



**Data Glacier**

Your Deep Learning Partner

# Exploratory Data Analysis

**G2M insight for Cab Investment**

**02.08.2021**

# Agenda

Executive Summary

Problem Statement

Approach

EDA

EDA Summary

Recommendations

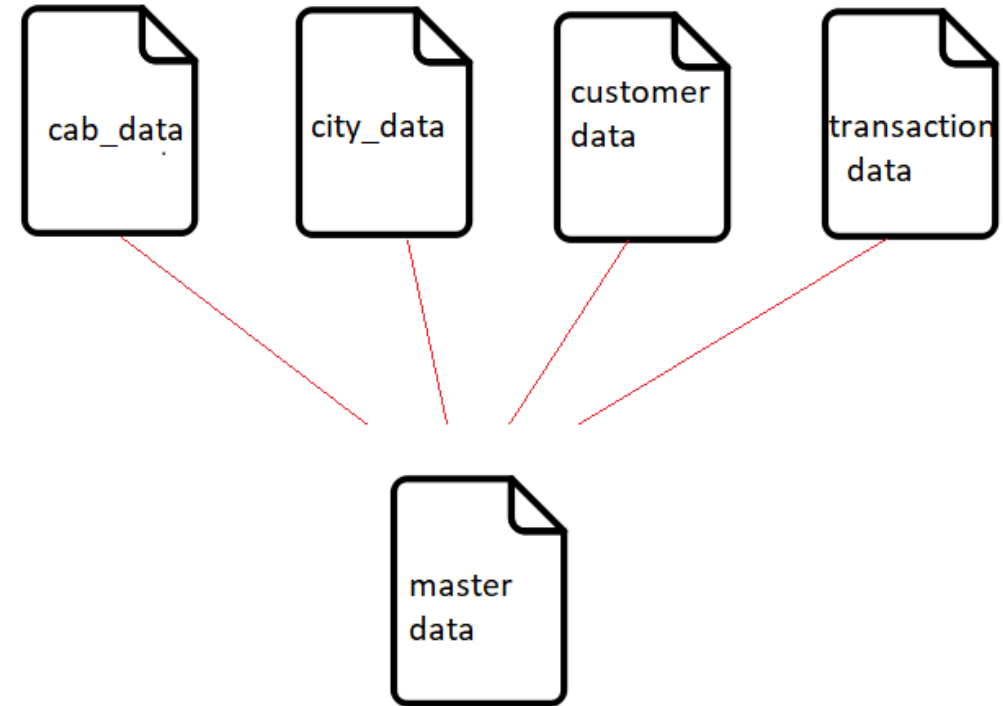
# Summary & Problem Statement

- 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.
- Path of the analyzes made in order to make the right decision for making investment and the conditions of the companies will be conveyed :
  - Understanding & evaluating data
  - Finding the most profitable Cab company by analyzing data
  - Recommendations for investment

