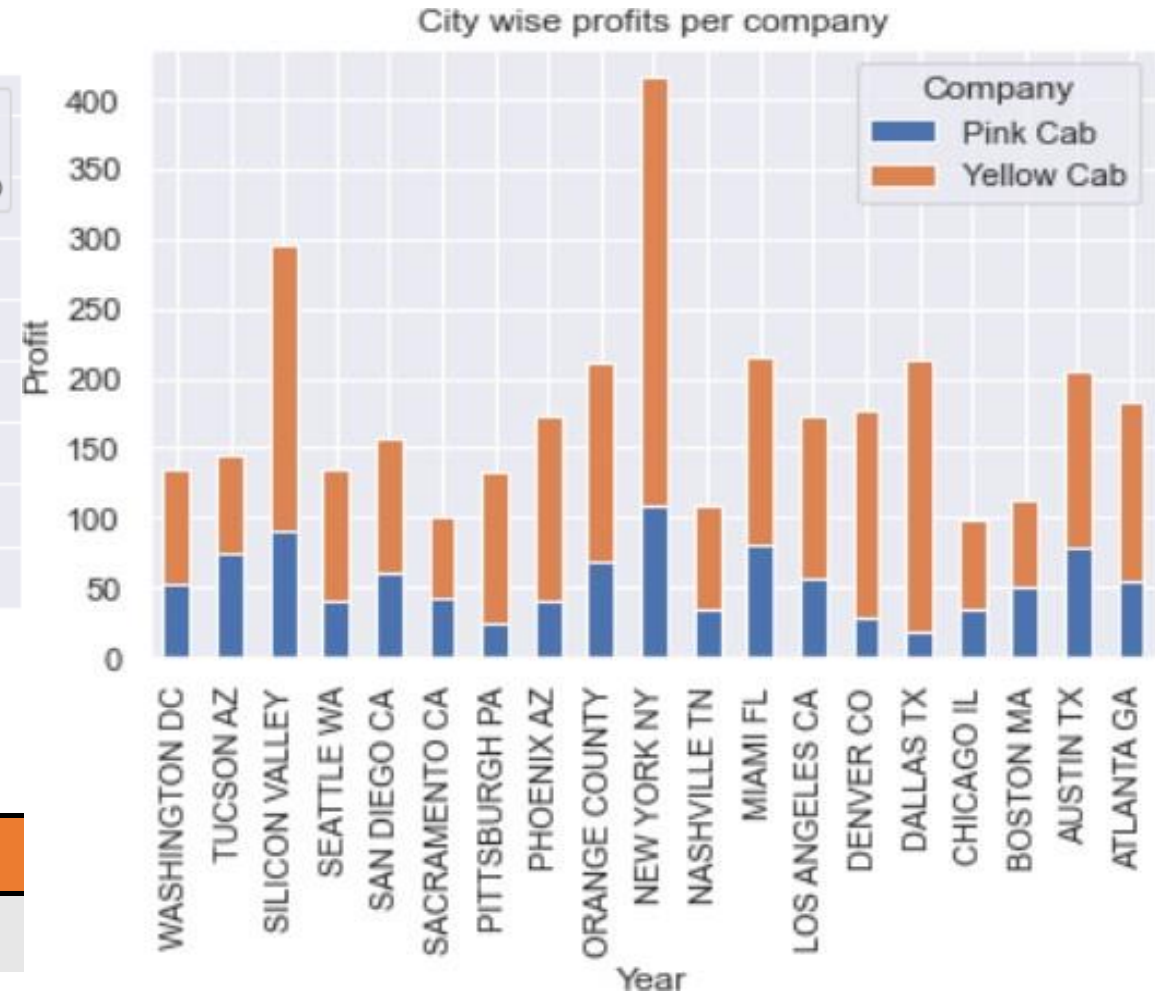
The analysis has been divided into four parts:

