G2M Case Study

Virtual Internship

18-Nov-2023

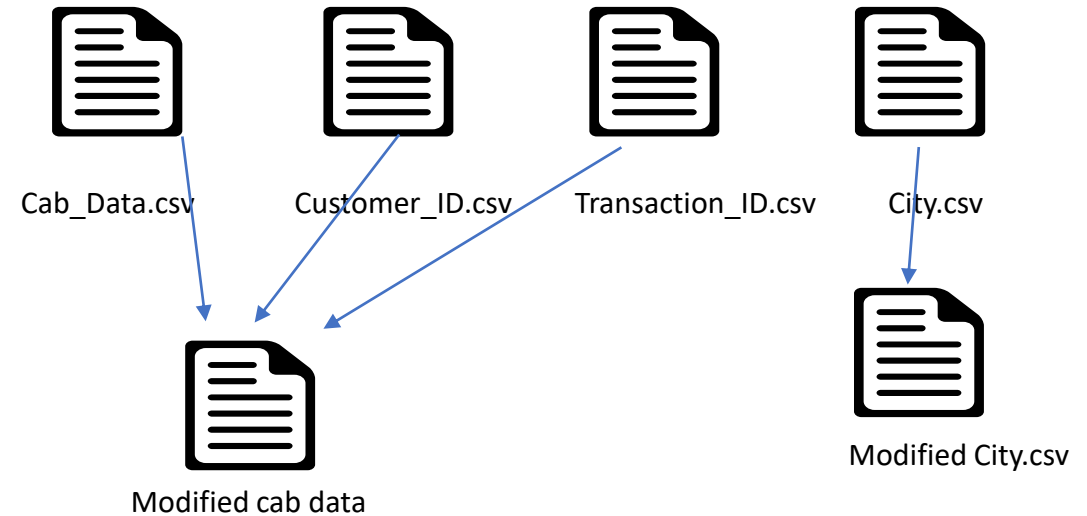# Background –G2M(cab industry) case study

- 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 three parts:

- Data Understanding

- Finding the most profitable Cab company

- Recommendations for investment

Data Exploration

- 19 Features(including 5 derived features)
- Timeframe of the data: 2016-01-31 to 2018-12-31
- Total data points :344,973

Cab_Data.csv   Customer_ID.csv   Transaction_ID.csv   City.csv

Modified cab data

Modified City.csv

Hypotheses and assumptions:
- Number of users in a city is the sum of cab users of all cab companies besides Yellow and Pink cab companies
- Higher use of cab services in a specific city is direct proportionate with high density of users in the same city
- Users prefer the use of card instead of cash when using a cab
- The number of cab uses is increasing each year
- Most users are coming from the younger population
- Most users are coming from low-income individuals

Number of transactions analysis companywise

Cab Company Distributions
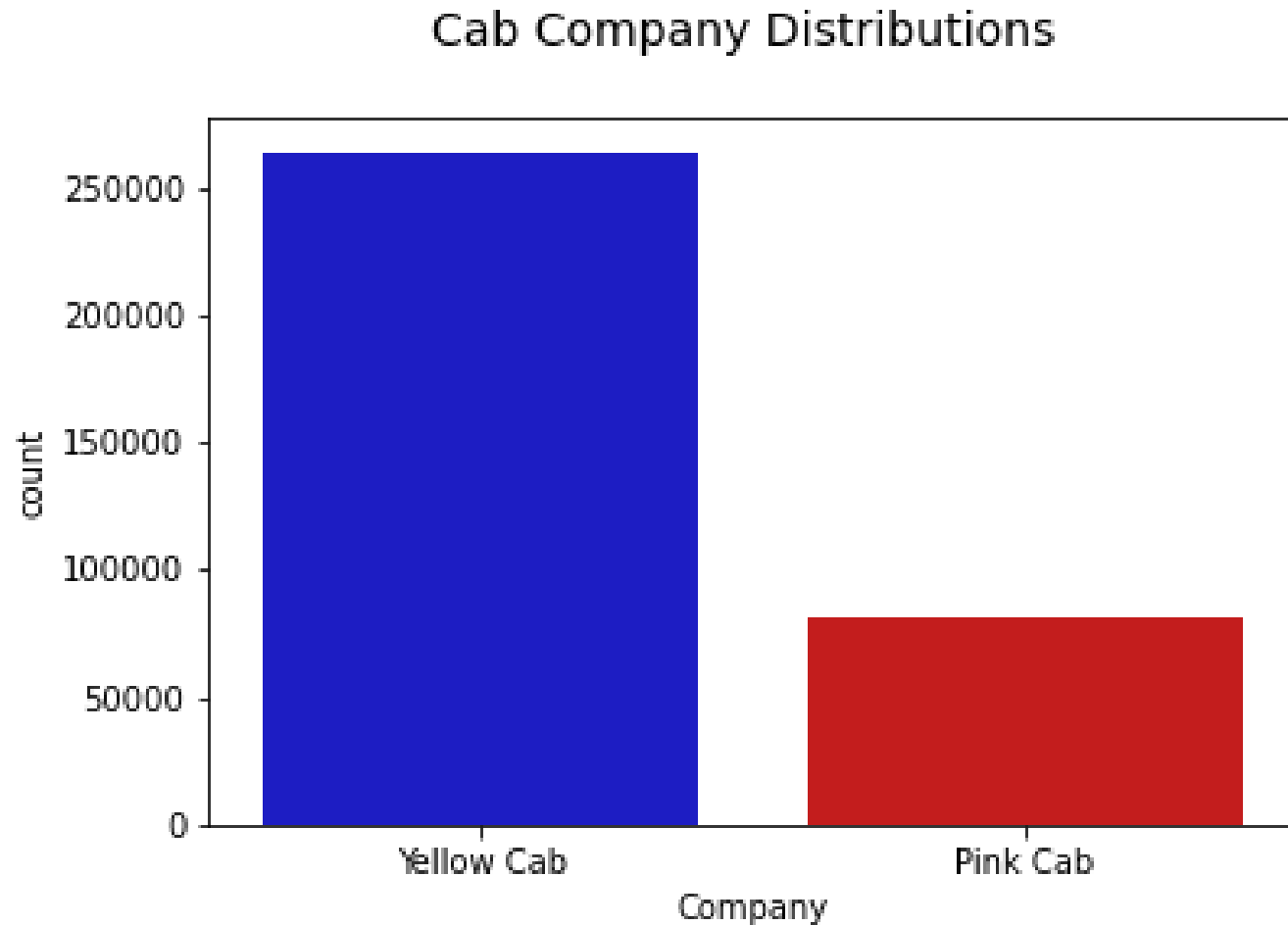
- Overall, Yellow Cab saw more transactions than Pink Cab