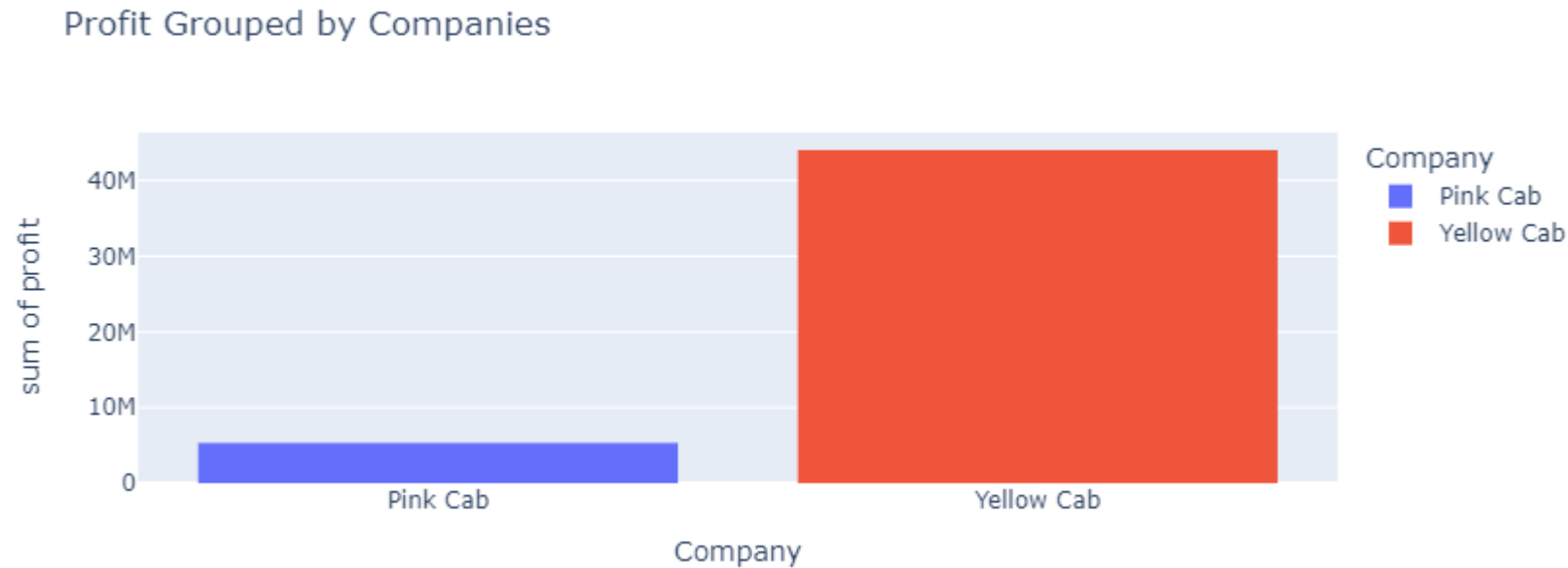
# Approach

- Understanding & evaluating data

- There are four data sets.
- 16 Features( including 3 derived features)
- Price\_Charged and Cost\_of\_Trip features are used to calculate profit.
- Time frame is 31/01/2016 to 31/12/2018.

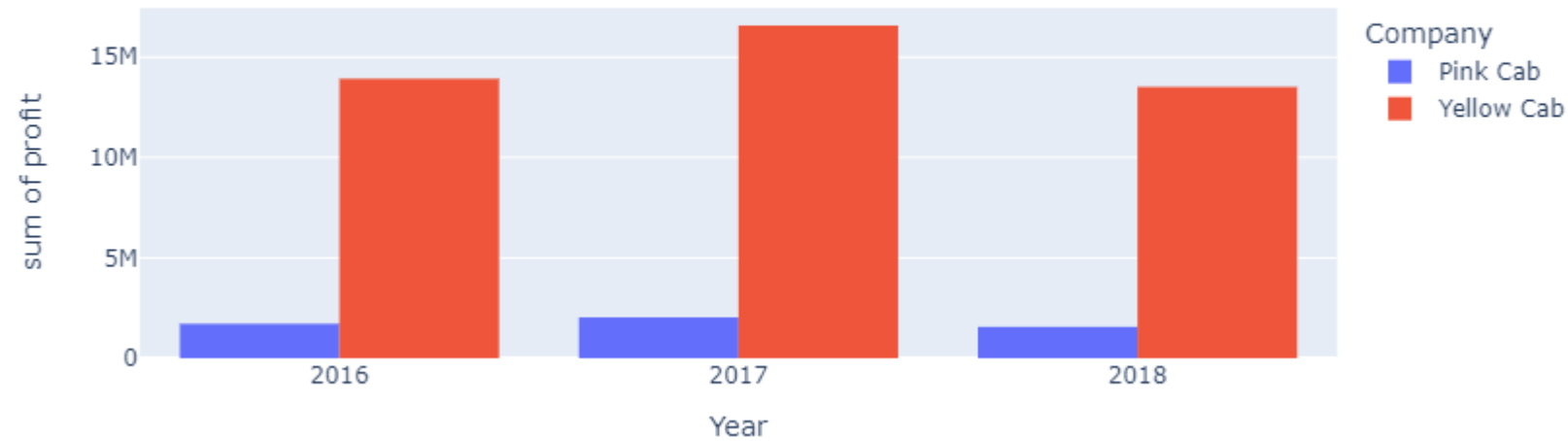


# Profit



Sum of profit of yellow cab is way more than pink cab for given time frame. Yellow cab is close to 39M while pink cab is close to 5.3 M.

