



Data Glacier

Your Deep Learning Partner

Exploratory Data Analysis

Cab Investment Analysis

23-June-2021

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EDA Summary

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Executive Summary

- ❑ XYZ a private firm in USA is planning on investing in a Cab Company.
- ❑ We try to help XYZ to identify the right company to make their investment.
- ❑ The analysis is performed on two cab companies namely “Pink Company” and “Yellow Company”.
- ❑ 19 different attributes were considered to perform the analysis.
- ❑ The data had information of 2 cab companies (Pink/Yellow) from 2016-2018.
- ❑ Analysis was primarily focused on the Customer reach and net profit earned by each company across the years.

Problem Statement(Research)

- ☐ Identify which company has maximum cab users at a particular time period.
- ☐ Growth of revenue across time.
- ☐ Are the customers in each cab company consistent users?
- ☐ Which company has the maximum customers?
- ☐ Is the company increasing its expenditure or is it steady?
- ☐ Is there a steady/increase use of cab service by the customer throughout the years or is there a decline?
- ☐ Majority of the cab users travel for how many Kilometer(KM) in average

Approach

1. Understanding the Data.
2. Customer Reach/loyalty.
3. Revenue Analysis over time.
4. Expenditure patterns.
5. Recommendation

Assumption: The data sample that which is given is a random sample and it truly represents the population.

Exploratory Data Analysis (EDA)

Summary of some Key Attributes

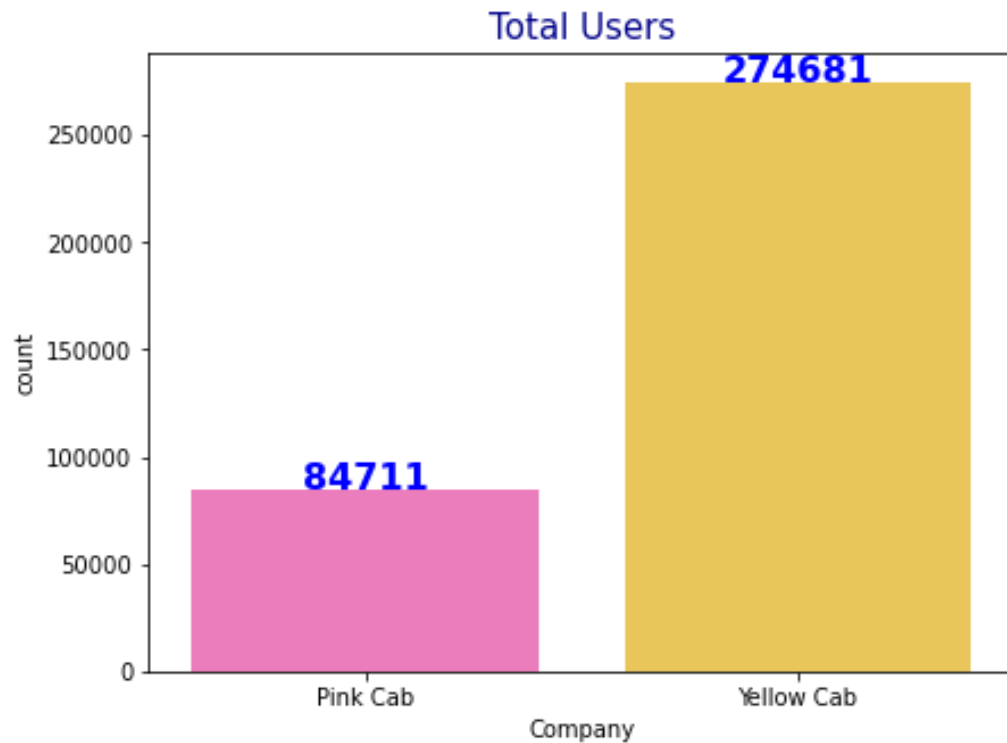
	KM Travelled	Profit	Price Charged	Cost of Trip	Age
count	359392	359392	359392	359392	359392
mean	22.56725	137.2532	423.44331	286.19011	35.3367
std	12.23353	160.3118	274.37891	157.99366	12.5942
min	1.9	-220.06	15.6	19	18
25%	12	28.012	206.4375	151.2	25
50%	22.44	81.962	386.36	282.48	33
75%	32.96	190.03	583.66	413.6832	42
max	48	1463.966	2048.03	691.2	65