Cab company distribution analysis citywise

Cab Company Distributions
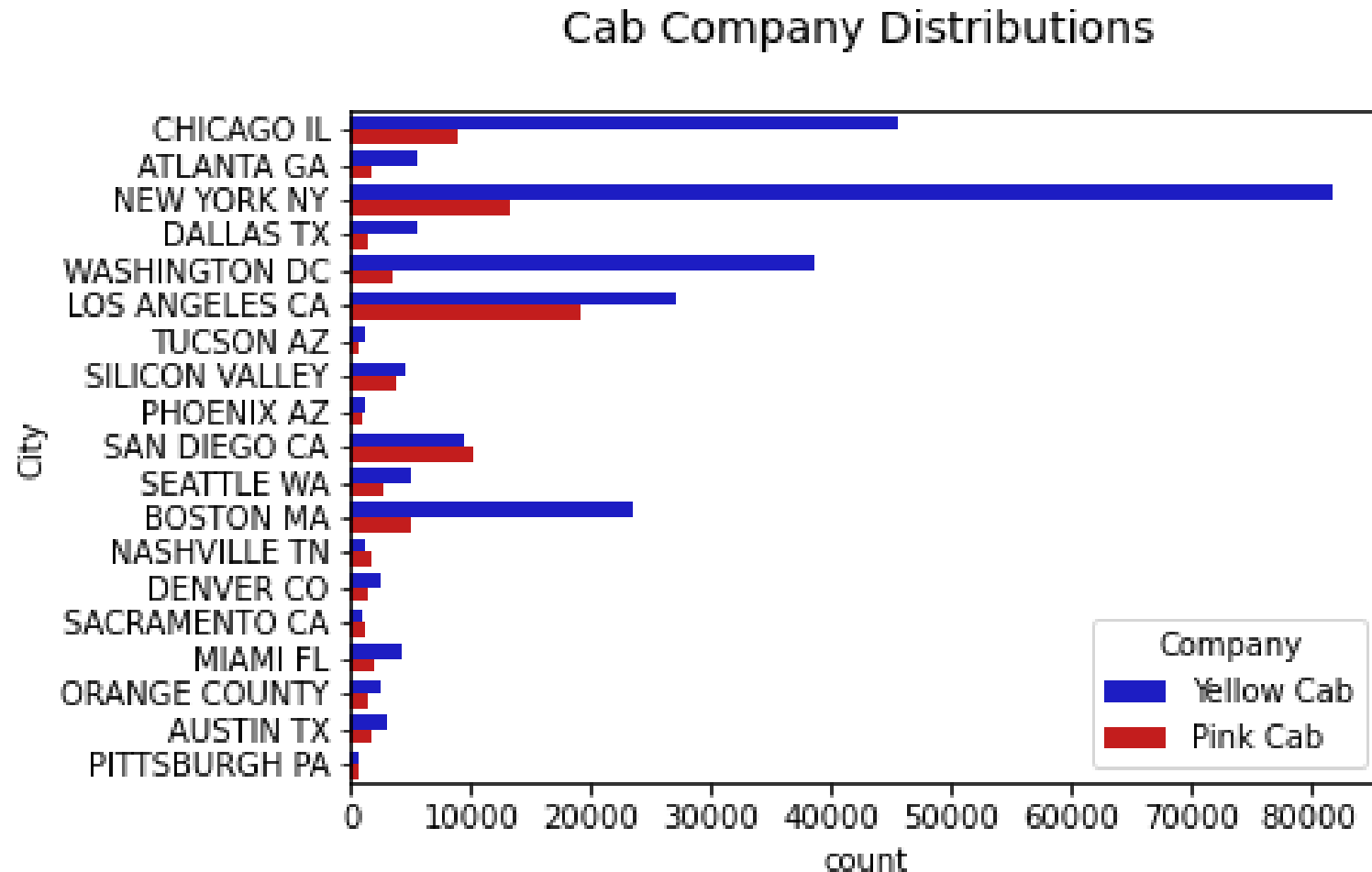
- Yellow Cab had more transactions than Pink Cab in all but four cities
- Pink Cab had more transactions in the cities of San Diego CA, Nashville TN, Sacramento CA and Pittsburgh PA