Profit Grouped by Companies per Year

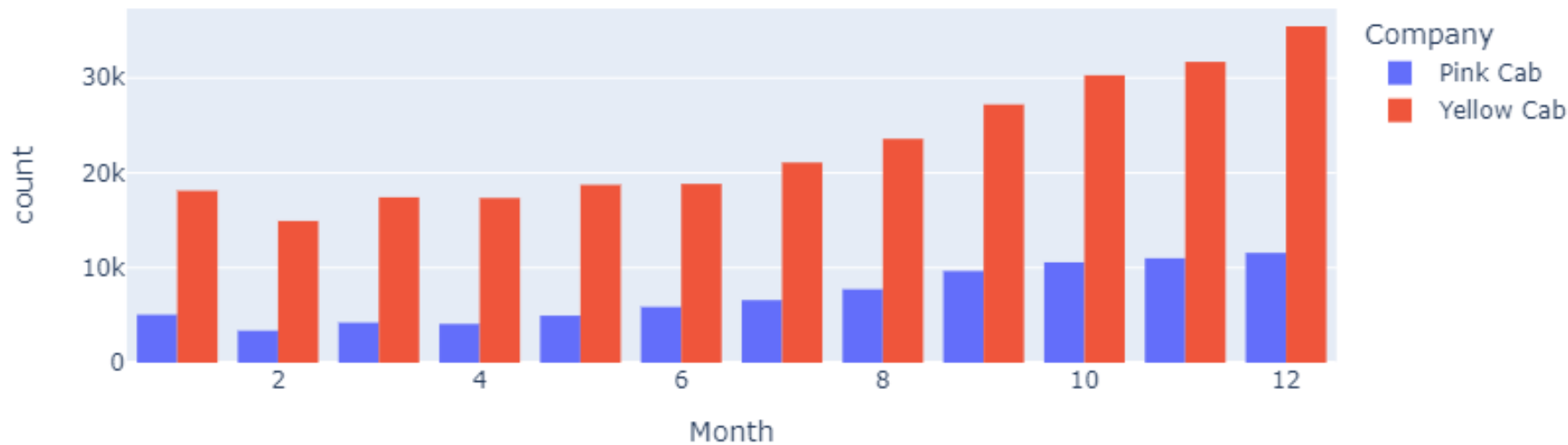


Yellow cab's profit is always higher than pink. Both pink and yellow had increase in their profits in 2017.

Yellow cab lost nearly 3M and pink cab lost nearly half a million in 2018.