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

Dataset

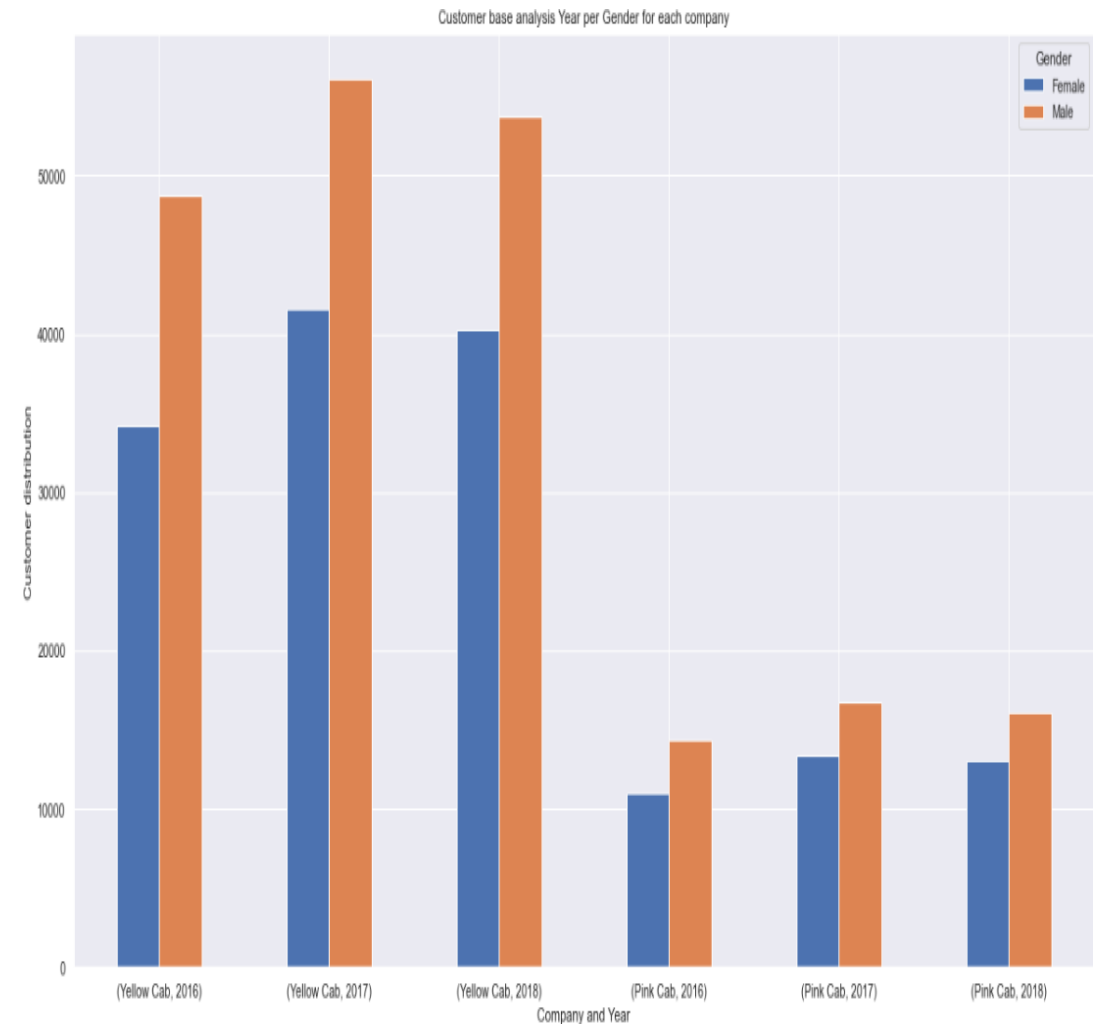
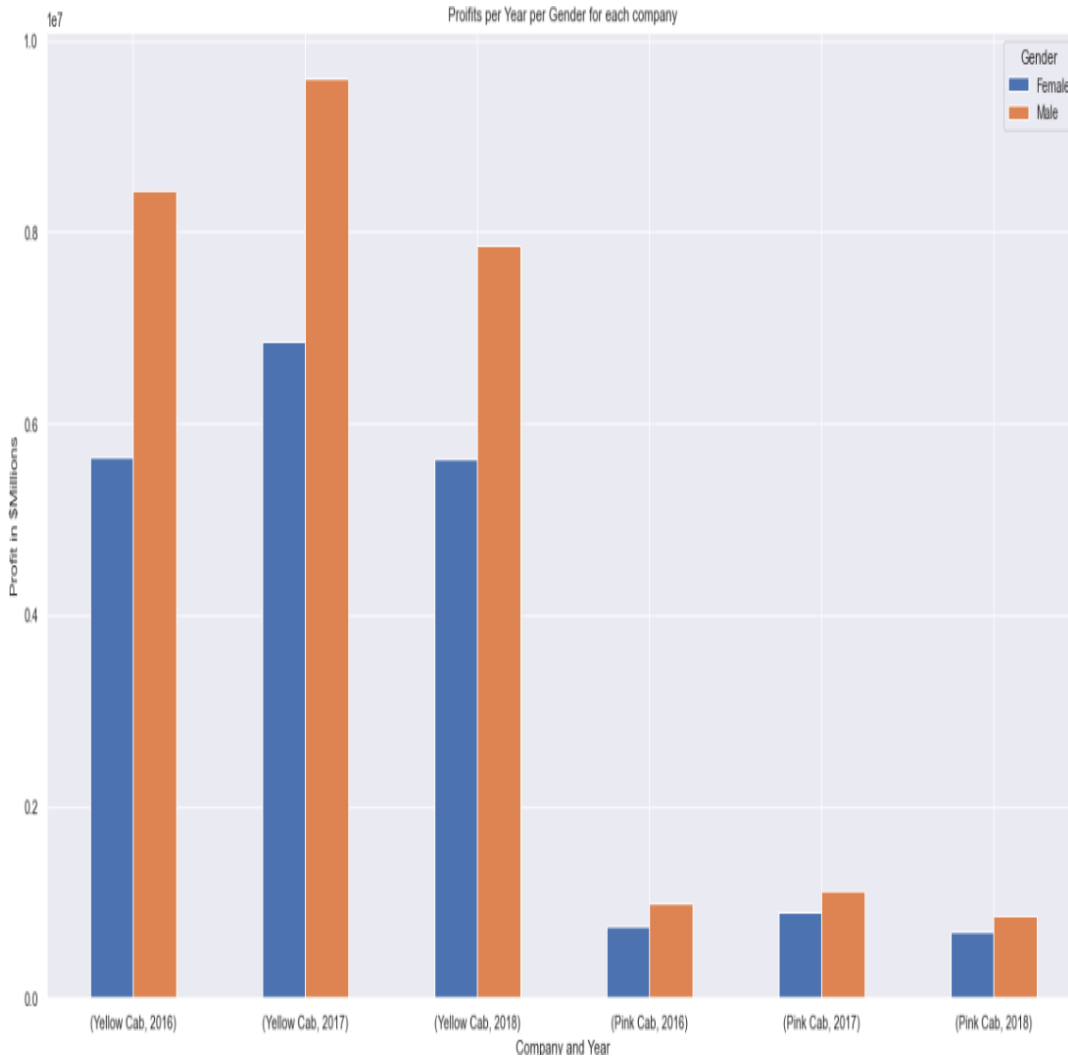
- 24 Features
- Timeframe of the data: 2016-01-31 to 2018-12-31
- Total data points: 355,032
- The given 4 datasets are combined in single file (merged_data.csv)
- Analysis to be done:
 1. Profit bar graphs
 2. Profit and customer base graphs (using Gender)
 3. Profit and Customer Base graphs (using Age)
 4. Customer Retention based on rides
 5. Cab users in a city
 6. User Covered by Company and Customer base Year wise
 7. Seasonality in the Profit
 8. Customer And Ride Analysis Day Wise
 9. Profit Forecasting for 2019

