G2M Case Study

Virtual Internship

17-June-2021

Background –G2M(cab industry) case study

- XYZ is a private equity firm in the 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 the Cab industry.

- Objective: Provide actionable insights to help XYZ firm in identifying the right company for making the investment.

The analysis has been divided into four parts:

- Data Understanding

- Finding the most profitable Cab company
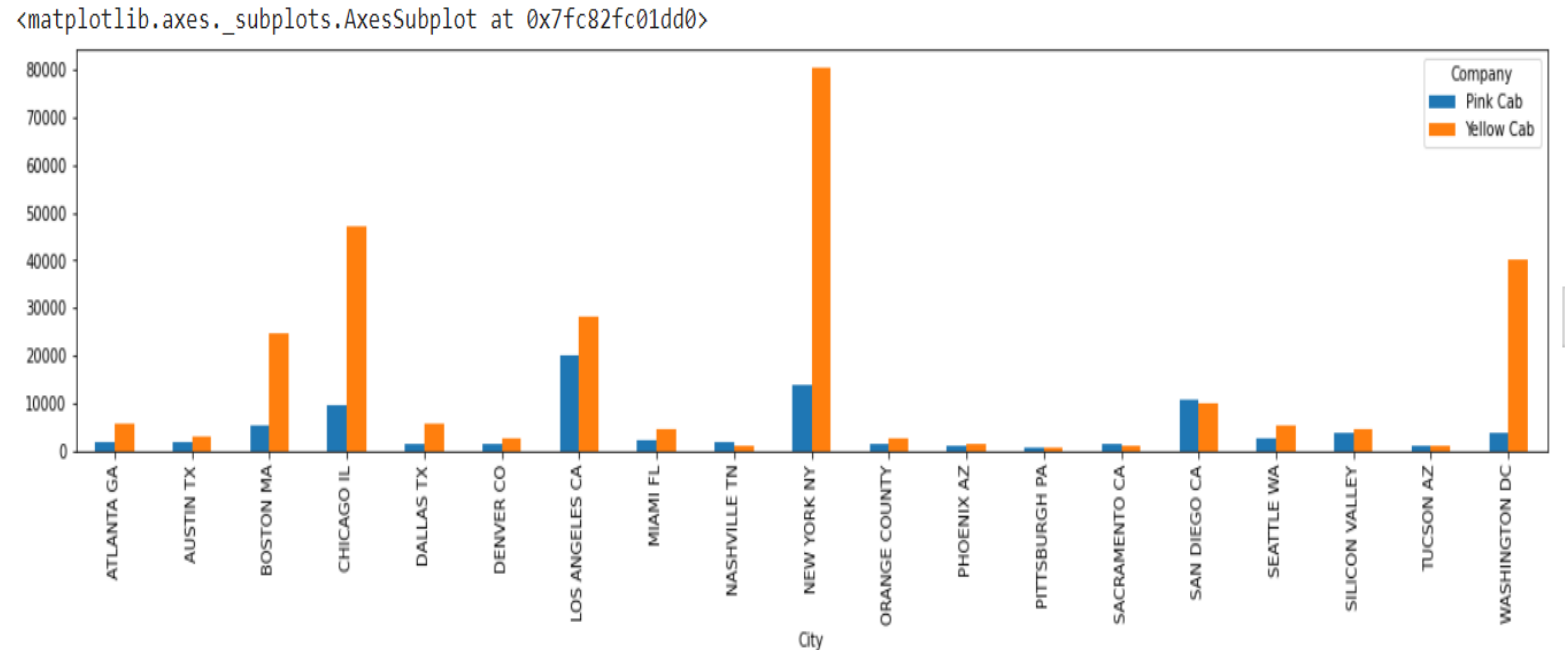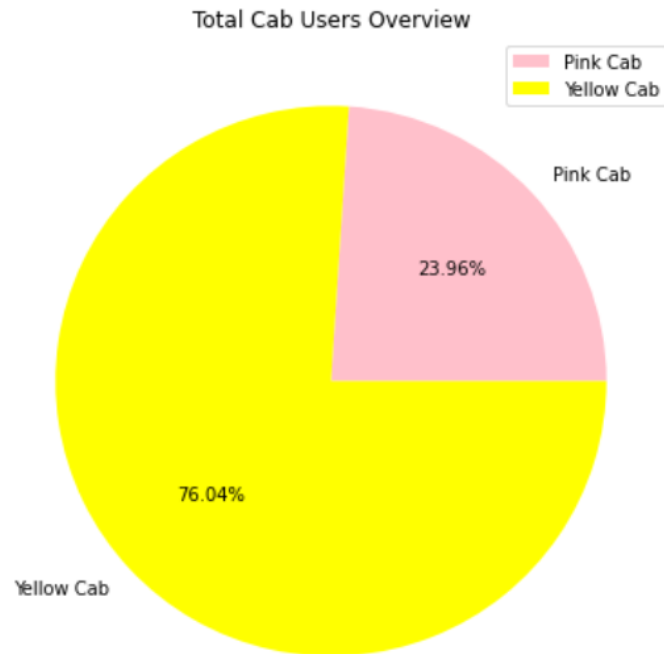
- Recommendations for investment