# Transactions

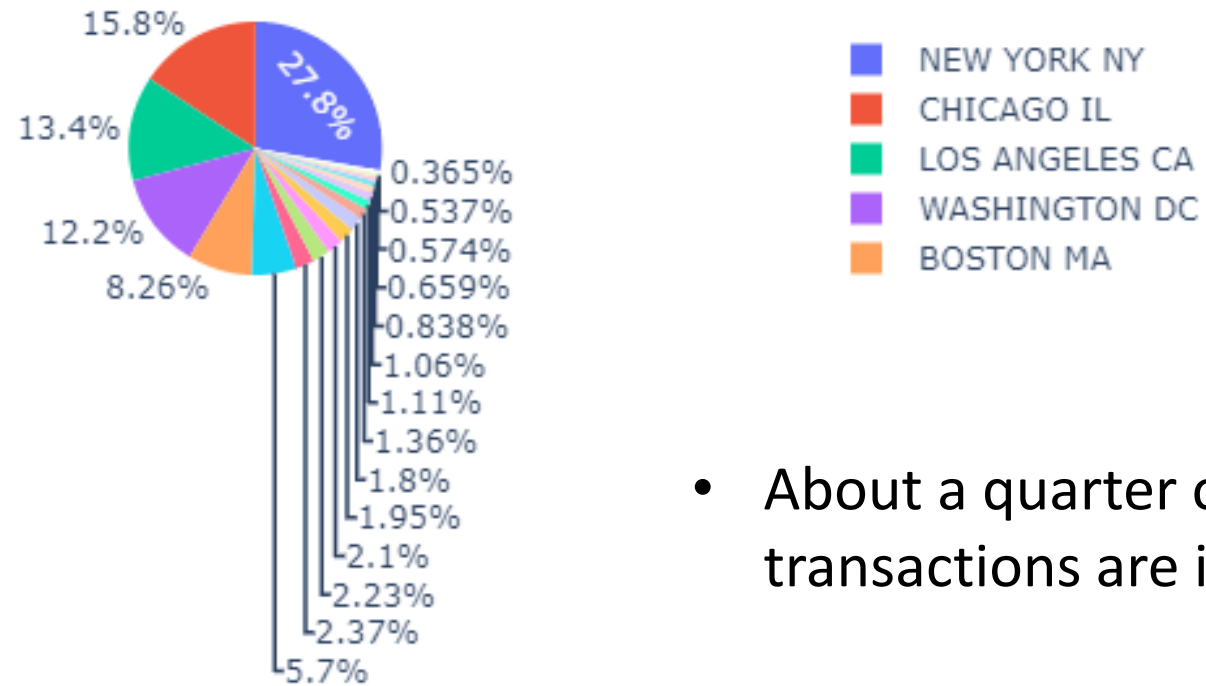
Number of Transactions per Month



- Yellow cab has more transactions every month of the year, especially during month of December which is a holiday month for USA.

# Transactions-2

## Transaction Distribution



- About a quarter of all transactions are in New York.