Key Insights

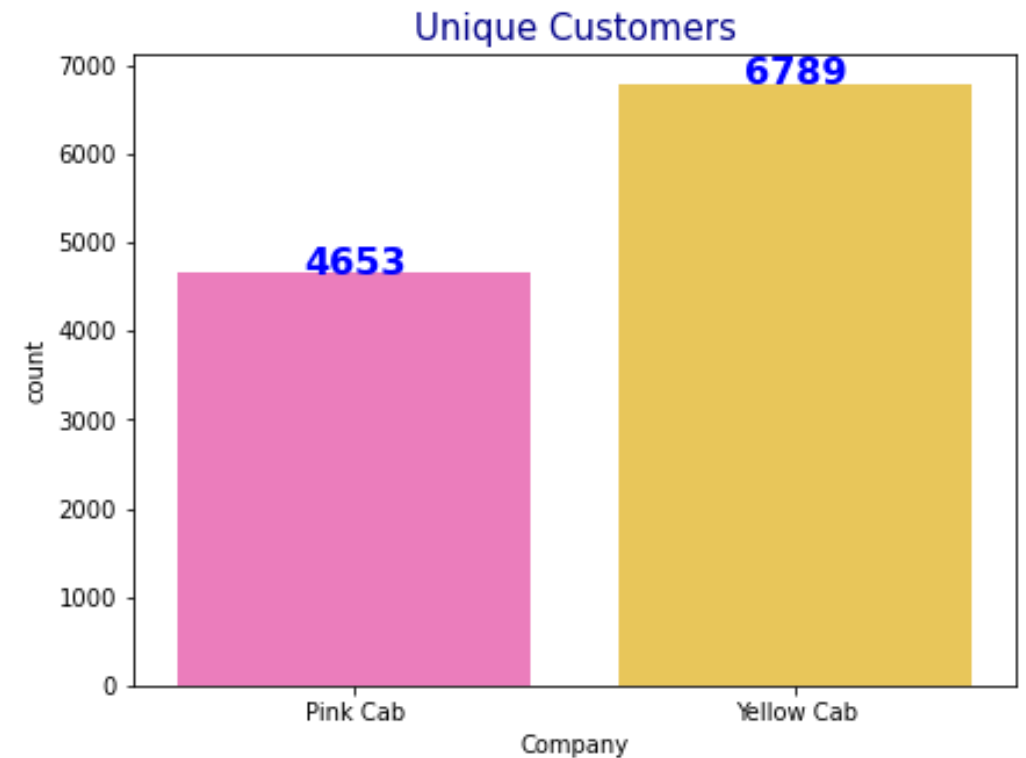
1. On average the profit in investing for a cab company can be 81\$ per customer.
2. Mostly the cab users are 35 years old in average.
3. On average from 2016 – 2018 the cab company has spent 280\$ approximately on each customer.