Data Exploration

- 14 Features in the master dataset
- Timeframe of the data: 2016-01-31 to 2018-12-31
- Total data points:359392

- Datasets:
  - Cab_Data.csv
  - Customer_ID.csv
  - Transaction_ID.csv
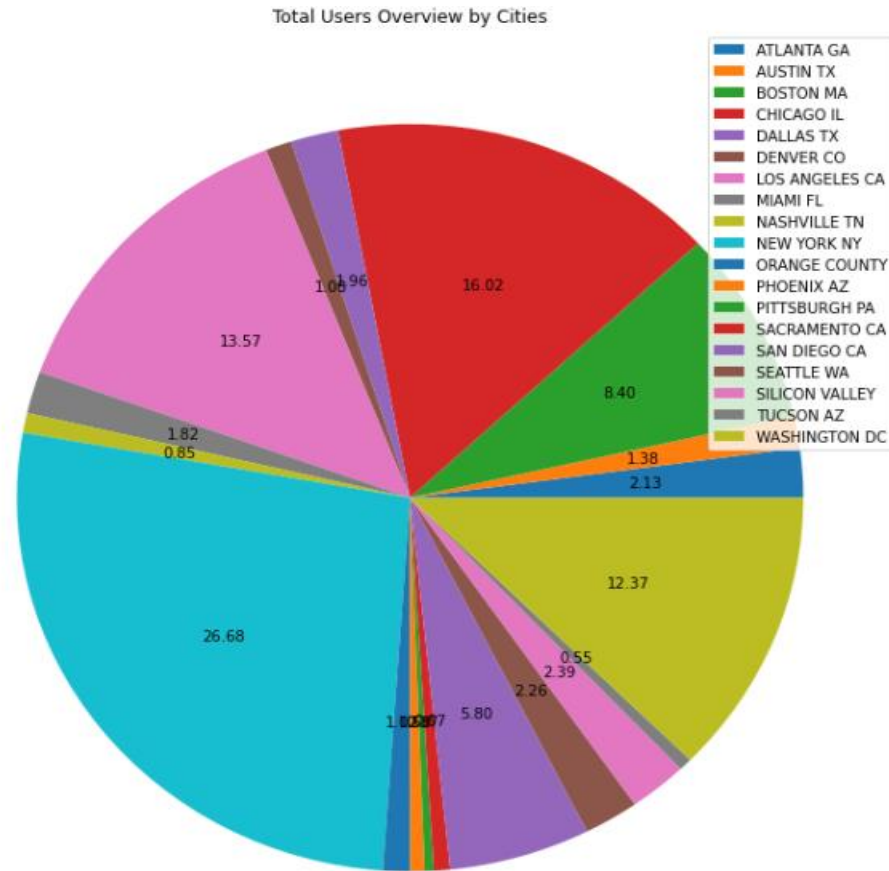 - City.csv

Assumptions:

- Outliers are calculated with Inter Quartile Range (25 <IQR <75)
- December is holiday month

Cab Users Count

Total Cab Users Overview

- Yellow cab has almost 3/4th % of the user, while pink cab holds for 1/4th %.
- New York, Chicago, and Washington Dc hold the first 3 positions in the number of yellow cab users, whereas Pink cabs have their strong areas in Los Angeles, New York and San Diego