# Transactions-3

Number of Transactions per Month



- This graph shows us transaction counts for each city grouped by company.
- In Nashville, Sacramento and San Diego CA there are more transactions in Pink Cab.

# Transactions-4

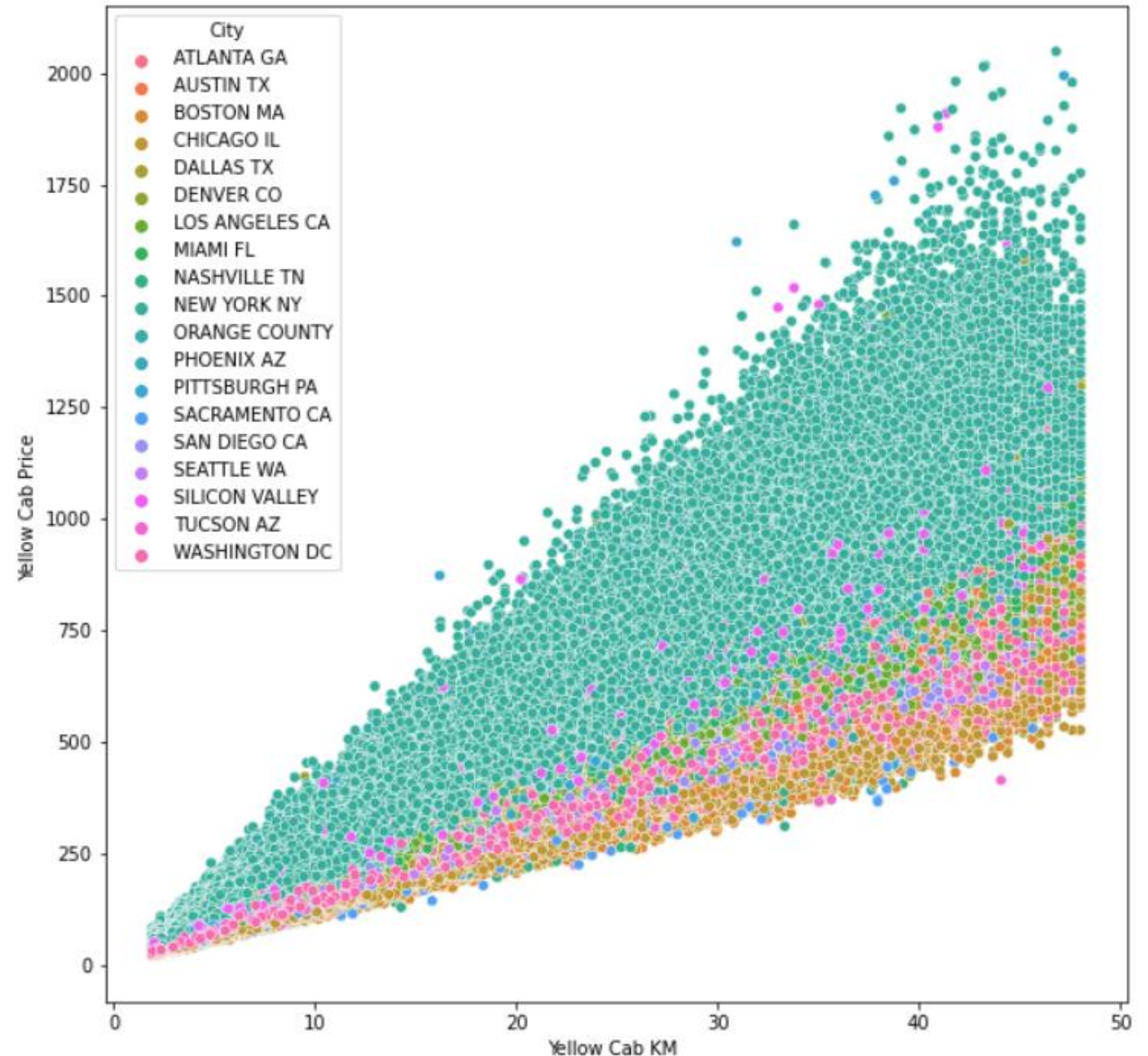
Transaction Distribution in NYC per companies