Customer Analysis

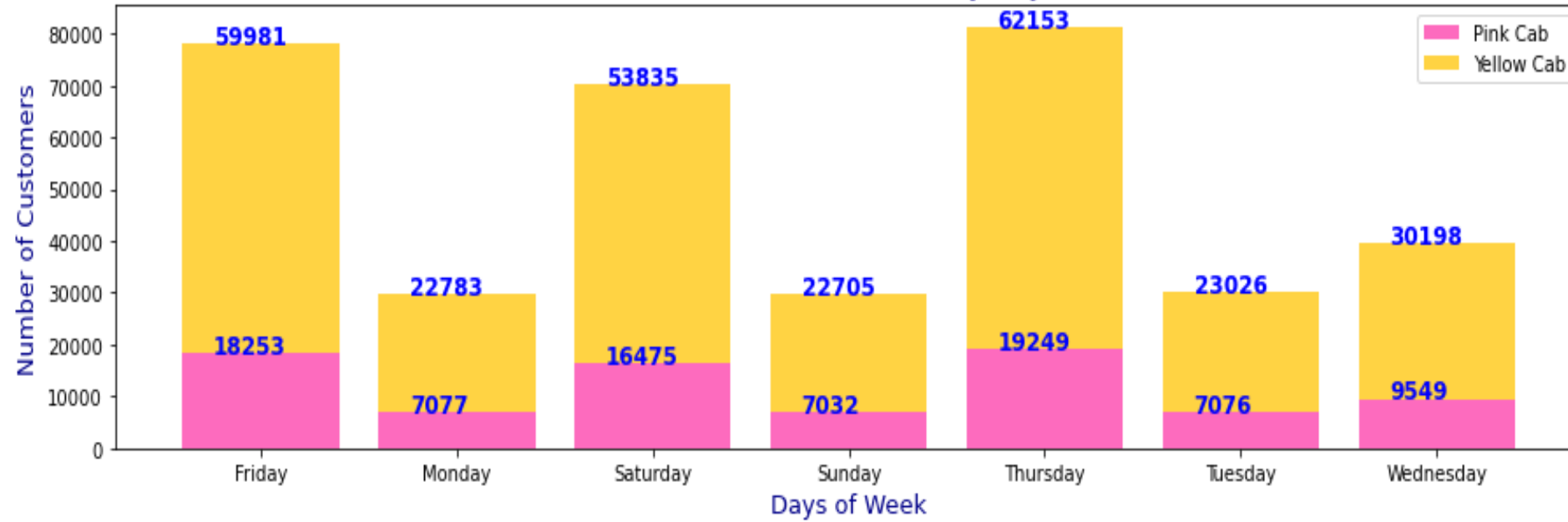
There are more number of Yellow cab users.