Age groups analysis

Age groups distribution
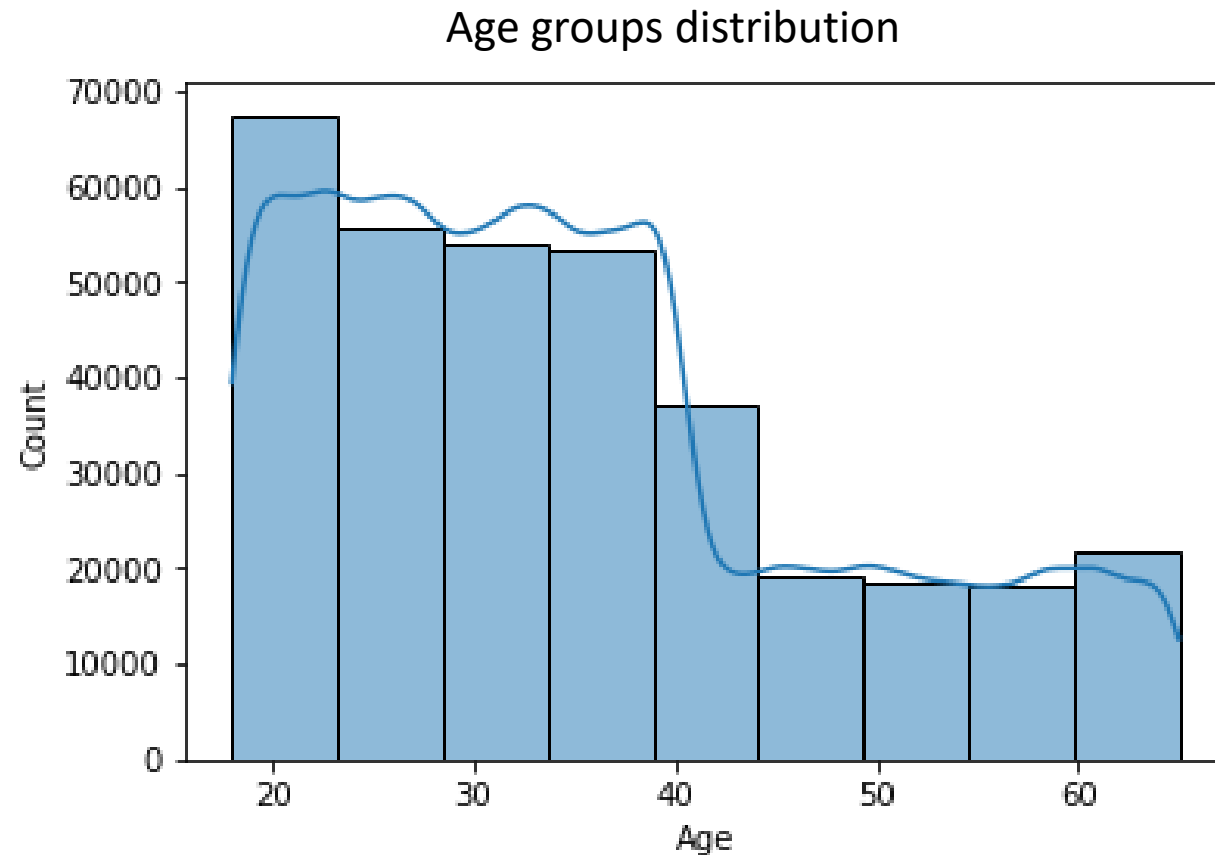
- Younger users use the cab more often than older users