Profit bar graphs

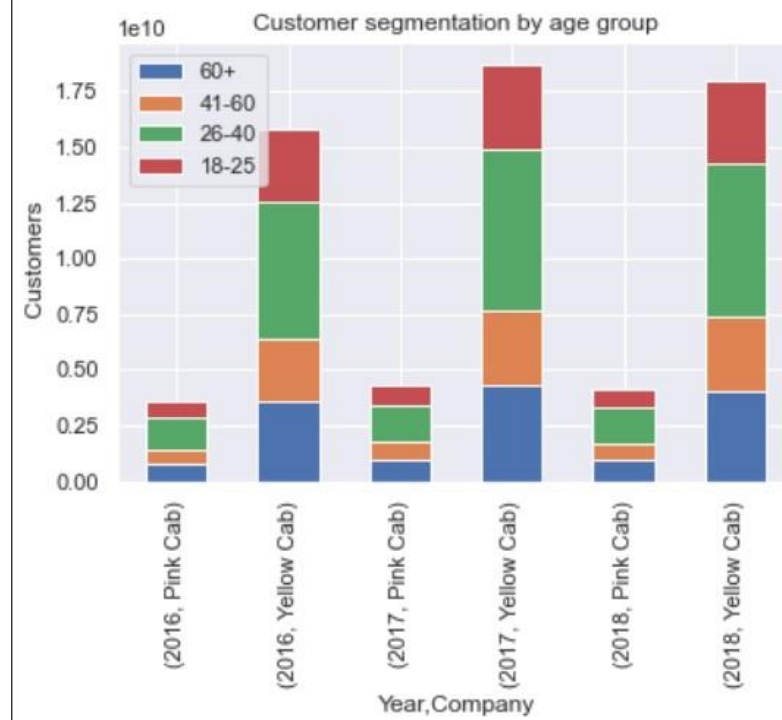
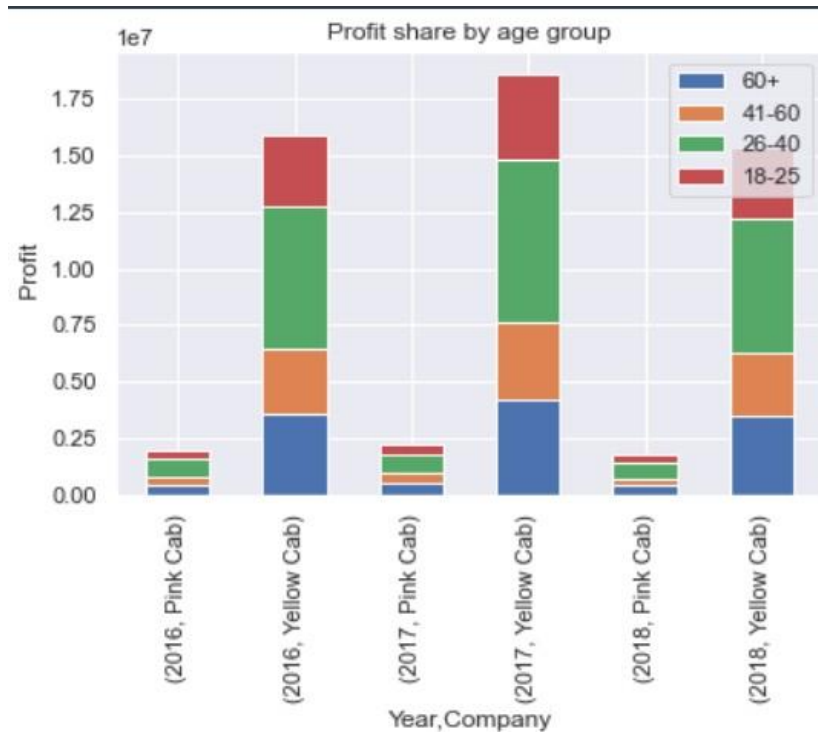


Company	Profit	Total Rides	Profit per ride
Pink Cab	5,307,328	84,711	2.769908
Yellow Cab	44,020,370	274,681	7.105508

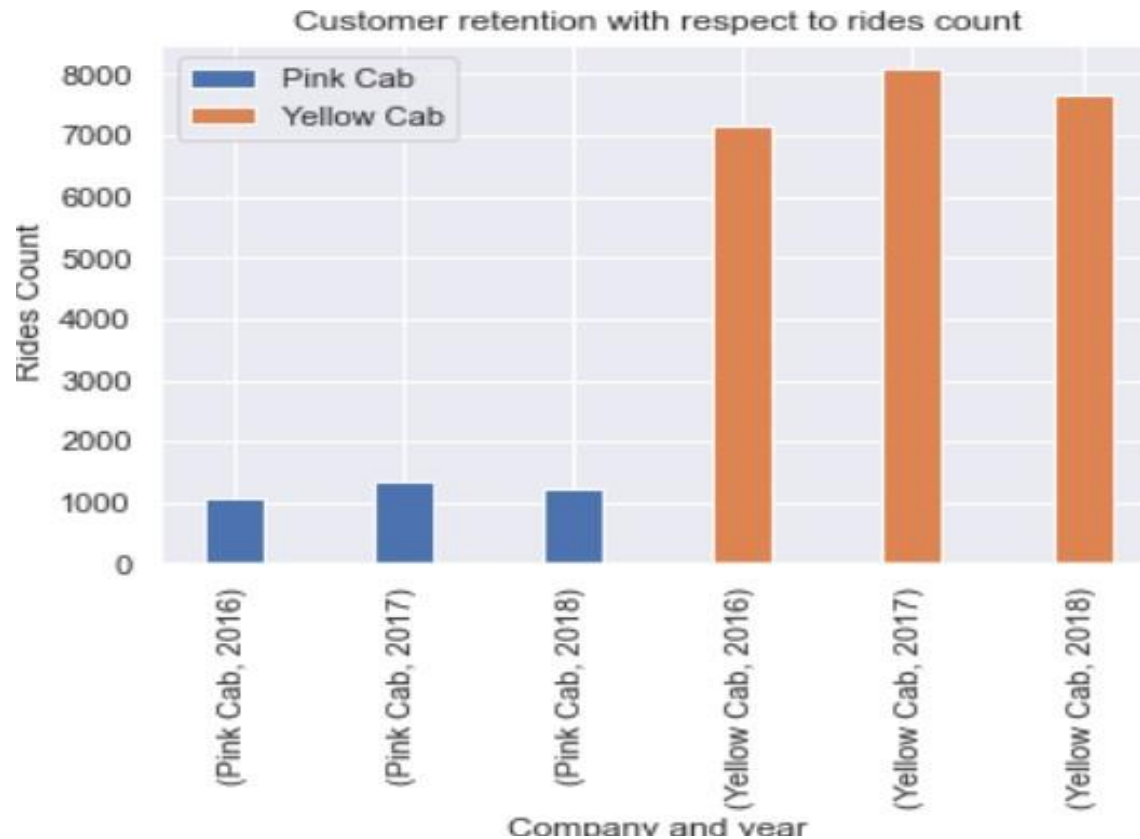
Profit and customer base graphs (using Gender)



Profit and Customer Base graphs (using Age)