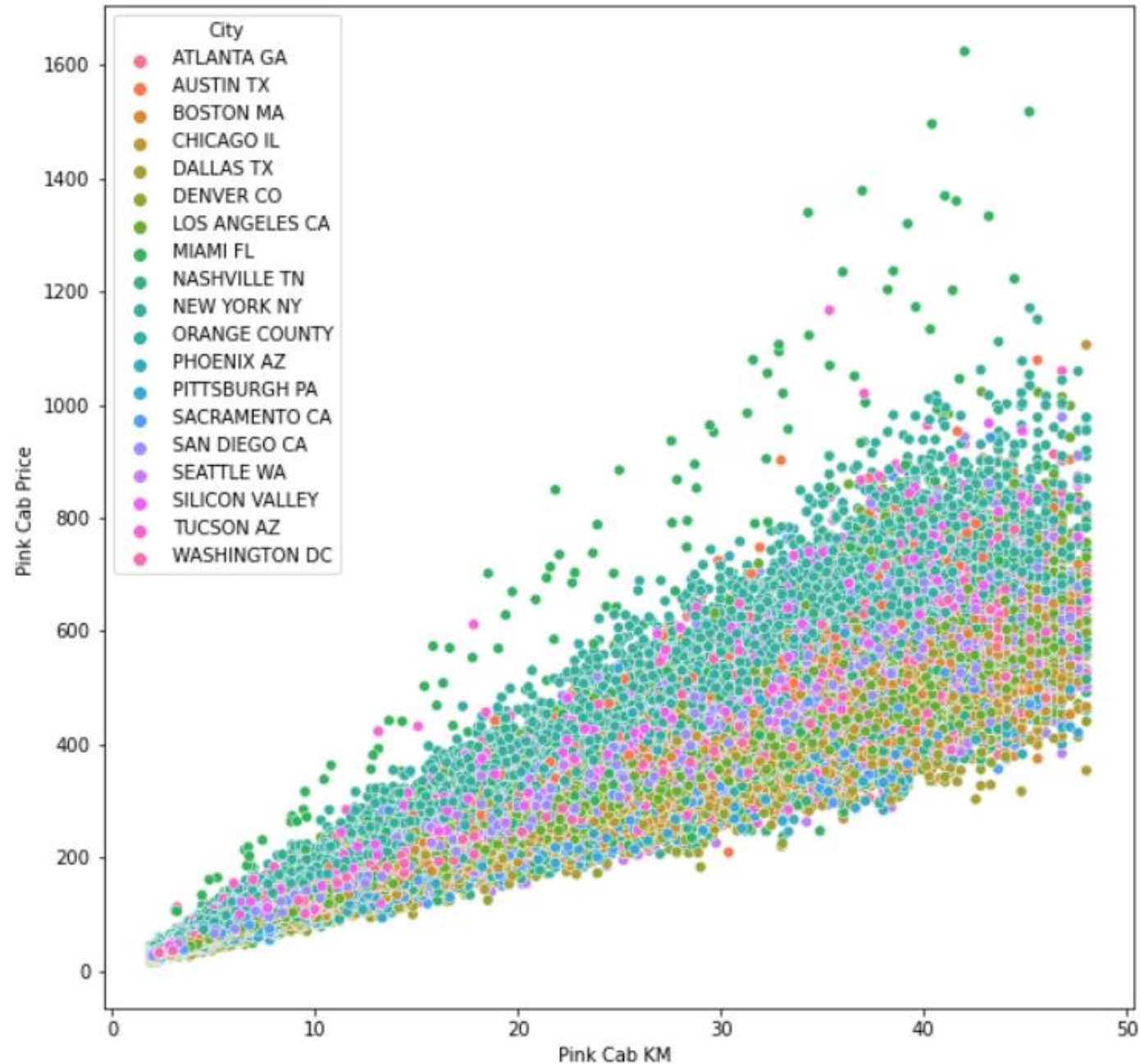


Yellow cab has %76.4 of transactions in NYC.

➤ Since Yellow Cab has most of transactions in NYC, we checked if the reason is that it is cheaper to use Yellow Cab than Pink Cab in NYC ?

➤ Yellow Cab's prices.

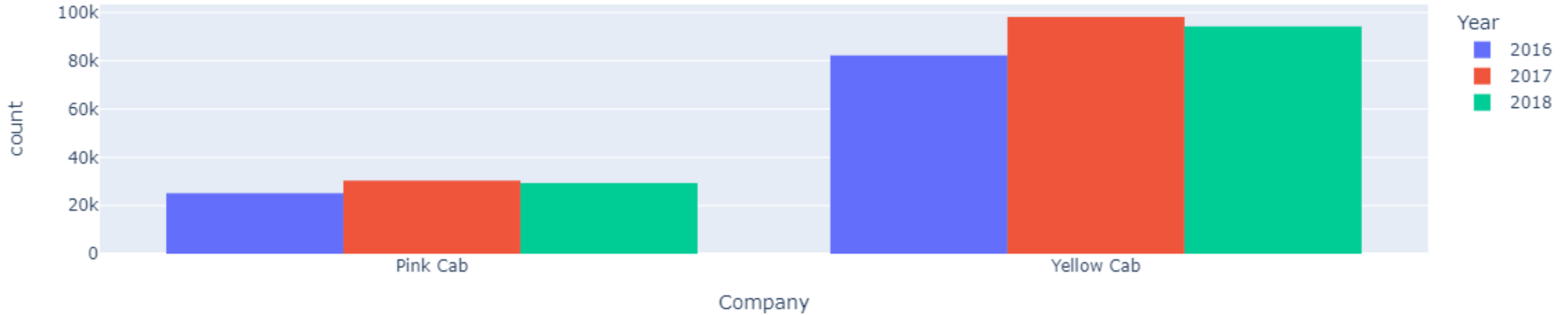




- Pink Cab's prices.
- From the graphs, we can say that Yellow Cab costs more than Pink cab in NYC.
- Also, we can see for Yellow Cab that they charge more than any other city in NYC.

# Customers

Customers according to years for each companies



- As shown, there is no decrease in customers in any cab firm.