- Users under 40 years of age are most of the clientele
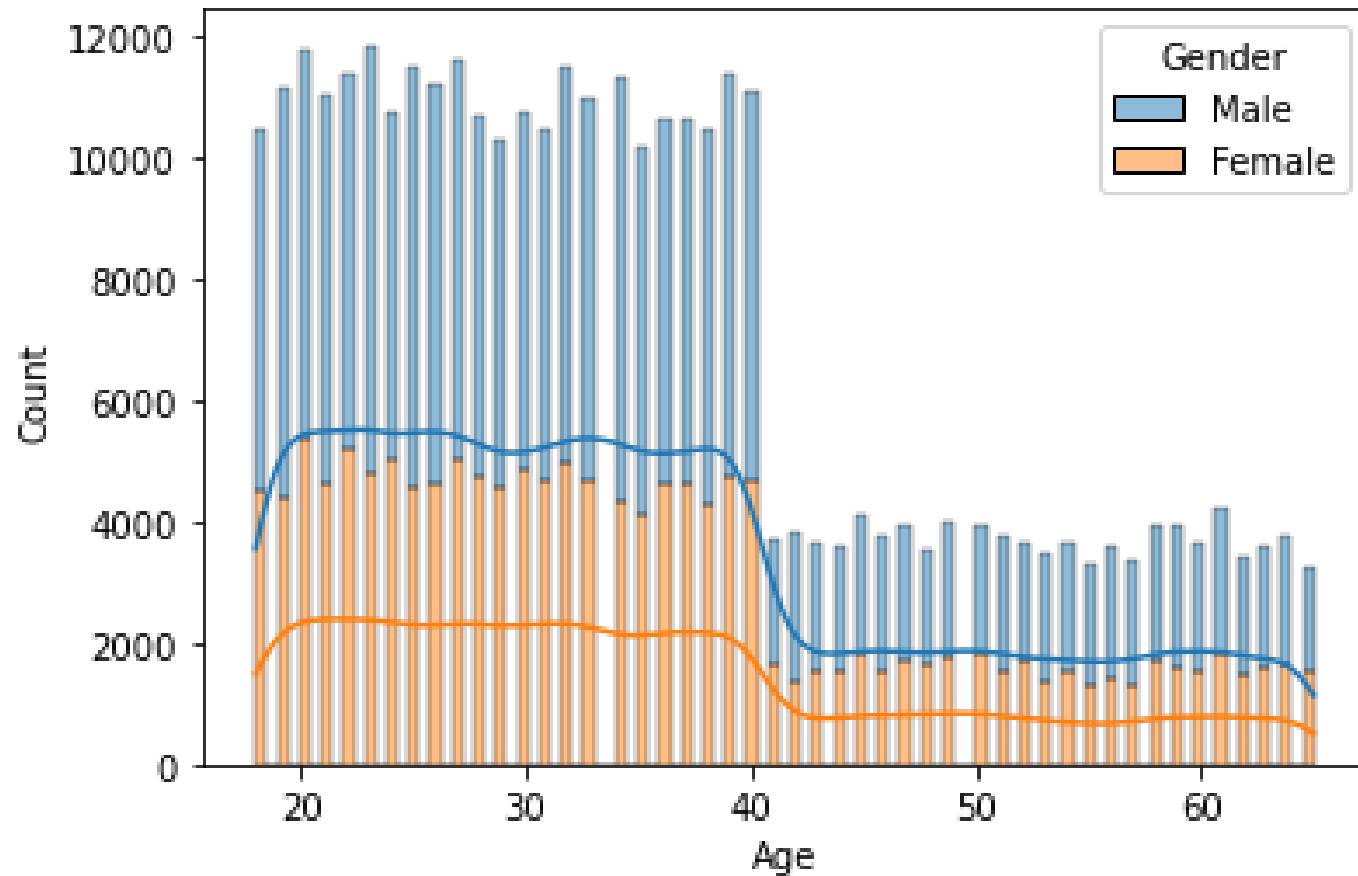- However, we can see a bump in transactions for users over 60