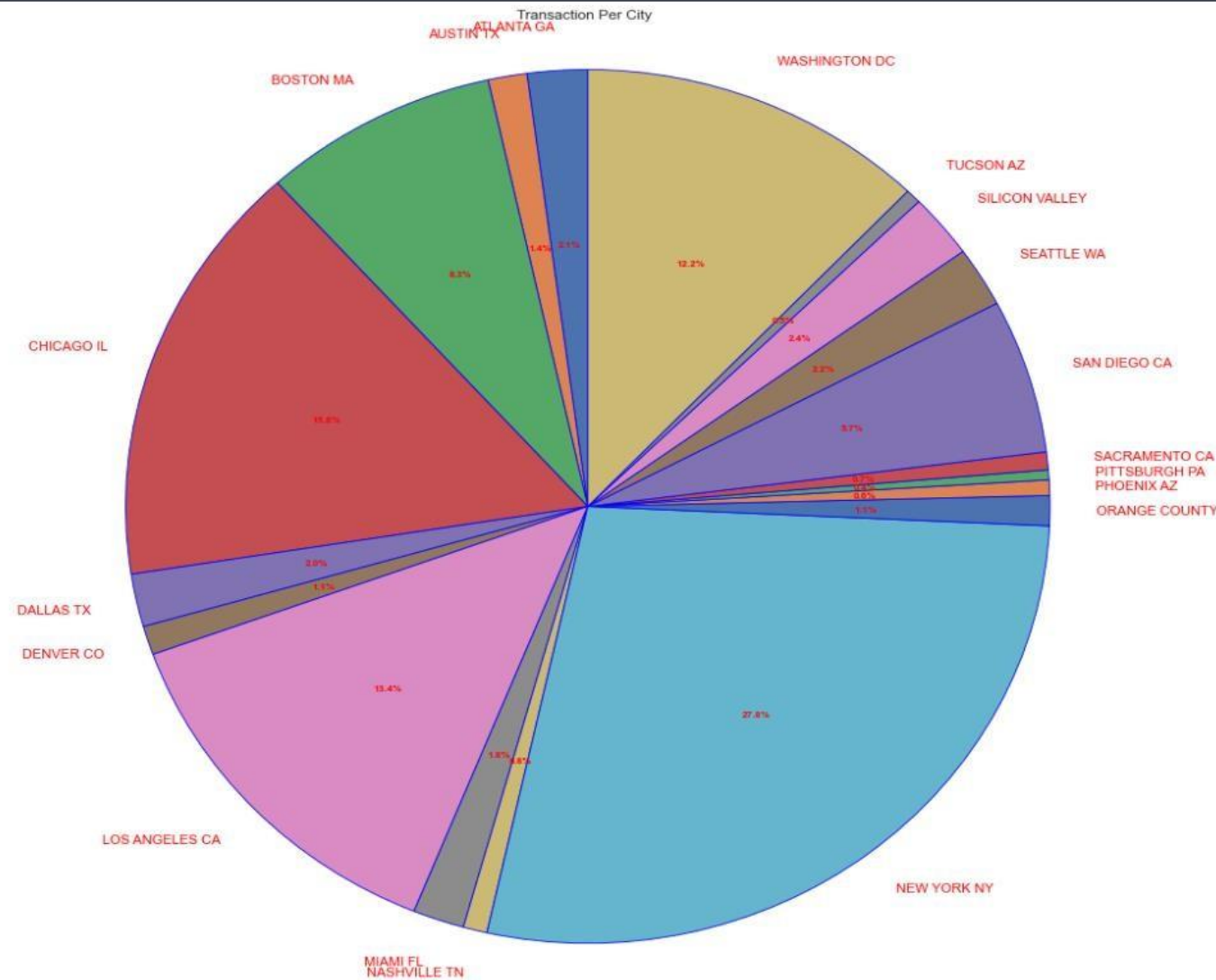


Customer Retention based on rides



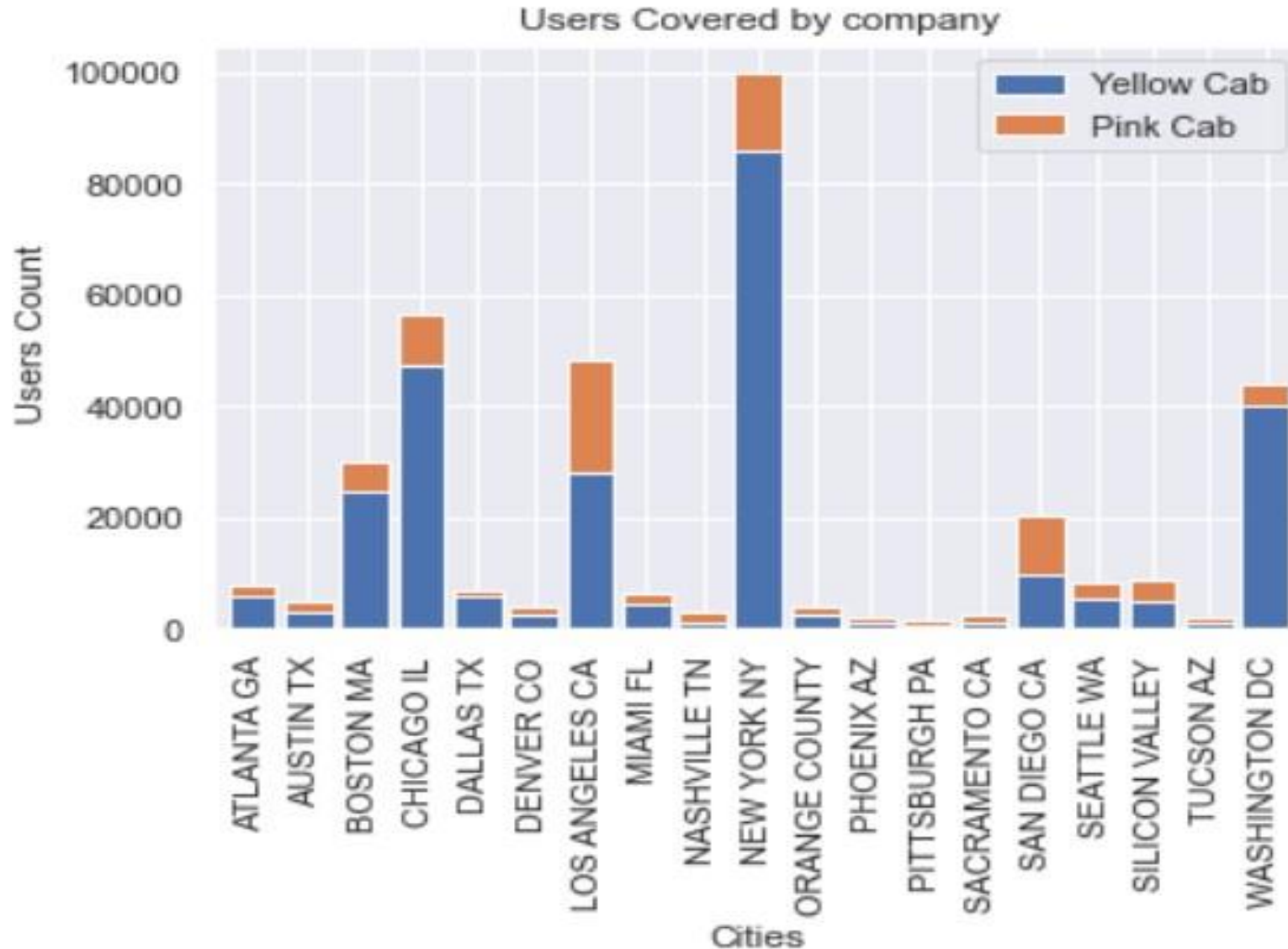
- Significant increase of customers for yellow cabs after 2016.
- Comparatively yellow cabs have a greater number of customers.