Yellow Cab has majority of unique cab users



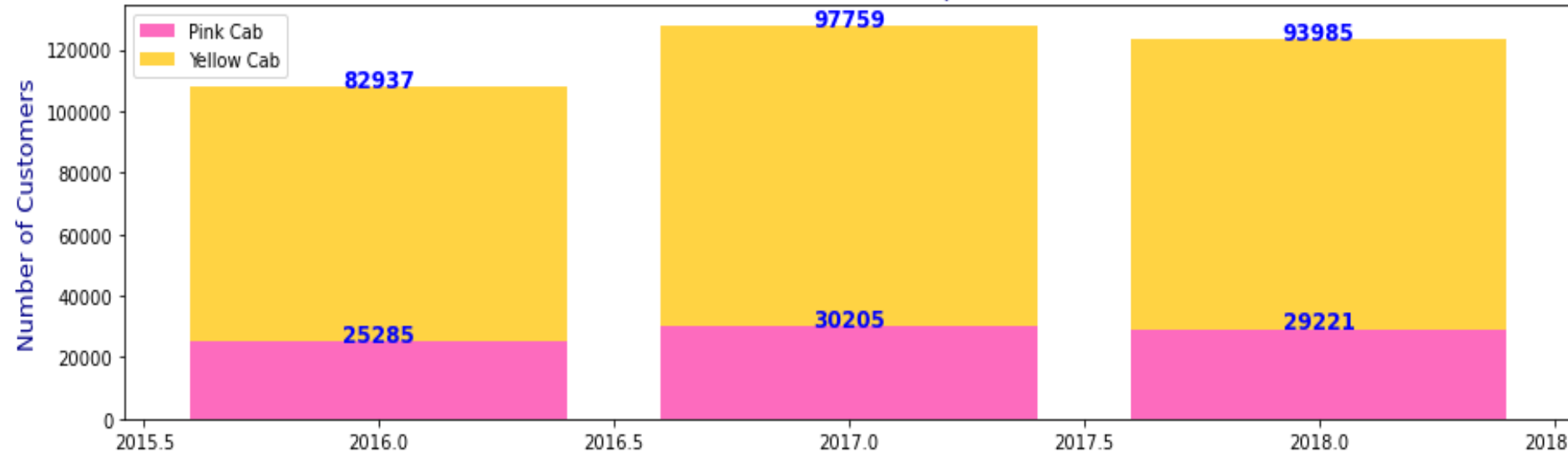
Number of Customers by Day



Customers prefer to use cabs towards the weekends.

From 2017 to 2018 there is a 4% reduce in the number of customers for Yellow Cab and 3.4% reduce for Pink Cab

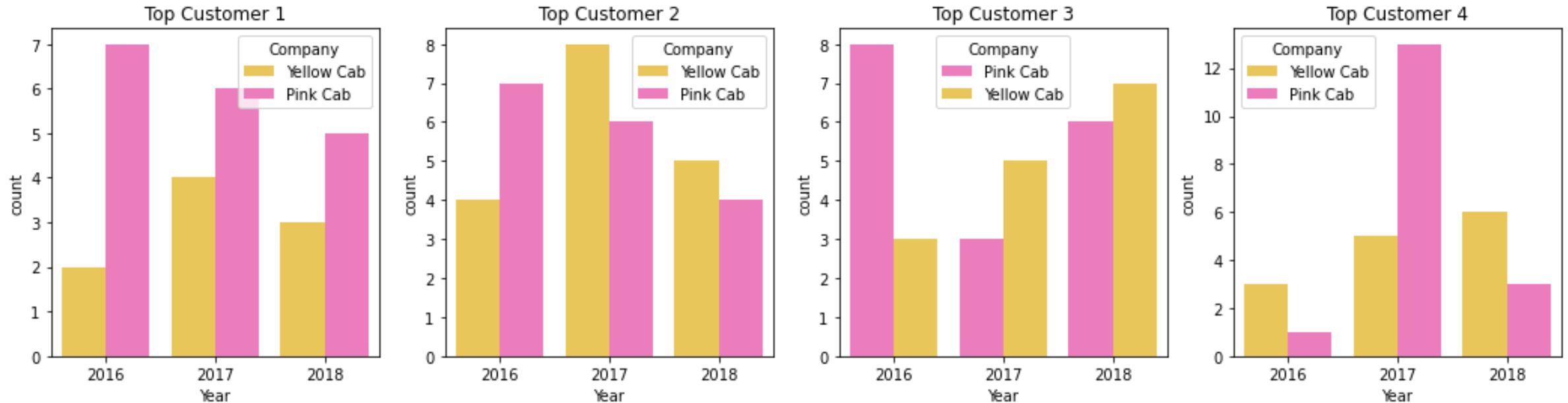
Number of Customers per Year



From 2016 to 2017 there is a 15% increase in the number of customers for Yellow Cab and 16.3% increase in Pink Cab.

- Consistency of the customer was checked across years to find if the cab users were loyal to any of the cab company.
- Top 4 cab users from each of the company were chosen to see their cab usage pattern.

Customer Analysis for Pink Cab Company



Top 1 customer used Pink cab more than Yellow and continued to use Pink cab more than Yellow though the usage of Yellow cab increased in 2017.

Top 2 customer used Pink cab more than Yellow in 2016 but in the subsequent years the customer has used Yellow cab more than Pink cab.