Cab Users Count

Total Users Overview by Cities

Legend:
- ATLANTA GA
- AUSTIN TX
- BOSTON MA
- CHICAGO IL
- DALLAS TX
- DENVER CO
- LOS ANGELES CA
- MIAMI FL
- NASHVILLE TN
- NEW YORK NY
- ORANGE COUNTY
- PHOENIX AZ
- PITTSBURGH PA
- SACRAMENTO CA
- SAN DIEGO CA
- SEATTLE WA
- SILICON VALLEY
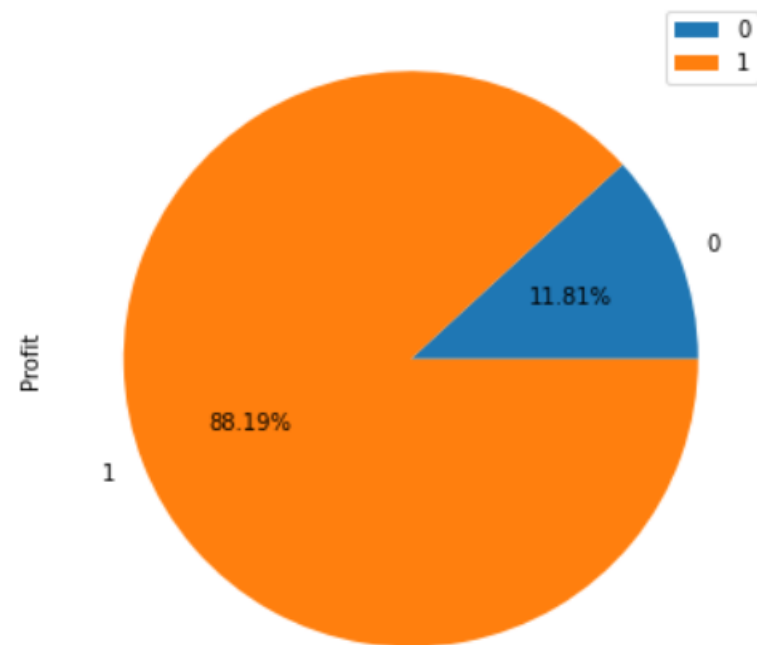- TUCSON AZ
- WASHINGTON DC

- New York accounts for almost 26% of cab users, Chicago accounts for 16%, and Los Angeles accounts for 13% of total cab users.

Profit Analysis

Total Profit Overview by Cities
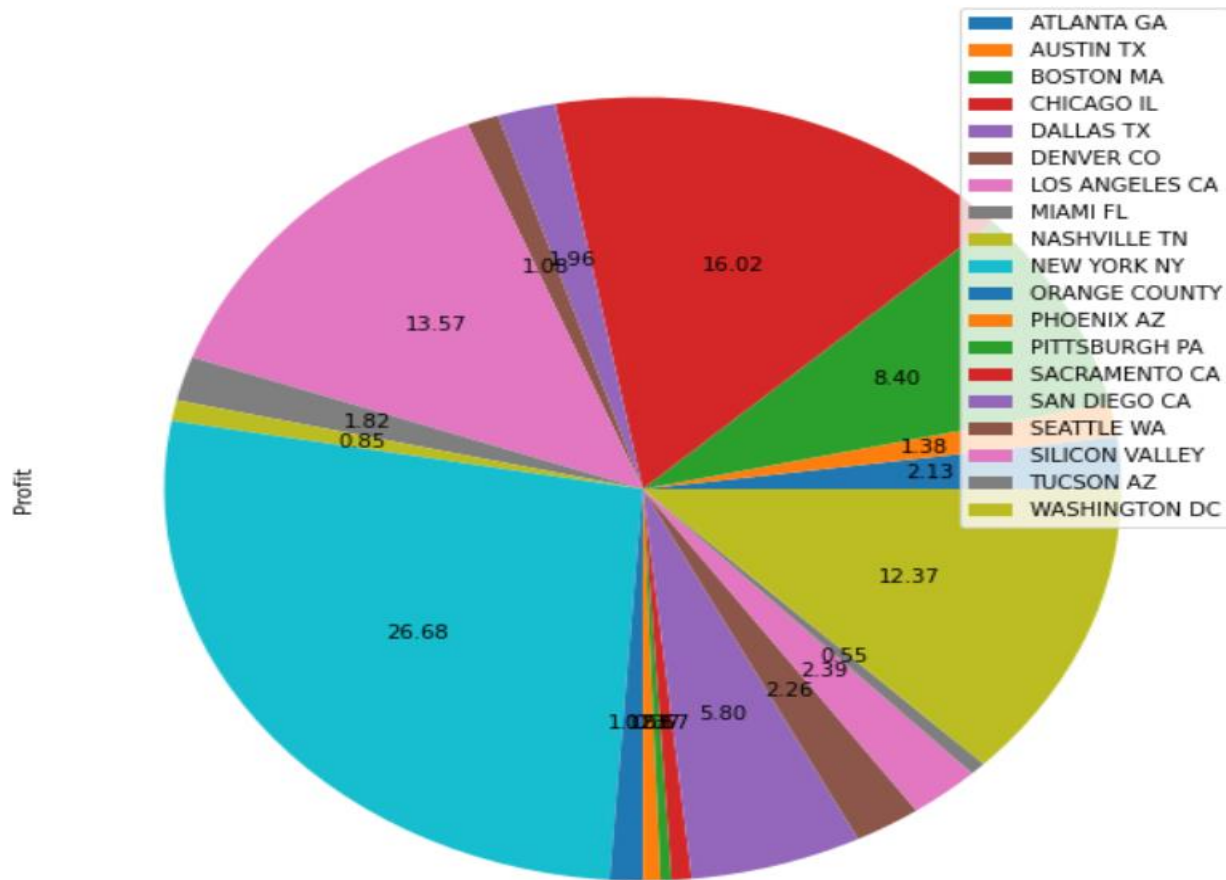
Profit Overview