Cab users in a city



- This graph describes the number of users of yellow and pink cab in different cities
- From the graph, New York has the highest number of yellow cab users
- In Los Angeles CA there are highest number of Pink Cab Customers

City vs Users graph (using cabs)



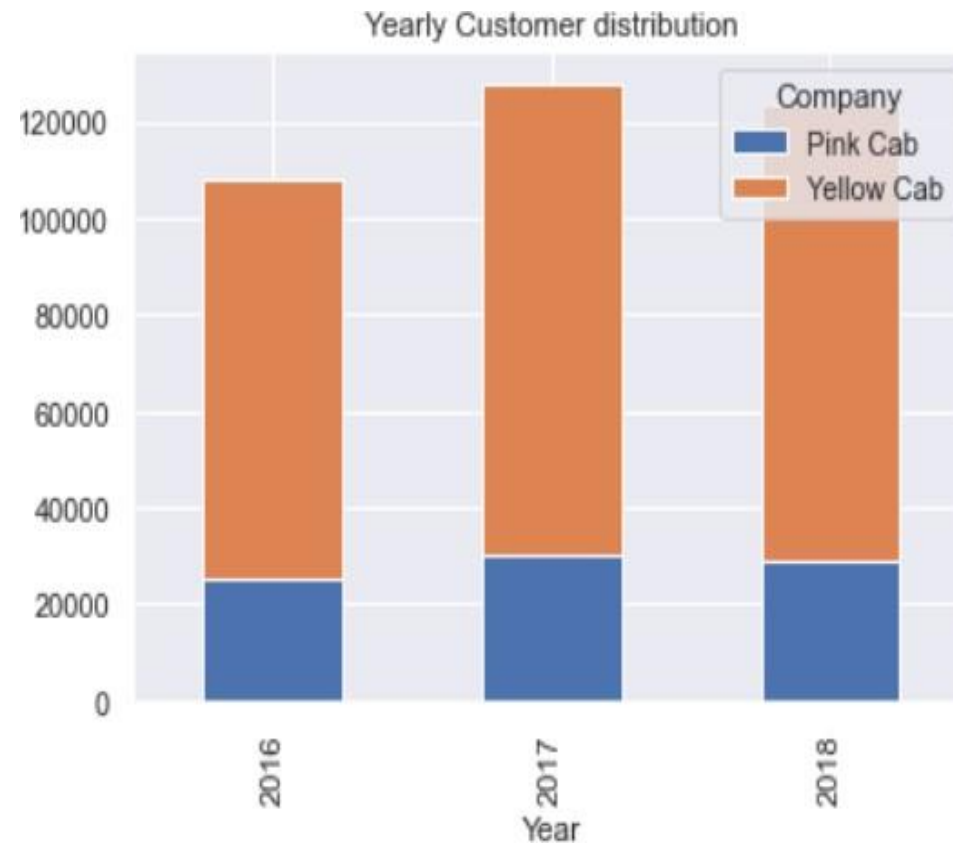
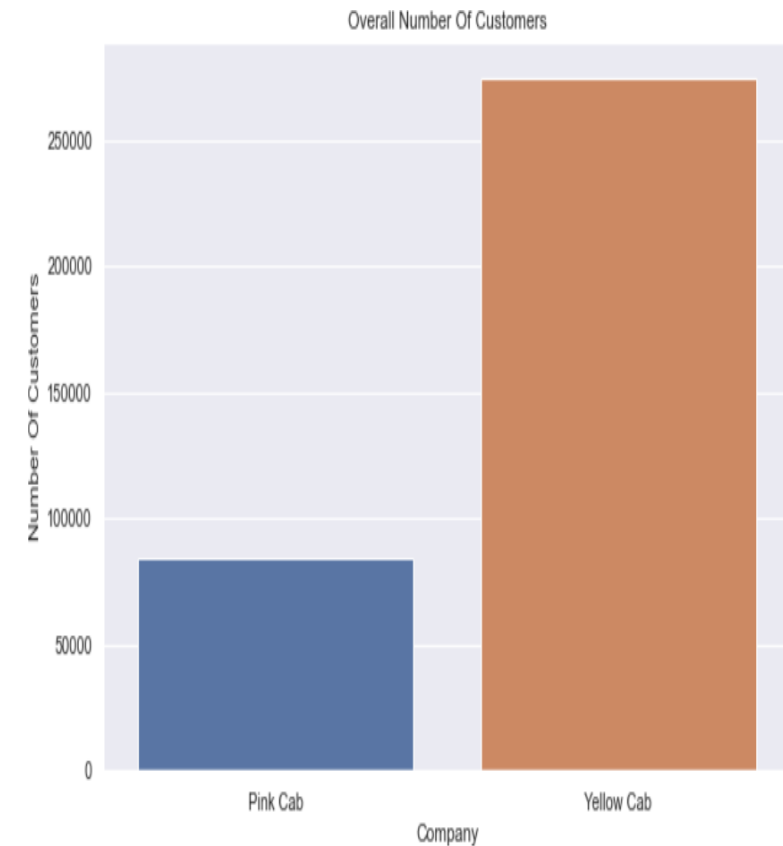
Pink cab has higher users than yellow cab in:

- SANDIEGO
- NASHVILLE
- SACRAMENTO
- PITTSBURGH

Yellow cab has higher users than pink cab in:

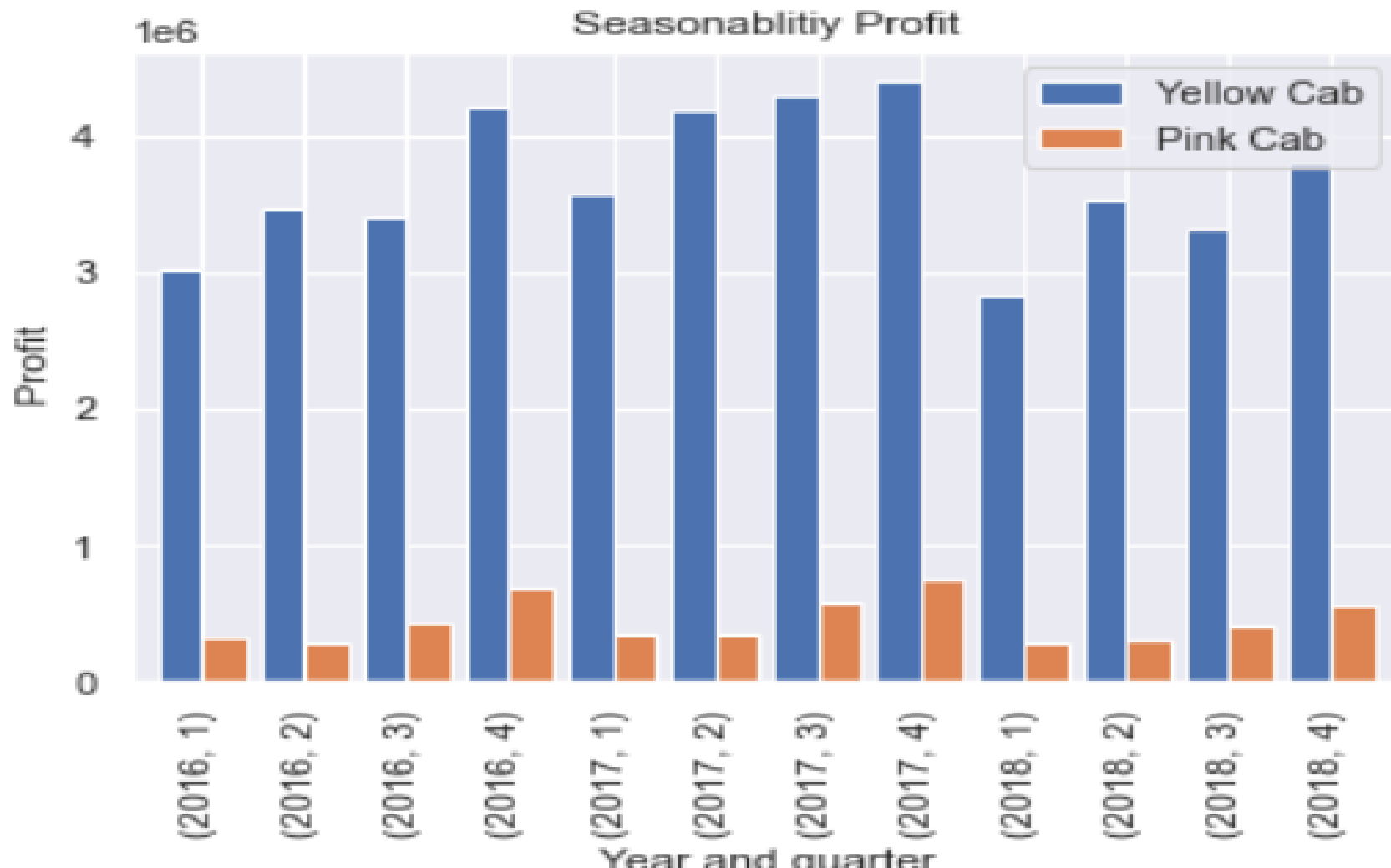
- NEW YORK CITY
- Chicago IL
- WASHINGTON DC
- LOS ANGELES

User Covered by Company and Customer base Year wise

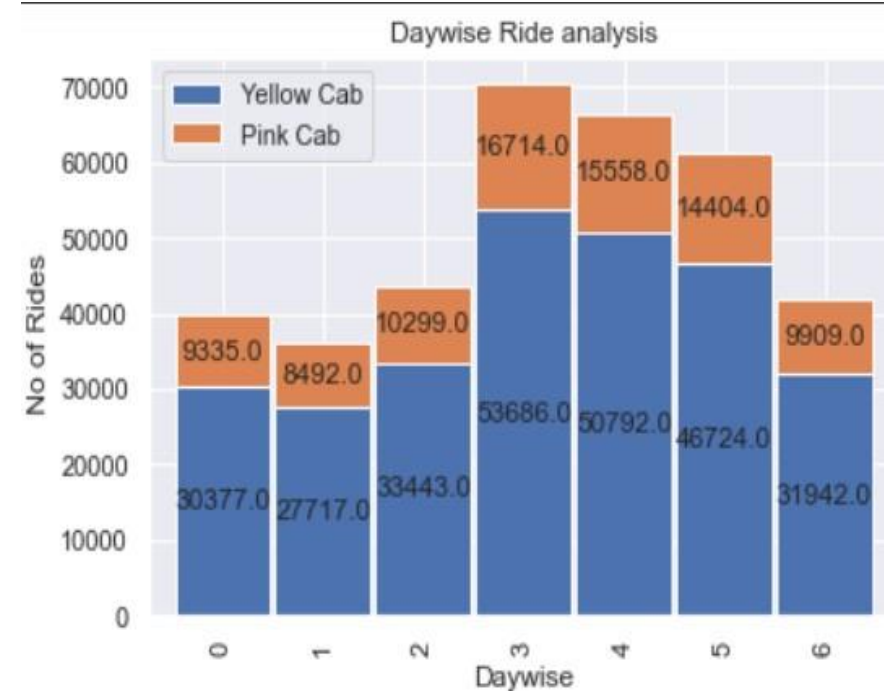
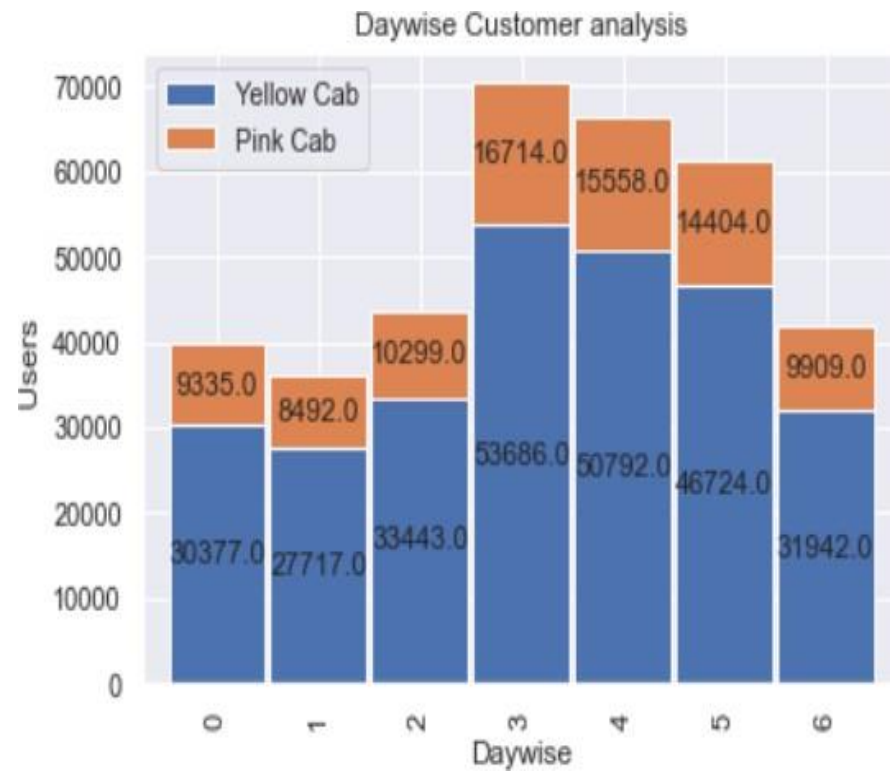


- Yellow cab has higher customer base than pink cab
- 1.3% loss of users for pink cab and 1.14% for yellow cab from 2017-18