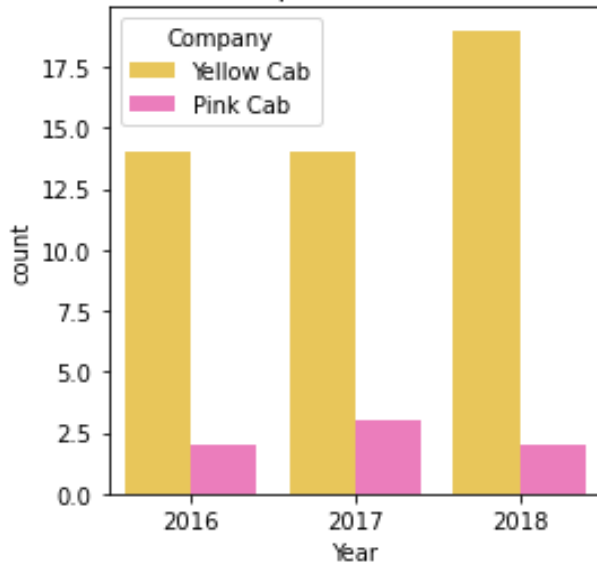
Top 3 customer used Pink cab more than Yellow in 2016 but in the subsequent years the customer has used Yellow cab more than Pink cab.

Top 4 customer used Pink cab more than Yellow in 2017 but there was drastic reduce of usage for Pink cab and the customer has used Yellow cab instead.

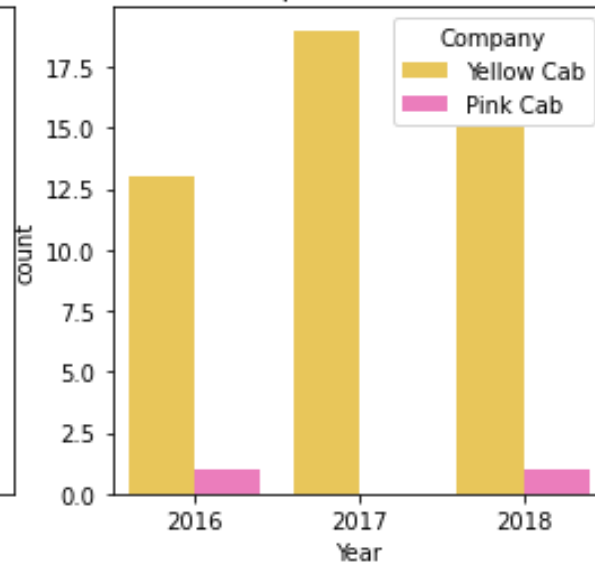
- Consistency of the customer was checked across years to find if the cab users were loyal to any of the cab company.
- Top 4 cab users from each of the company were chosen to see their cab usage pattern.