Profit Analysis

	Company	Ride Count	Profit	Profit_Per_Ride
0	Pink Cab	84693	5291882.36	62.483114
1	Yellow Cab	268741	39526350.38	147.079718

- Pink Cab has a share of 12 % in profit, while yellow cab has 88%.
- The profit per ride for pink cab is 62 whereas it is more than double for the yellow cab (147)
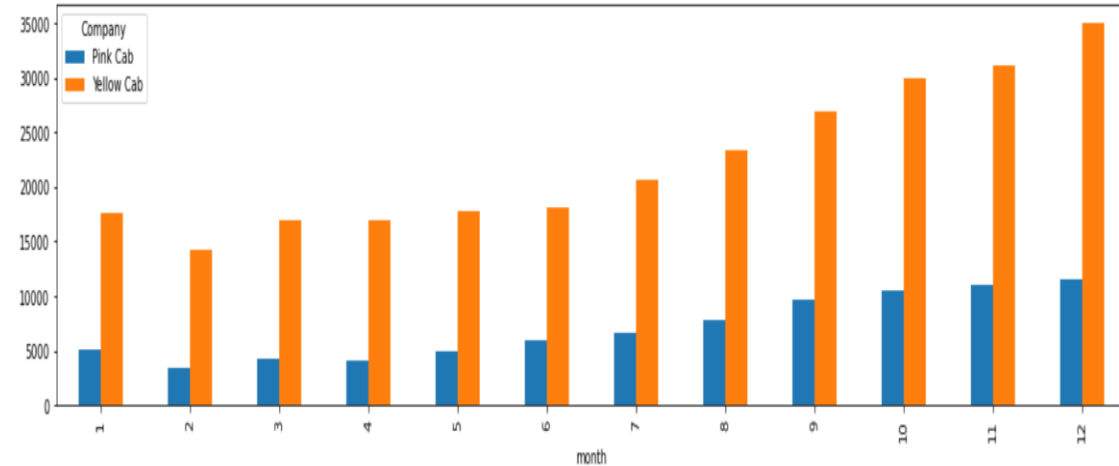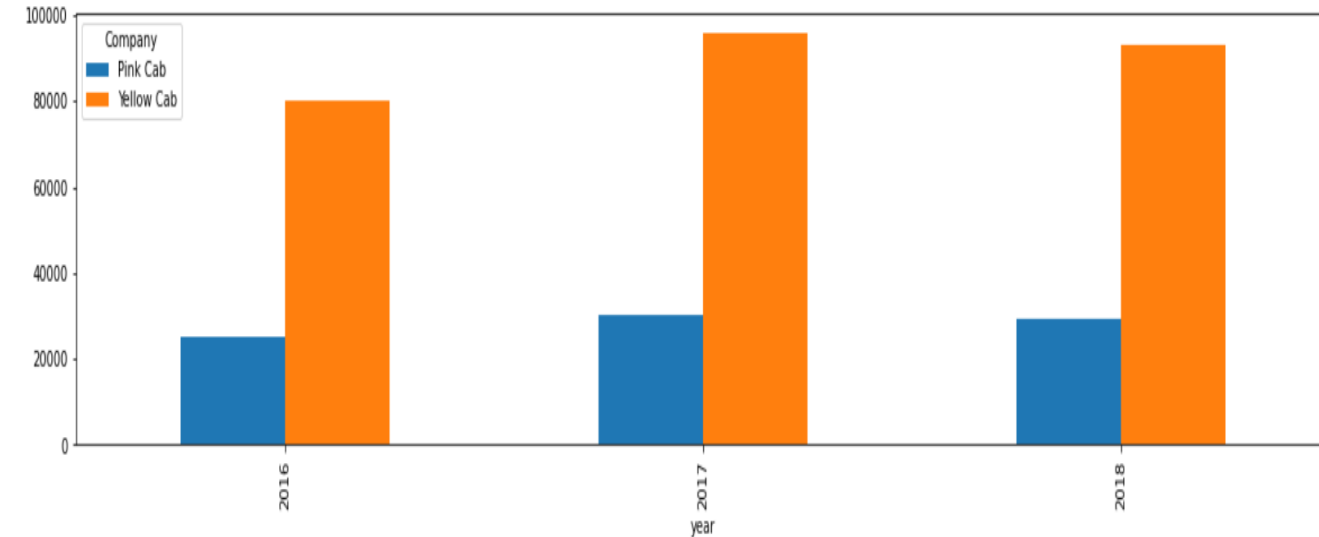- New York city generates the largest profit