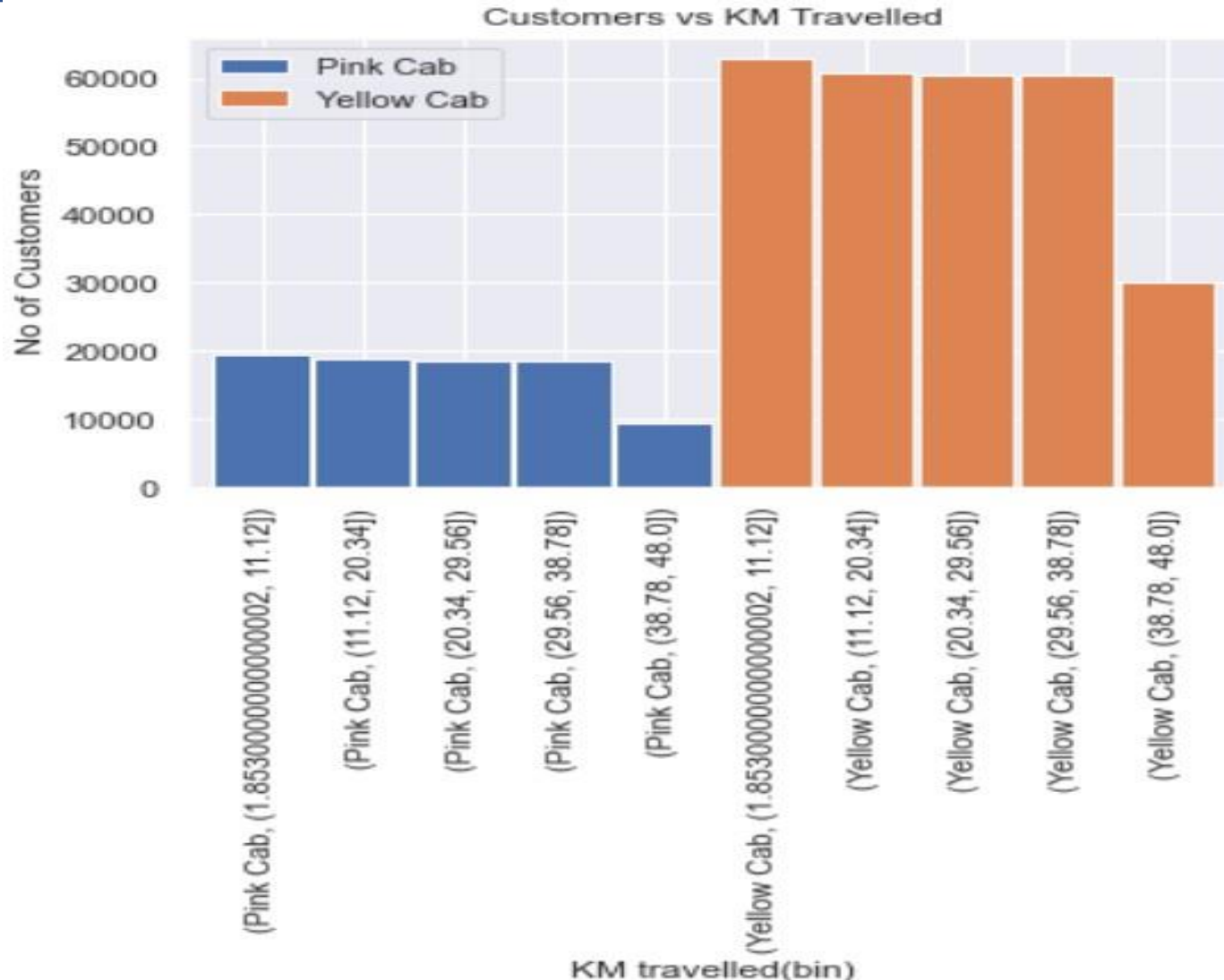
Seasonality in the Profit



Customer And Ride Analysis Day Wise

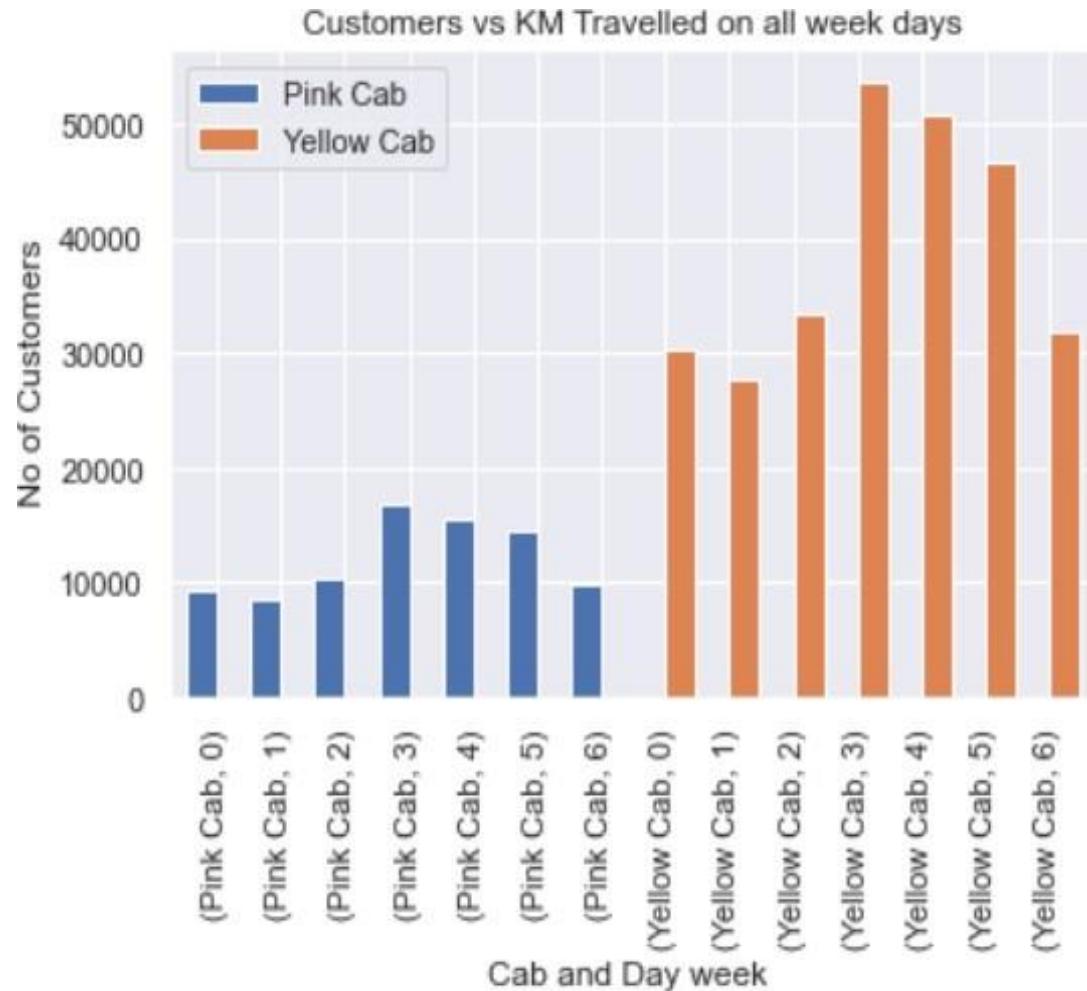


Customer analysis based on ride distance



- Yellow cab has customers almost uniform for short, medium and long Trip. Which shows yellow cab is offering better customer plan for short, medium and long Trip.
- 5-35 KM trips are contributing more in both the cabs profit
- There is a huge difference between yellow and pink cab in customer reach for short and long trip. Yellow cab has very good customer reach in this segment as well.