Customer Analysis for Yellow Cab Company

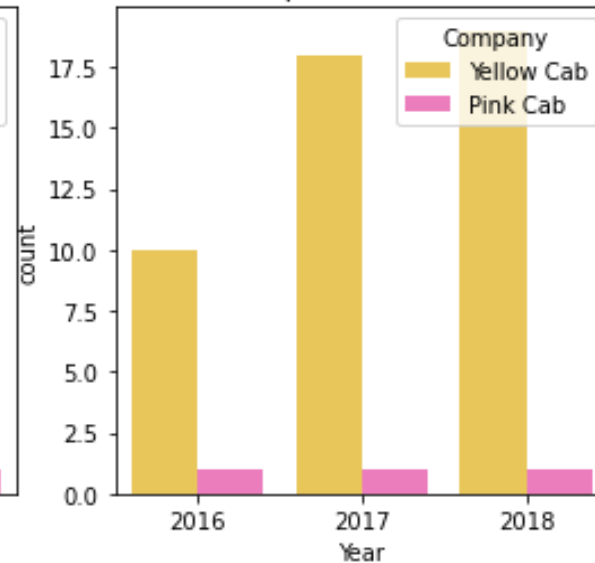
Top Customer 1



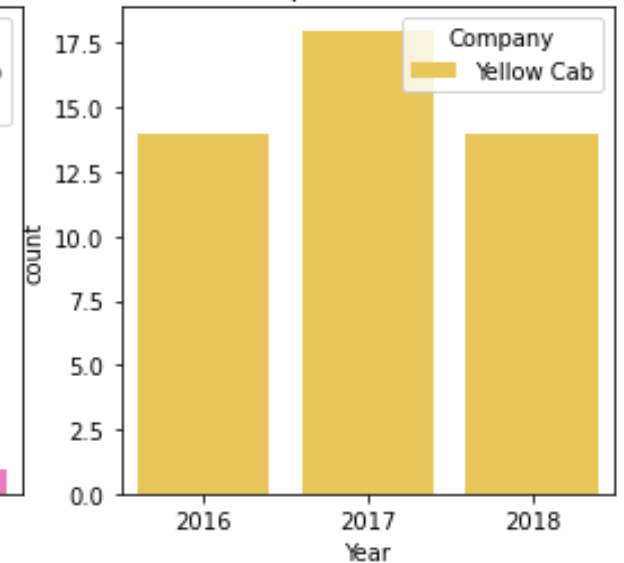
Top Customer 2



Top Customer 3



Top Customer 4



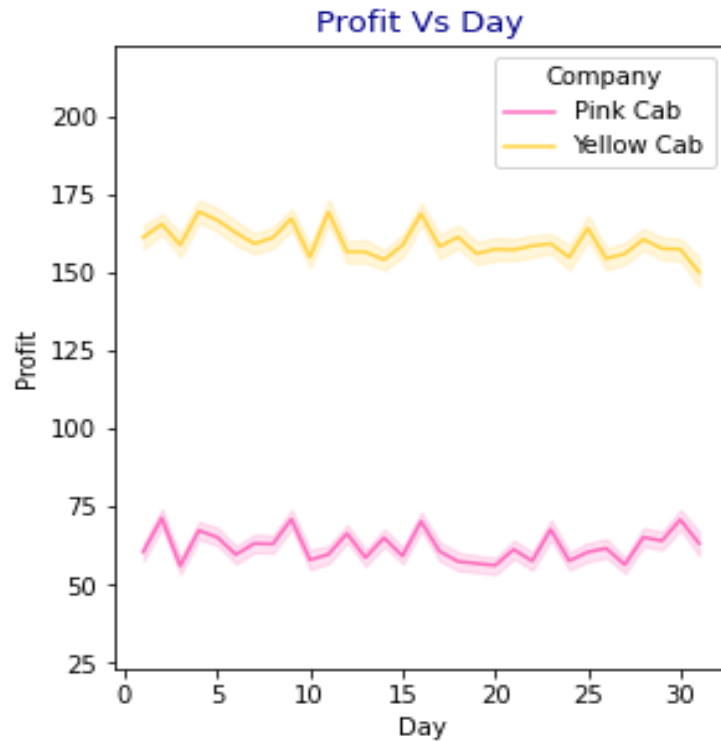
Top 1 customer has been a consistent user throughout the years though there has been a increase of usage in 2017 for cabs from Pink cab company.

Top 2 customer has been a dedicated user of the Yellow company where in 2017 the customer never used the cabs from the Pink company.

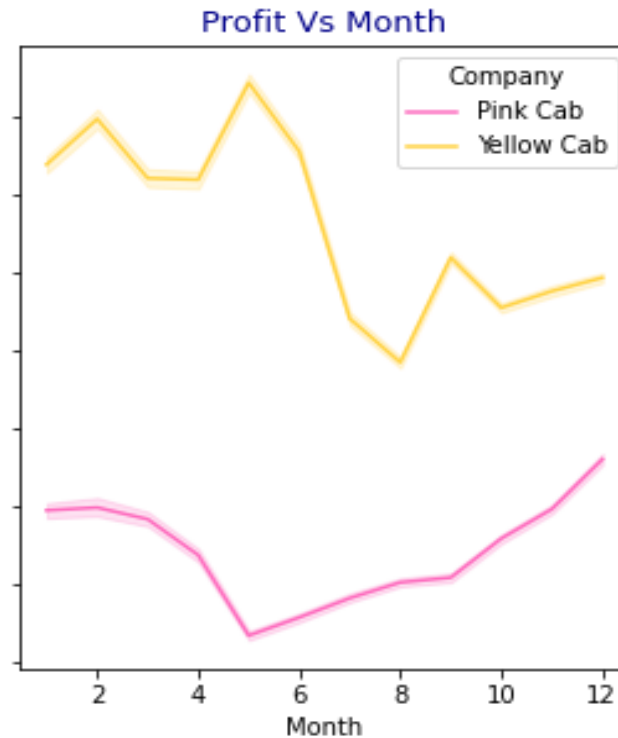
Top 3 customer has used Yellow cabs more than Pink cabs and there has been a consistent usage on from both the cab companies.