Travel Frequency

Travel frequency by Month
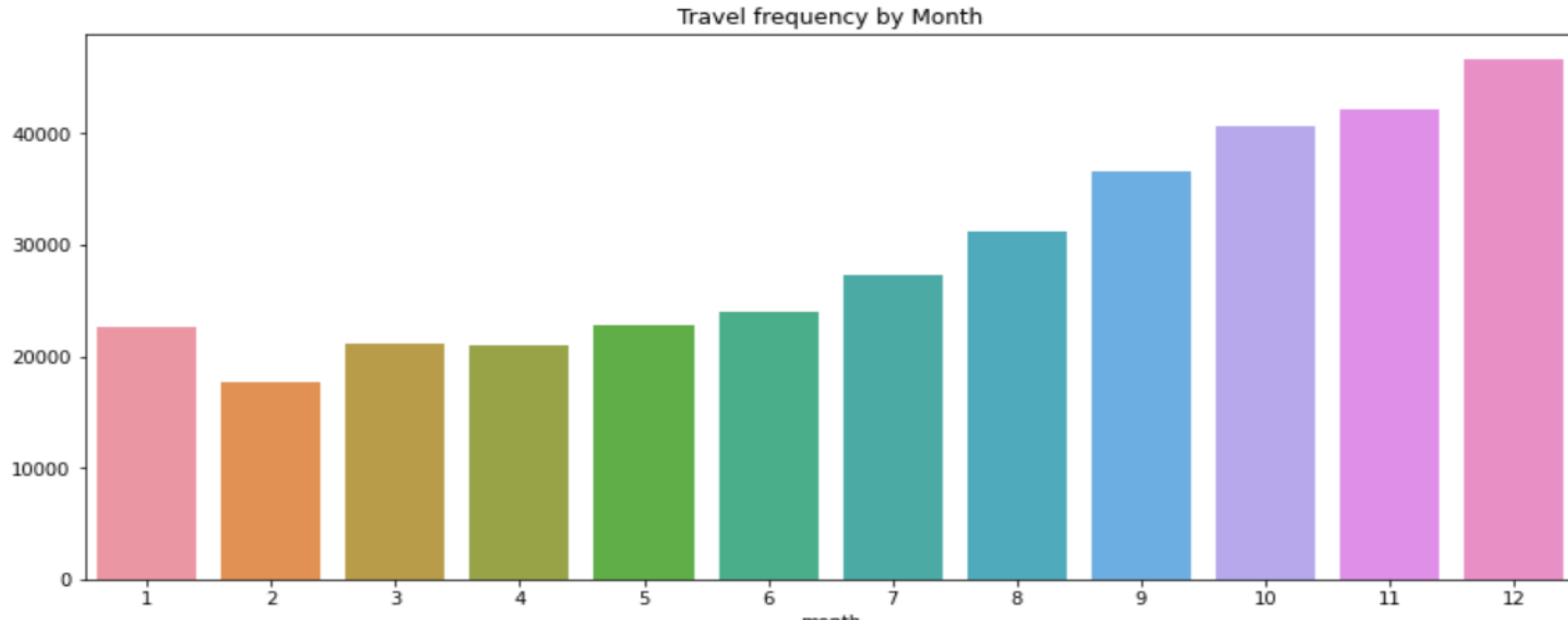
- The number of cab usage increases from February to December, with December being the Holiday season seeing the maximum usage
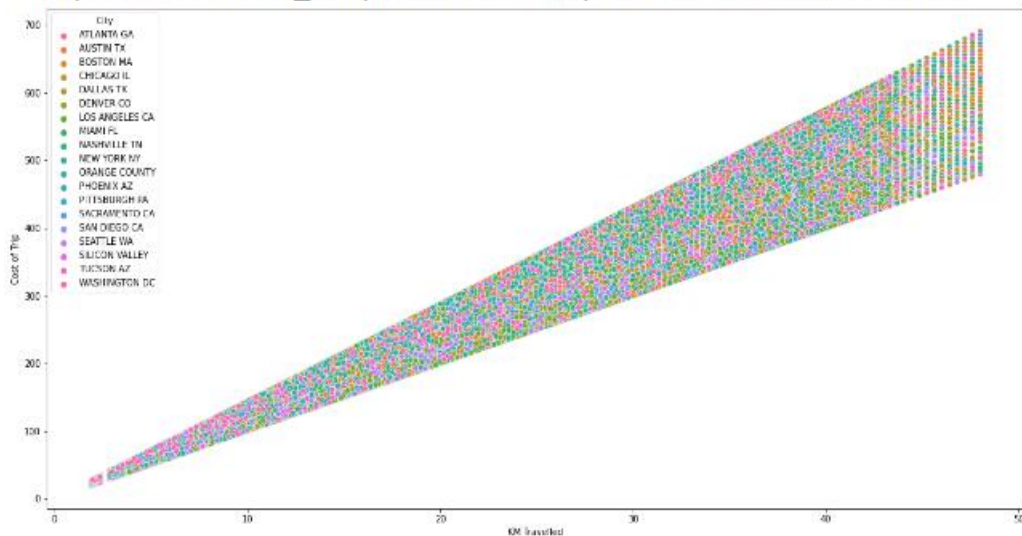
Travel Frequency