# Growth rate

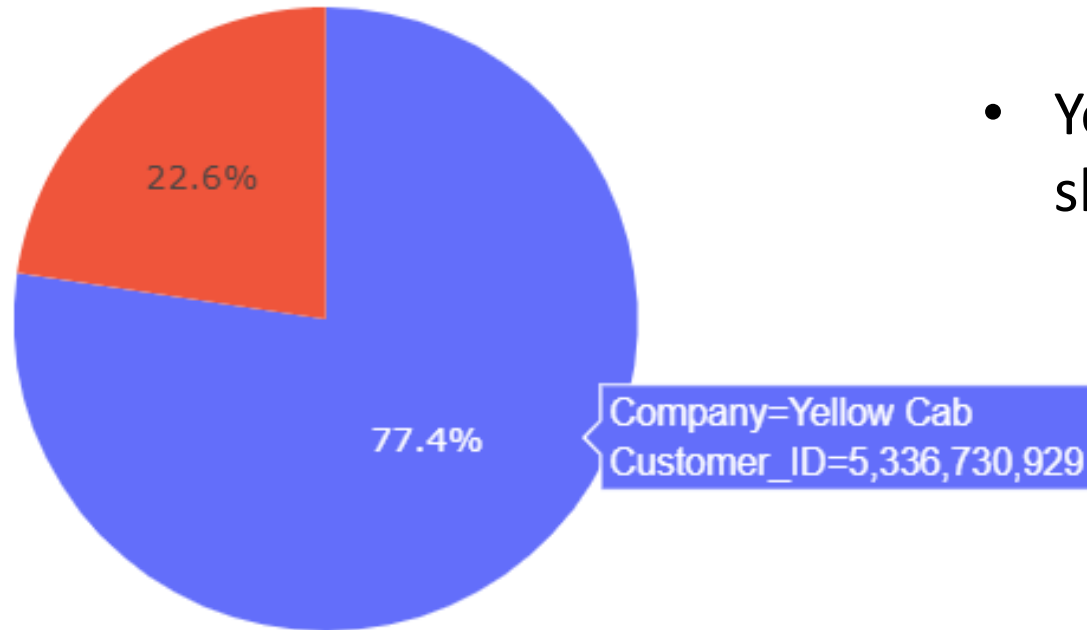
Since both gained customers, we needed to look at which gained more profit. Time frame is 2016-2018 for calculating year-over-year growth in terms of customer number for each company.

Yellow cab's growth rate : -0.0180814

Pink cab's growth rate : -0.0028353

Yellow cab's growth rate is better. Both of the companies are in negative values.

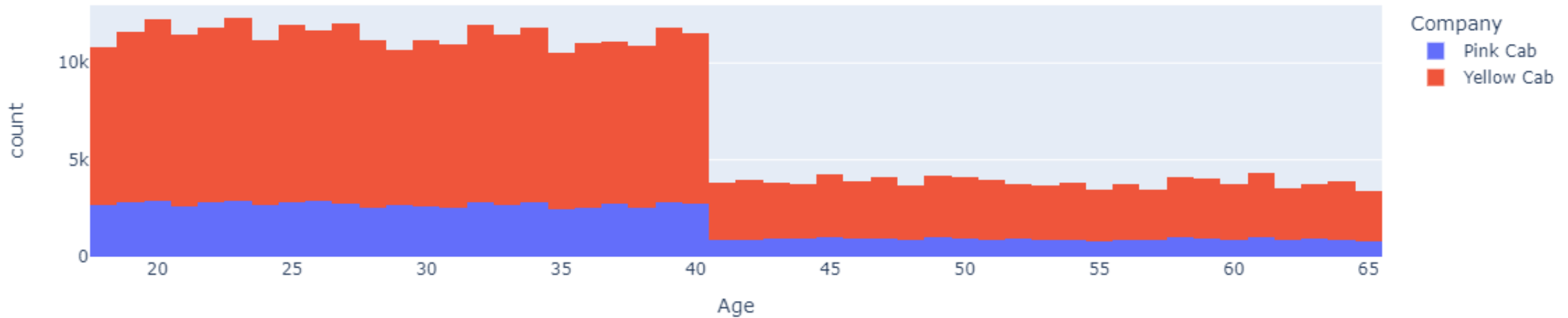
# Customer share



- Yellow cab has more share in customers.