Top 4 has never used any service from the Pink Cab company. The Pink cab has failed to reach to this customer.

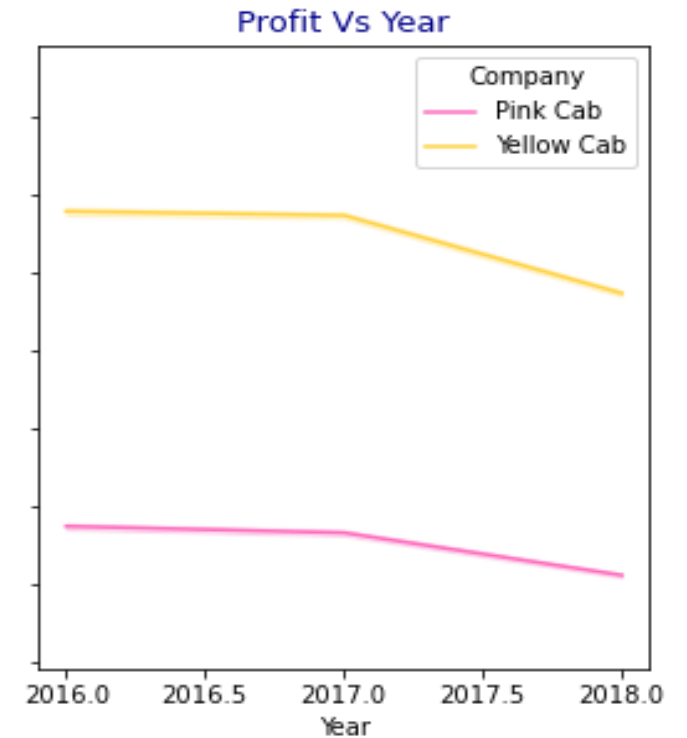
Revenue Analysis



- Approximately after every 5 days there is a increase in profit, it could be because of weekends.
- At the end of month there seems to be increase in profit for Pink Company while profit reduces for Yellow.



- Profits declined severely in the month of June for the Pink company, while the Yellow Company seemed to increase their revenue .
- There seems to be a increasing growth for the Pink Company while the yellow company has drastically reduced its profits after June.



The companies seem to have decreased their profit after 2017.