Cab company preference analysis age wise

Age groups distribution
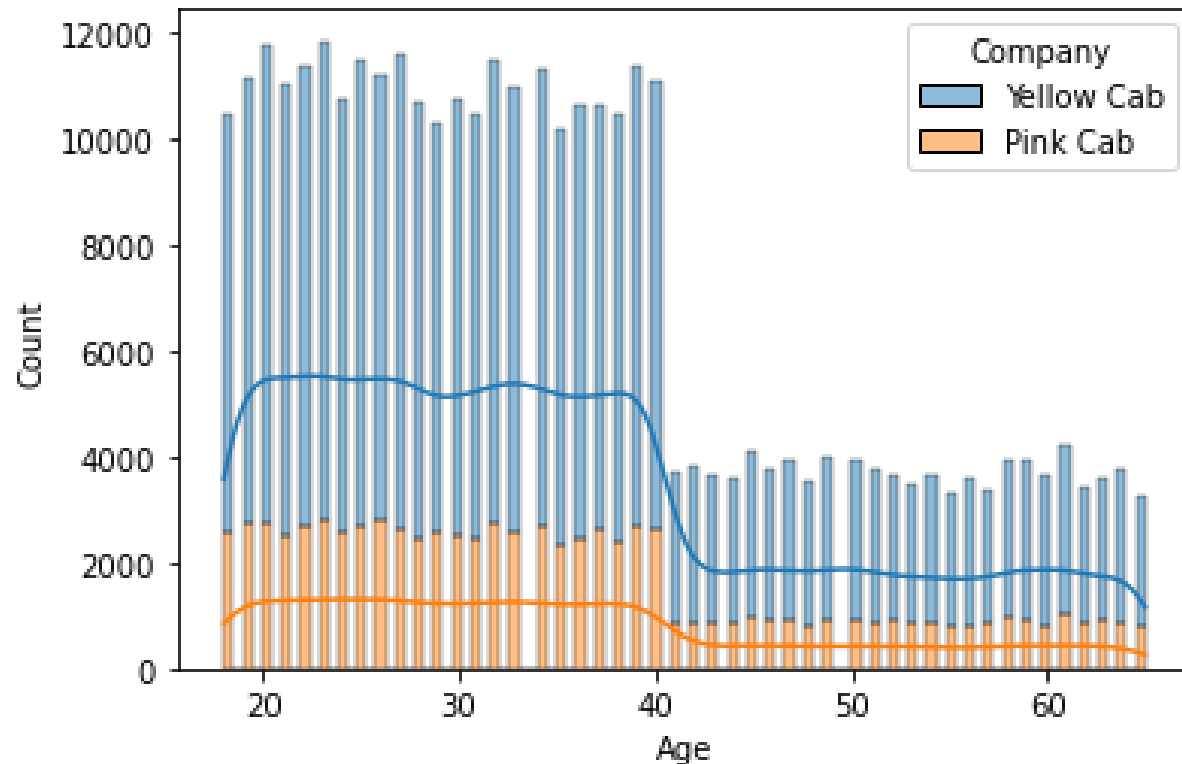
- Overall, the Yellow Cab company is preferred by all ages
- Both companies see less transactions from users over 40 years of age
- Pink Cab has a less drastic decline through the age groups, comparatively to Yellow Cab
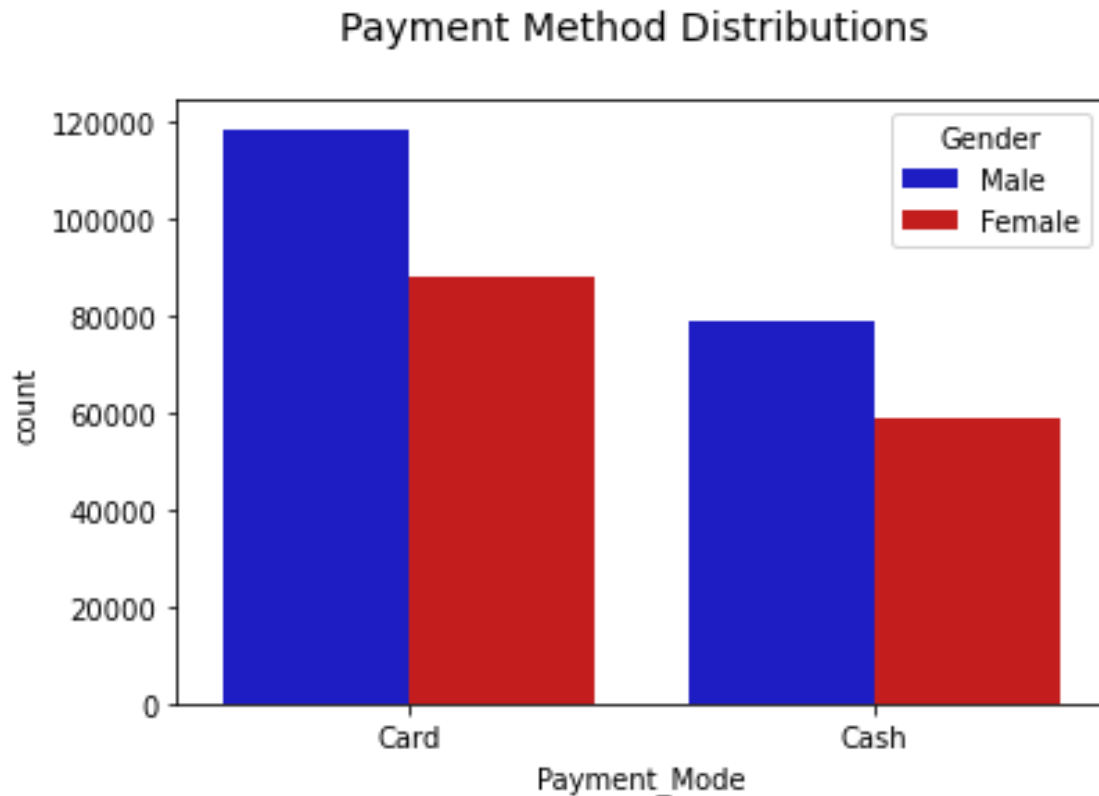
Age analysis gender wise