# Age range

Age Distribution for companies

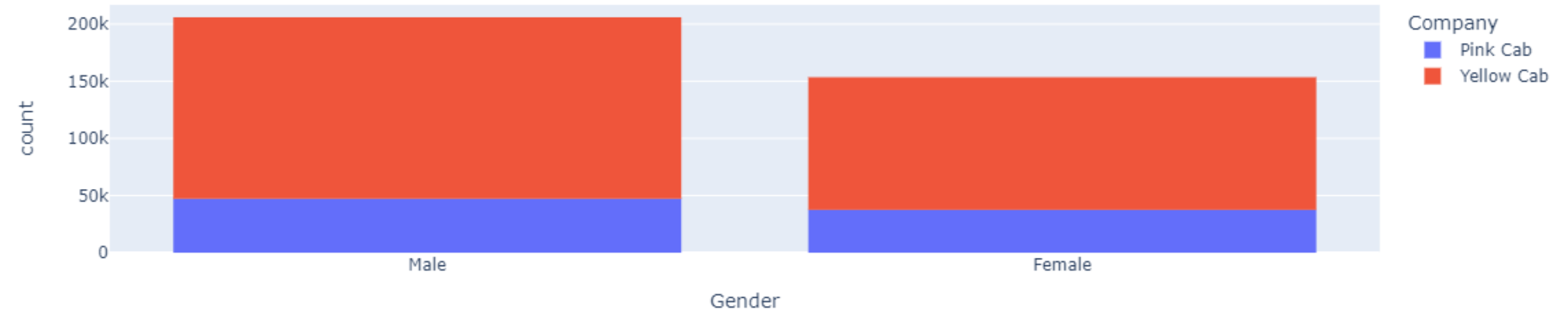


- As shown, there is no significant difference of choice within age ranges.
- We can say that no matter the age, Yellow cab is preferred more than Pink.



# Gender

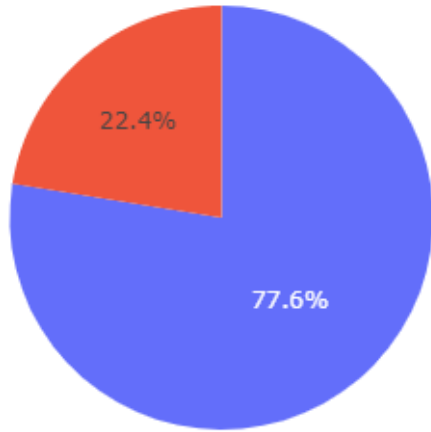
Gender distribution for companies



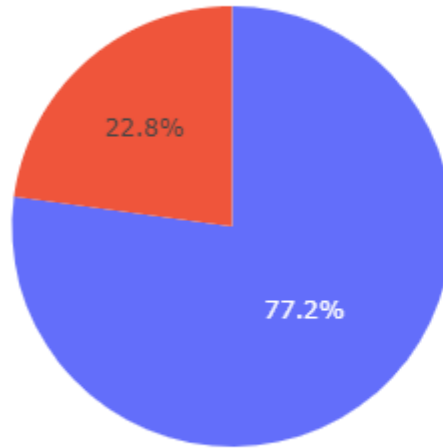
- Yellow cab is preferred more no matter the gender.

# Social class

Lower Income



High Income



- People with lower income prefers Yellow Cab even though it is more expensive in some cities.(Like NYC).
- People with higher income prefers Yellow Cab.

# Recommendations

- 1.Yellow cab is preferred more than pink cab no matter age,income or gender by customers.
- 2.Yearly profit of yellow cab is always more than pink cab.
- 3.Growth rate of yellow cab is higher than pink cab.
- 4.Out of 19 cities, only in three cities there are more transactions done by Pink Cab than Yellow Cab.
- 5.Yellow cab has more customers every month of the year,especially during month of December which is a holiday month for USA. 6.Yellow cab usually costs more to customers.
- On the basis of above point , we will recommend Yellow cab for investment.

# Thank You