- The travel frequency shows a similar pattern as that of the overview for the individual cab companies as well.
- The yearly usage shows a slightly low decline in 2018 than that of 2017 for the yellow cab.
- There is a slow steady increase in the usage of the pink cab.

Cost & Price Analysis

- Cost increases in direct proportion to the distance travelled but shows no relationship with the city.
- The price charged is also in direct proportion with the distance travelled, however with the different cities it varies.
- New York is a highly charged city for cab travel.

Price Analysis

Company	Payment_Mode	
Pink Cab	Card	310.949759
	Cash	310.052100
Yellow Cab	Card	439.722426
	Cash	439.768464

mean

Company	Gender	
Pink Cab	Female	310.468075
	Male	310.685922
Yellow Cab	Female	437.398417
	Male	441.457771

- The mean price charged with different modes of payment are same irrespective of the cab company
- The price charged by the pink company is the same for the gender of the user.
- The Yellow cab provides a discount for the female users in comparison with the male users.
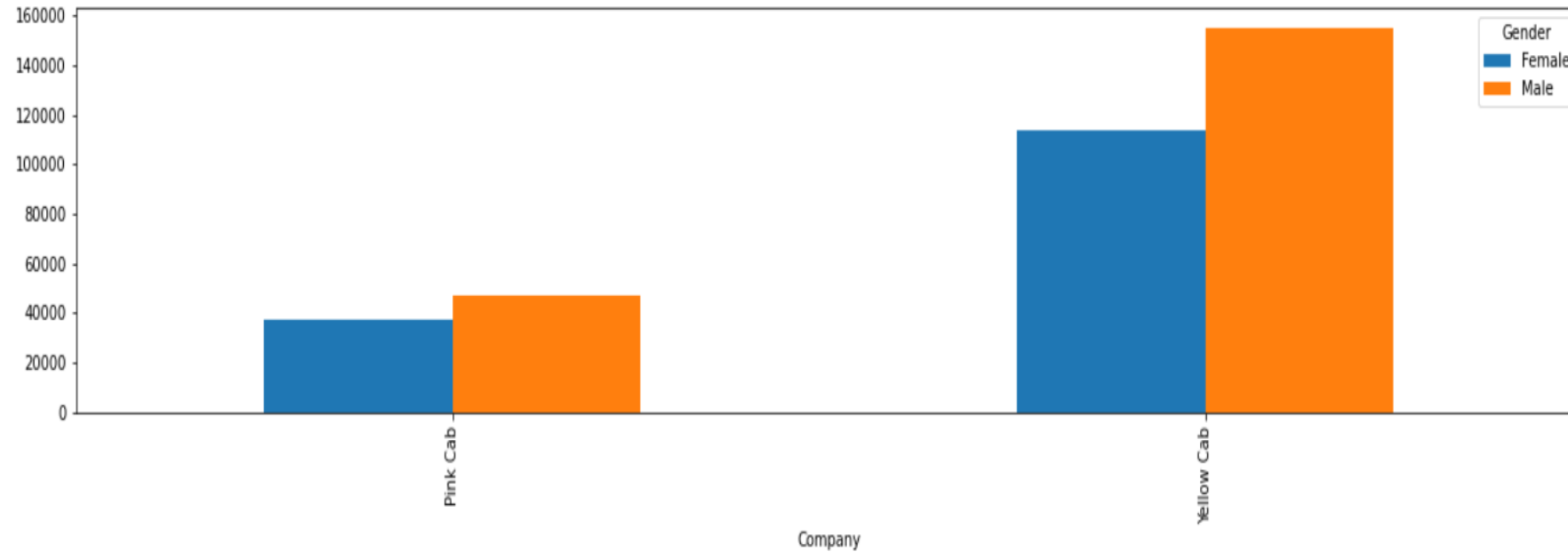
Age Group Analysis
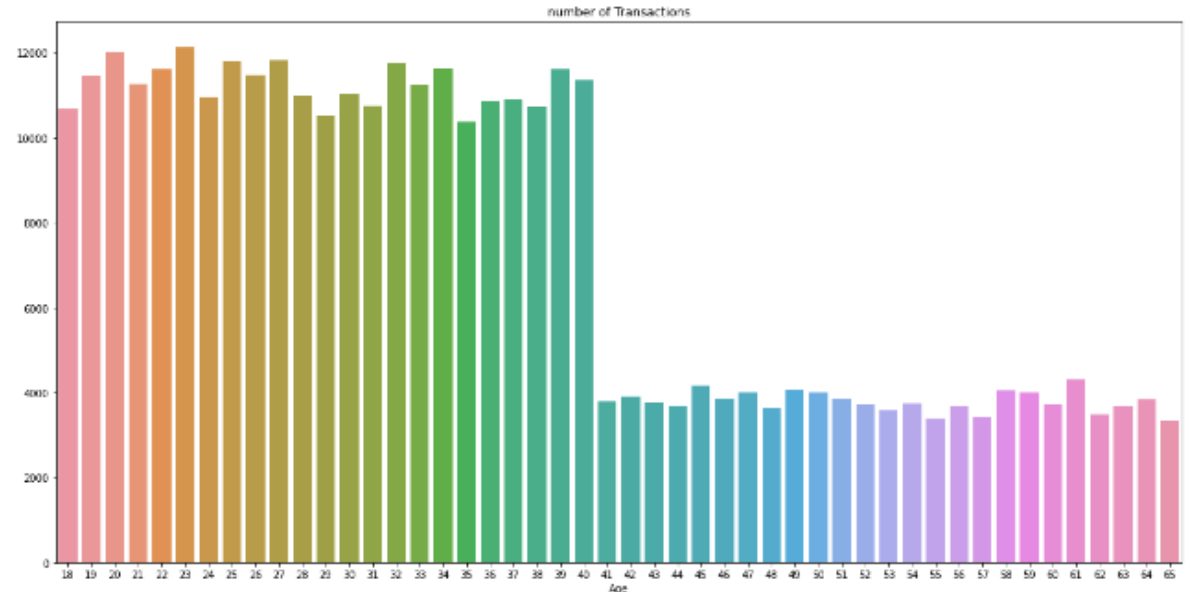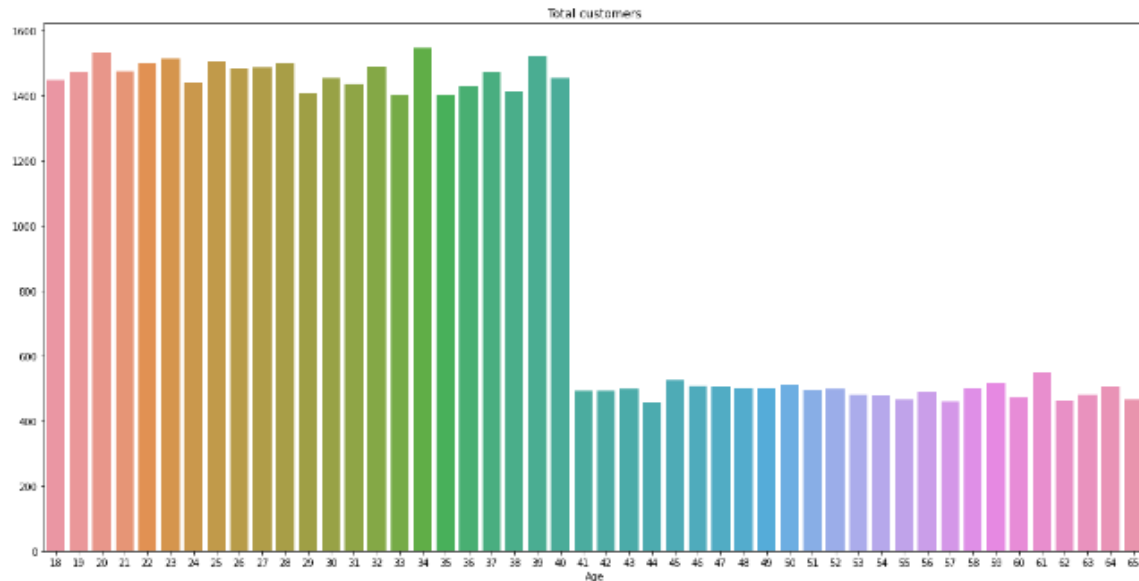
- The number of unique customers and the number of travel made by the customer shows a similar pattern.
- The age group 18 – 40 travels more than double that of from 41 -65