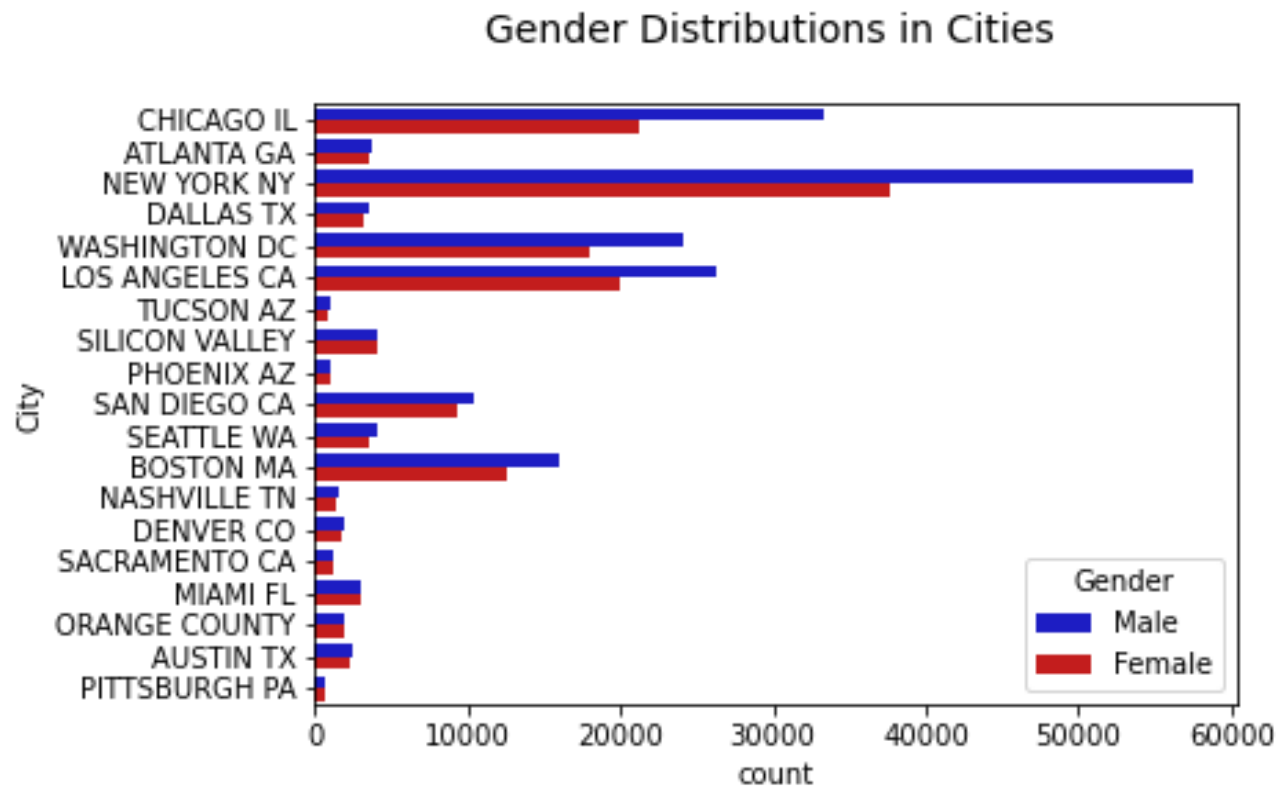- Overall, in all age groups, most of the users are male

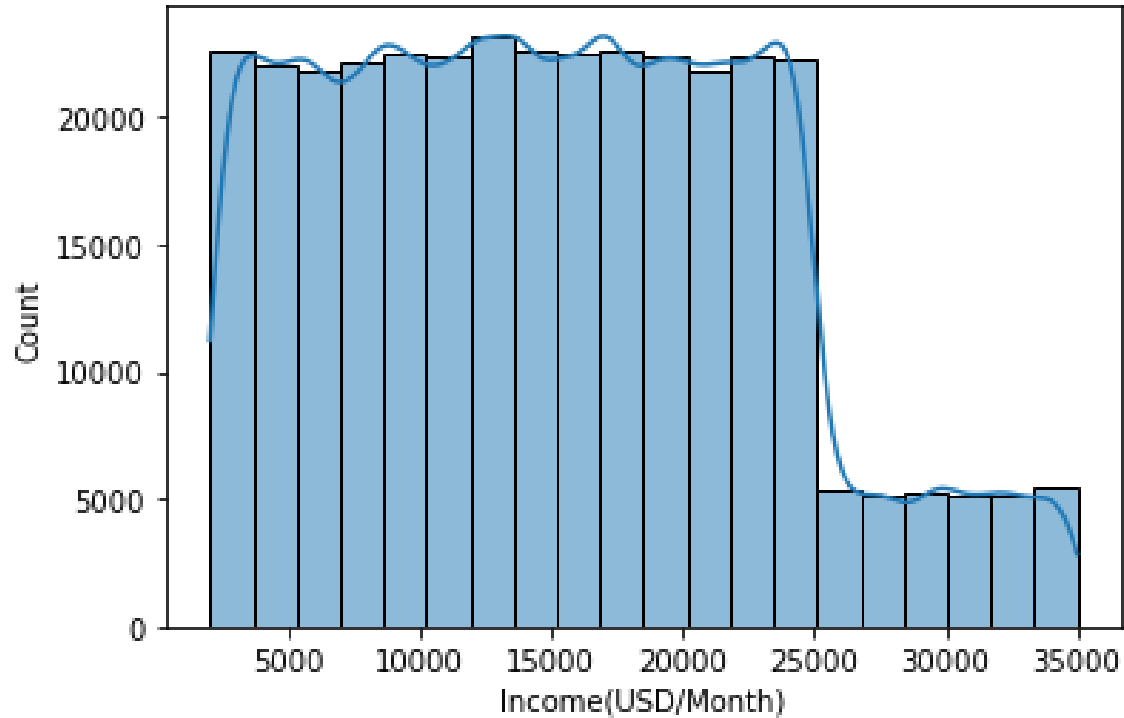# Payment mode preference analysis genderwise