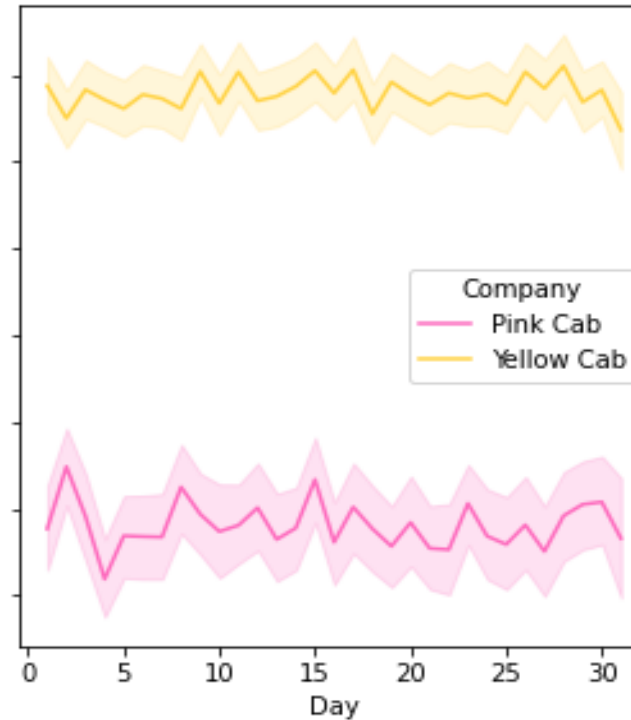
Expenditure Analysis

Cost Incured Per Year



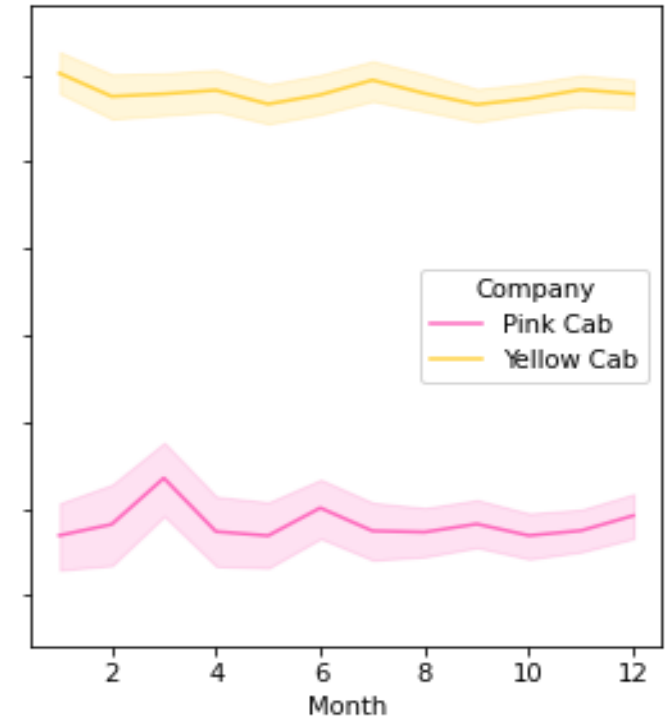
- There is not major trend in the Cost over the years for Yellow Company while there has been a minor increase in the cost for the year 2017 for Pink Company where it has then reduced.

Cost Incured Per Day



- There is no major trend for both the cab companies when compared for each day.

Cost Incured Per Month



- Pink company expenses has increased in the month of March, again in the month of June there has been increase in the expenses after which there is steady expense patter. While Yellow company has a steady expenditure patters.

EDA Summary

- More number of Customers from the given data are Yellow Cab Users.
- From 2017 to 2018 Yellow cab users reduction percentage was more than the Pink Cab Users.
- From 2016 to 2017 Pink cab increase percentage was more than Yellow Cab users.
- There was a drastic reduce in profit from the month of June for the Yellow Company while there were no evident patterns for Cost which means that there could be a chance that Yellow company might have been attracting customers by reducing its charges for customers.
- Customer reach by Pink cab company is not very good.
- There could be a chance that Pink Company is a start up.

Recommendations

1. If Pink cab company is a startup, then it would be less risky to invest in the Pink cab company as their profit has a steady growth.
2. Customer reach needs to be improved if Pink cab company is chosen also since usage of cabs is more on weekends especially Thursdays, company could invest more on cabs for these days.
3. If Pink company is not a startup then Yellow Cab company is less risky to invest as they have successfully attracted the customers and Yellow cabs seem to be more common to users.
4. However Yellow cab irrespective of major customer reach it has a drastic reduce in profit after 2017. Thus there is more risk to invest in Yellow Cab.

Note: All analysis was performed strictly to help XYZ company make a decision for investing in a cab company.

Thank You