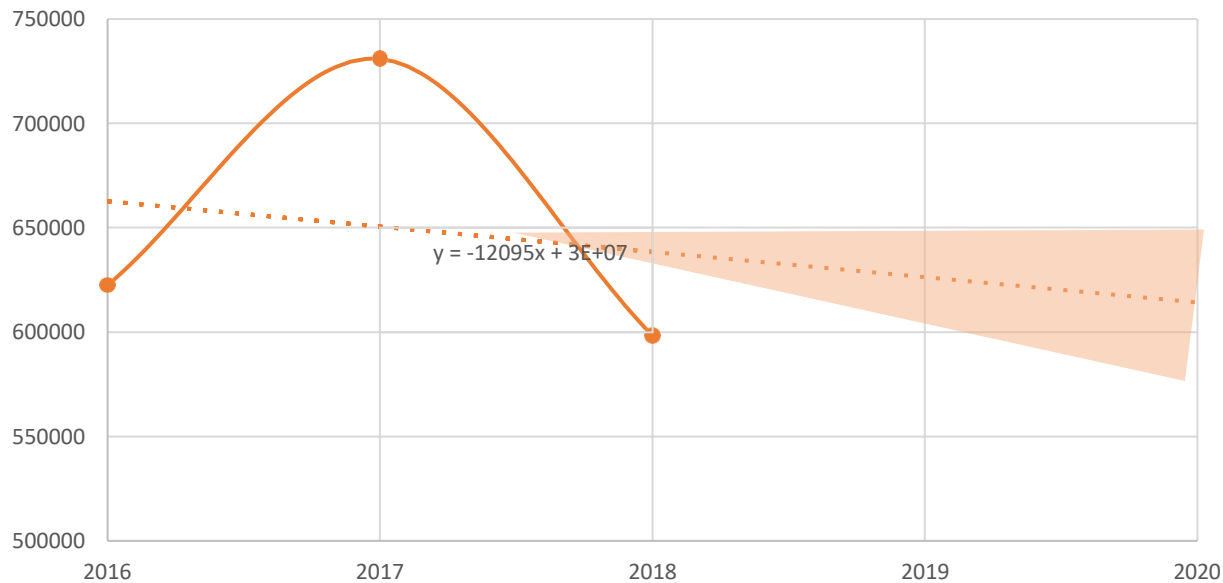
Number of users per day in a week



Day	Pink Cab	Yellow Cab
Mon	9335	30377
Tue	8492	27717
Wed	10299	33443
Thu	16714	53686
Fri	15558	50792
Sat	14404	46724
Sun	9909	31942

Profit Forecasting for 2019

Profit/KM vs Year for Yellow Cab

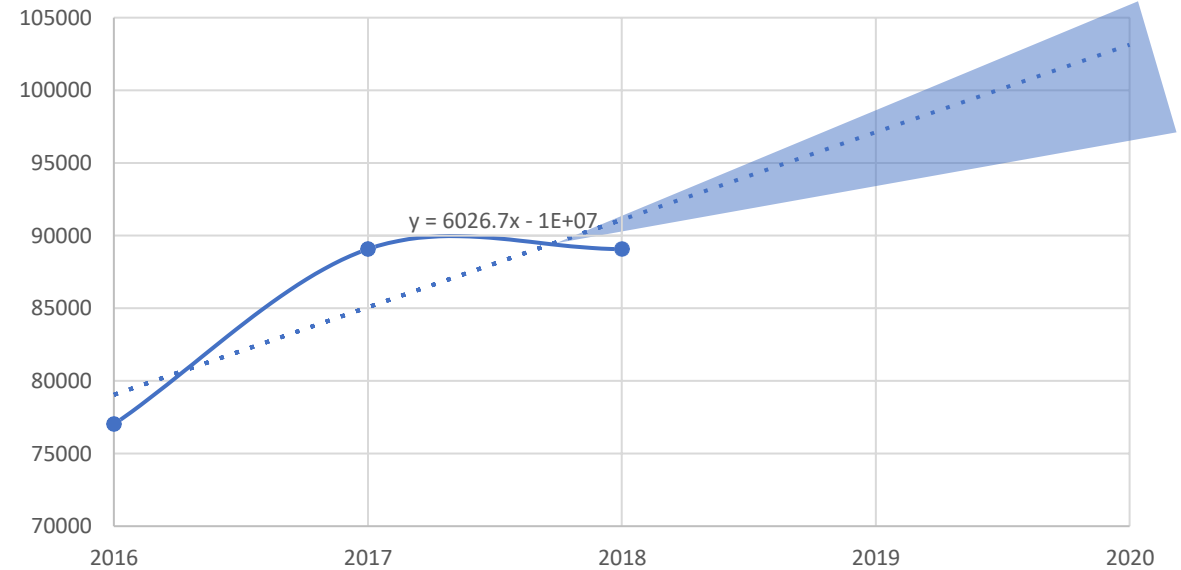


Profit Prediction for next 2 years: **Yellow Cabs**

The linear equation for the profit curve is: $Y = -12095x + 3E+07$

The Profit/KM for 2019 is would be 620000-650000 and for 2020, it would be in the range of 600000-640000.

Profit/KM vs Year for Pink Cab



Pink cabs

The linear equation for the profit curve is: $Y = 6026.7x - 1E+07$

The Profit/KM for 2019 is would be 90000-100000 and for 2020, it would be in the range of 100000-105000.

Recommendations

We can conclude that, yellow cab out performs pink cab on following aspects:

- **Number of Customers:** Yellow cab has higher customer reach in 20 cities while pink cab has only in 4 cities
- **Customer Retention:** Yellow Cab has the highest customer retention ratio
- **Age wise Reach:** Yellow cab has customers in all age groups and it's been observed that it's even popular in the 60+ age group as equally as it's in the 18-25 age group
- **Average Profit per KM:** Yellow cab's average profit per KM is almost three times that of the pink cab
- **Income wise Reach:** yellow cab is offering their services to all the three-income class group
- **Profit/KM Forecasting:** Based on 2019 profit, pink cab's profit has scope to improve while yellow cab's profit is expected to fall based on average profit and loss rates

On analyzing the given dataset, we will suggest to invest XYZ company to invest in yellow cab.

Thank You



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