Payment Method Distributions

- Most users prefer to pay with card, rather than cash

Gender analysis city wise
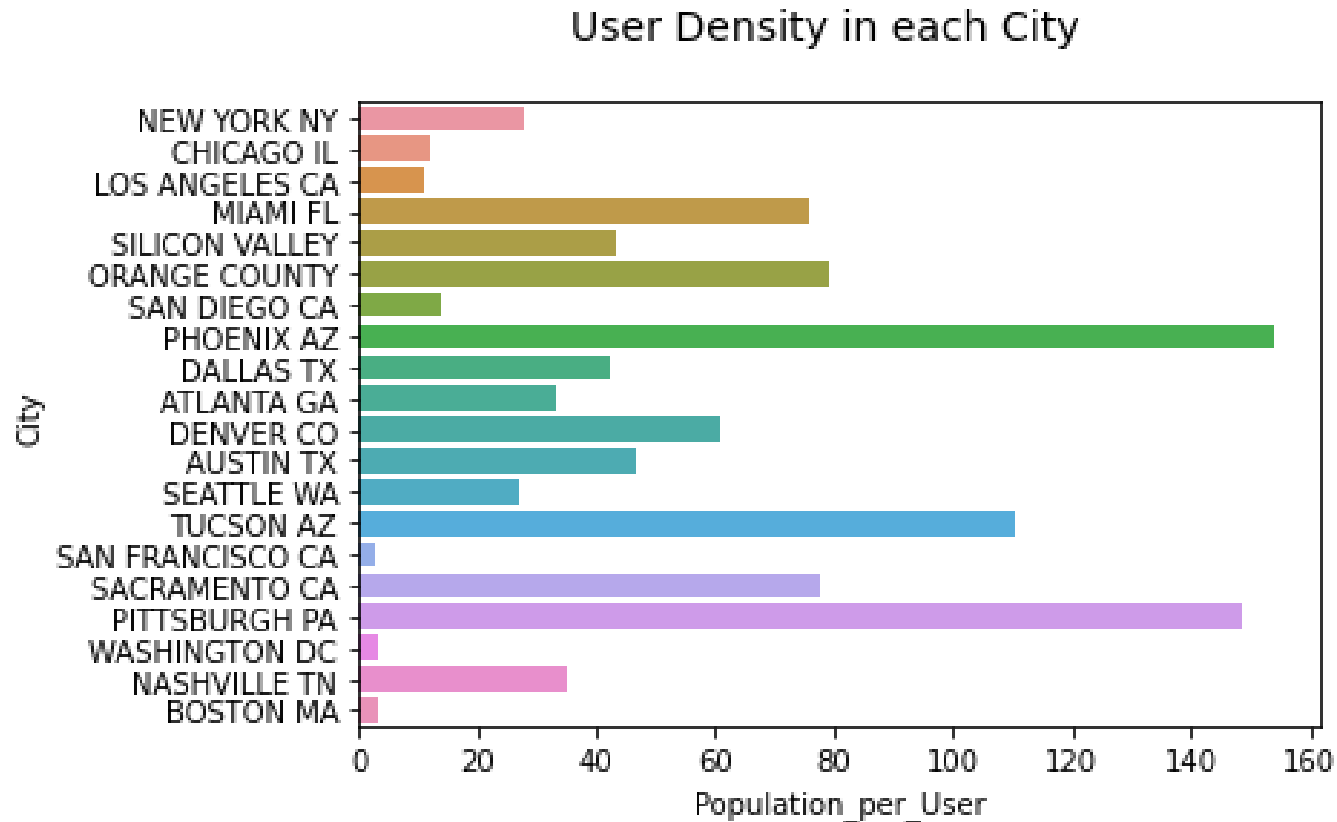

Gender Distributions in Cities

- In all but four cities where the gender distribution is relative equal or female dominant, most cities saw more male users than female users

Income analysis

- Most of the users are people in low to medium income
- Users with higher do not use the cab as frequently as the rest

User density analysis city wise

- The top 5 cities with the highest density of users in the population are San Francisco CA, Washington DC, Boston MA, San Diego CA and Los Angeles
- The cities with some of the highest populations in the country have the highest density of users