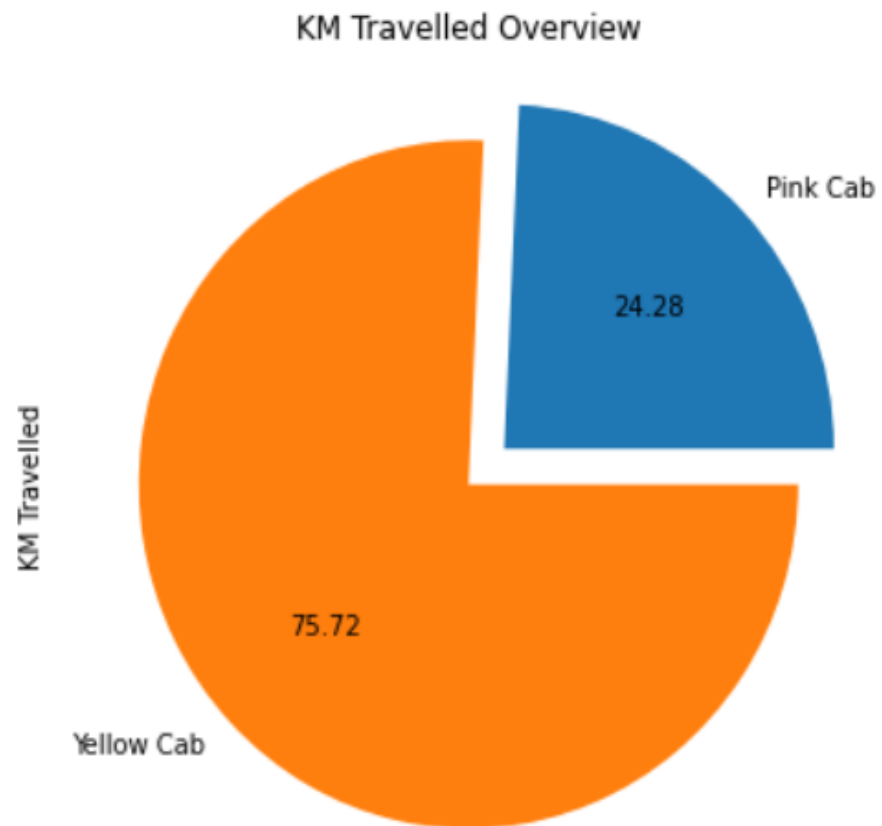# Gender Analysis

- The number of male customers is more for both the companies than their counterparts.

Distance Analysis

KM Travelled Overview

- The KM travelled by yellow cab is more
- Pink cab shares only 25% of the distance travelled

Recommendations

We have analysed the data and compared various factors as below.

- **Customer Count**: Yellow cab has almost 3 times the customers as that of the pink cab

- **Profit Analysis:** Pink cab shares only 12% of the profit, the rest is taken by Yellow cab.

- **Travel Frequency**: Both the companies show an increase in the usage over the months and years, however, the rate of increase of yellow cabs is more than that of the pink cab.

- **Gender:** Male customers are more for both the companies

- **Cost & Price Analysis**: The price charged by the yellow cab is slightly lower for women to encourage them to use cab more. However, no such initiative from the pink cab.

- **Age Group**: Age group of 18-40 used and spent more on cabs, while that of 41-65 spent less than half. But this pattern is fairly the same with both the groups.

On the basis of the above points, I will suggest the Yellow cab for the Investment.

Recommendations

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

- **Customer Reach** : Yellow cab has higher customer reach in 25 cities while Pink cab has higher customer reach in 4 cities. We have also observed that Yellow cab is doing good in covering other cab users as compared to Pink cab.

- **Customer Retention:** We have analyzed this in two segments : at least 5 drive and at least 10 drive with the same cab company. And we found that Yellow cab is doing far better than Pink cab in both these segments.

- **Age wise Reach :** Yellow cab has customer in all age group and it's been observed that it's even popular in 60+ age group as equally as its in 18-25 age group.

- **Average Profit per KM:** Yellow cab's average profit per KM is almost three times the average profit per KM of the Pink cab.

- **Income wise Reach :**Both the cabs are very popular in high and medium income class but here also Yellow cab is performing better than Pink cab in offering their services to all the three income class group (low, medium and high)

- **Ride count and Profit Forecasting :** Both the companies are facing loss in the profit and no. of ride. Yellow cab's forecasted profit loss is around 1.83% while Pink cab's loss in 3.1%.Pink cab is facing more loss even when its forecasted no of ride loss is lesser than Yellow cab.

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

Thank You