Number of transactions analysis year wise

Year Distributions
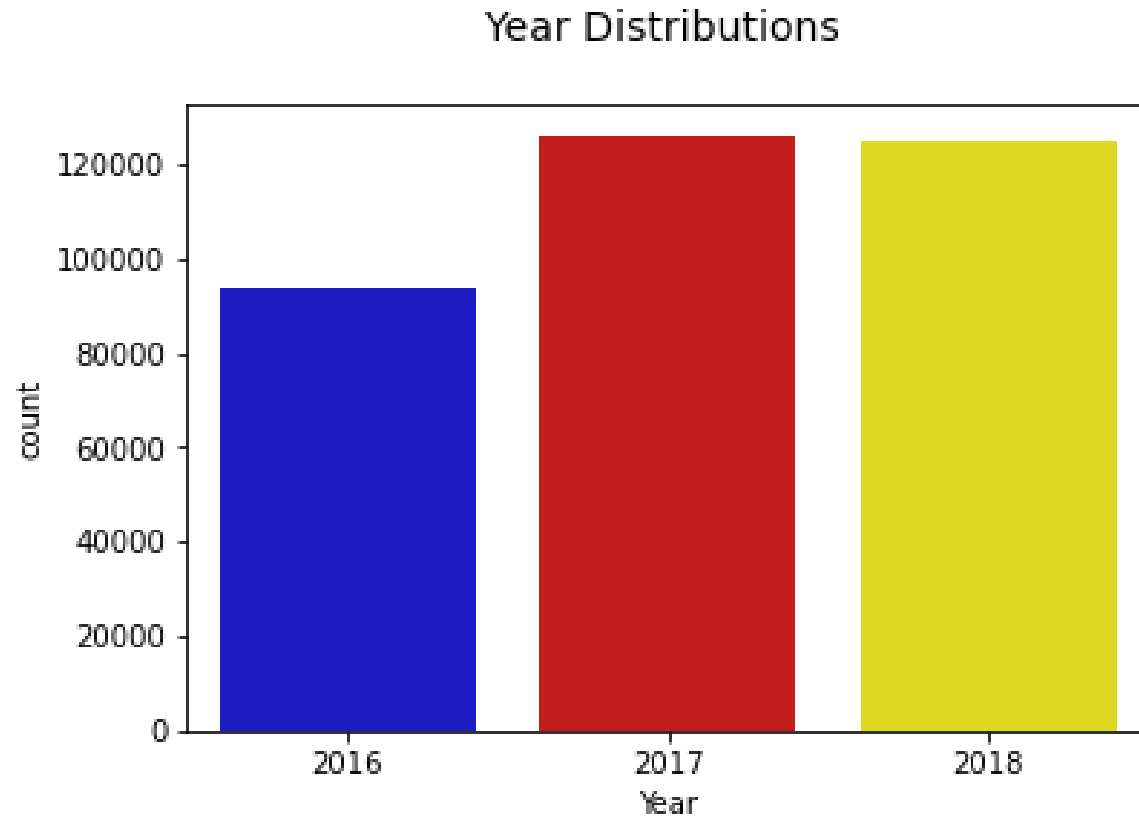
- An interesting discovery is that although the cab business saw remarkable growth, the data shows that the two companies have fewer transactions in 2018 than in 2017
- 2017 and 2018 are the only years in the dataset which have all the days present

Correlations between features

Correlation Matrix
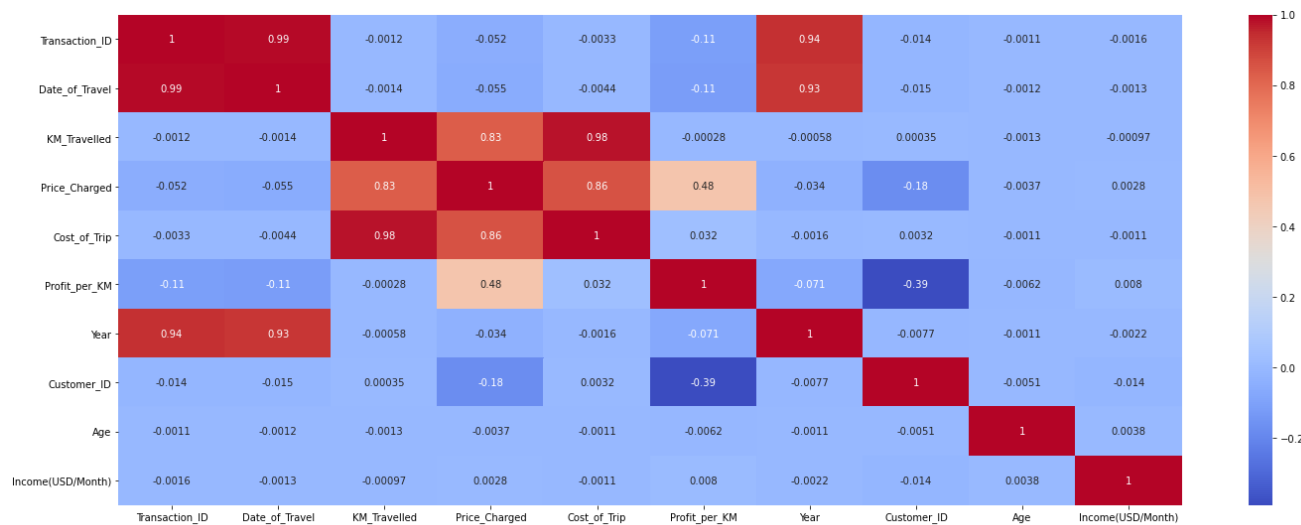
- As seen in the matrix, there is no strong correlations that could have big influence on the outcome when it comes to number of users for each cab company

Hypothesis results

Based of testing the hypothesis, it has been found that:

- Male focused cab services should be recommended, except in Phoenix AZ, Sacramento CA, Silicon Valley and Pittsburgh PA
- Top 5 highest density of users in population are in San Francisco, Washington DC, Boston MA, Los Angeles CA, Chicago IL
- Highest number of users are male between 20 and 40
- Most users are male over 40 lower than female under 40
- Most users are males with income under 2500 USD/Month
- 2018 saw lower numbers than 2017

Recommendations

Based on the evaluation of the data, we believe Yellow cab is a better investment than Pink cab:

- Yellow cab is more used in most of the cities except four.
- The same cab company is used by young individuals from lower income.
- In San Francisco, a female marketing strategy would be recommended moving forward
- In the rest of the cities, a more male orientated strategy should work.
- The prices for the trips should be low, without eating too much from the profits.
- Although there was a remarkable growth in the Cab Industry in last few years, 2018 saw less cab uses than in 2017, but not by much.

With all those in mind we will recommend Yellow cab for investment.

Thank You