



Data Glacier

Your Deep Learning Partner

Cab Industry Case Study

Virtual Internship

25-June-2021

EXECUTIVE SUMMARY

A private firm in the US, XYZ, wants to invest in the cab industry. And before making their final decision, they want to understand the market thus making a wise decision.

There are two companies which are Pink Cabs and Yellow Cabs and with proper insights, XYZ, will be in a better position to choose which company to invest in.

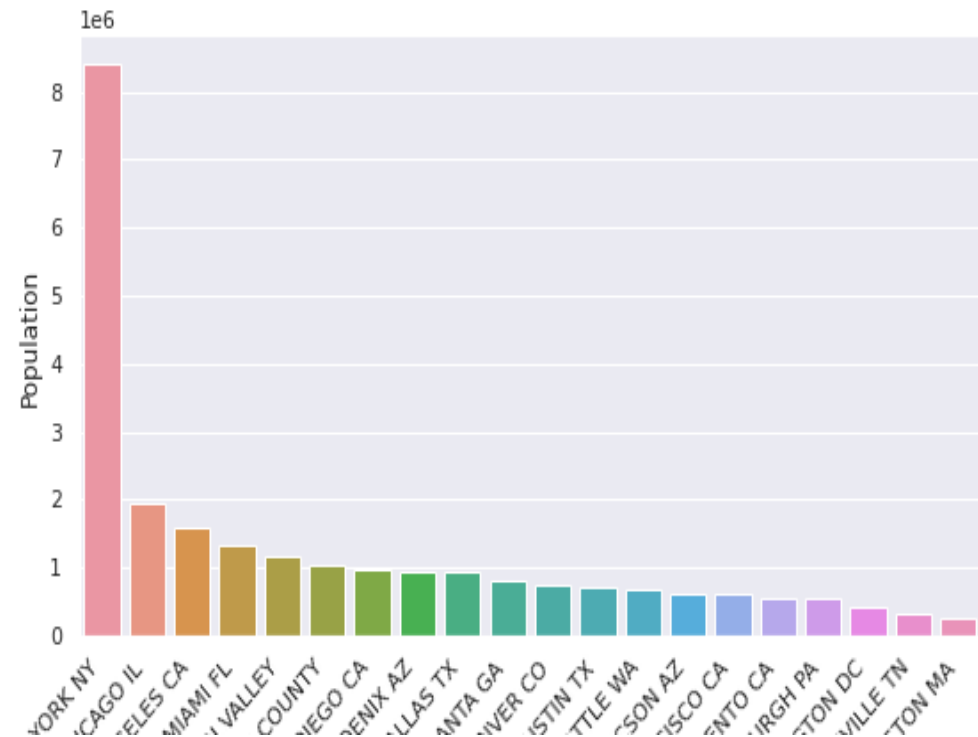
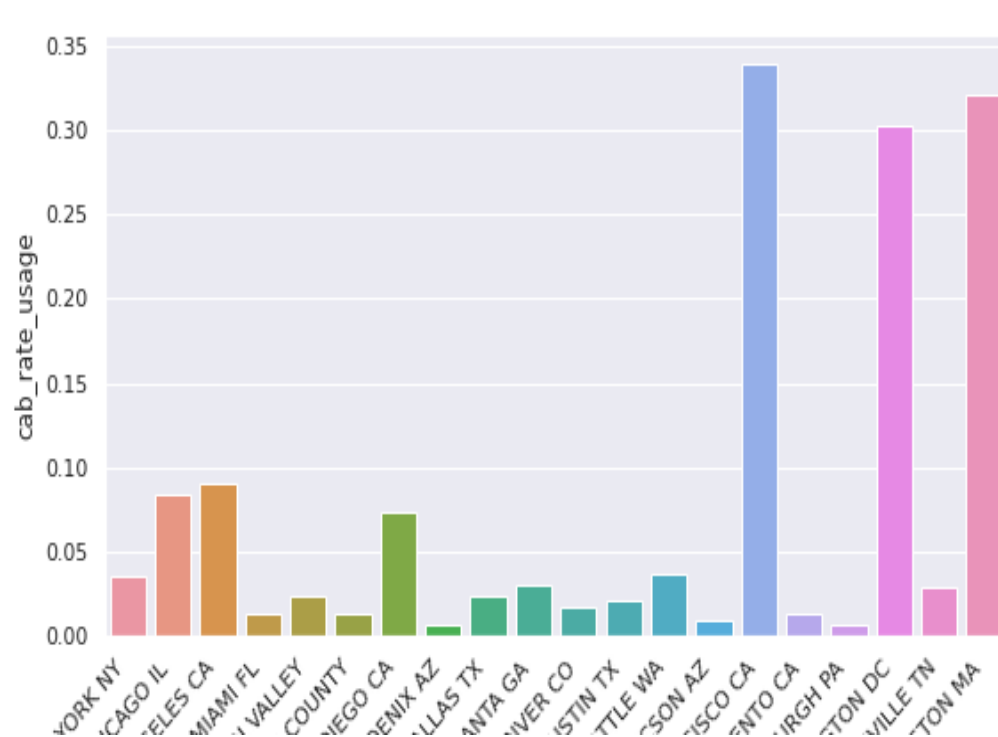
Data Exploration

- Combined Cab_Data.csv, Customer_ID.csv, Transaction_ID.csv into one final dataframe.
- The final dataframe has 18 features and 359,392 data points.
- The City.csv dataset is on its own, despite it having a city column which could have been used in the merging. This is because the final dataframe contains information for each customer.

Assumptions:

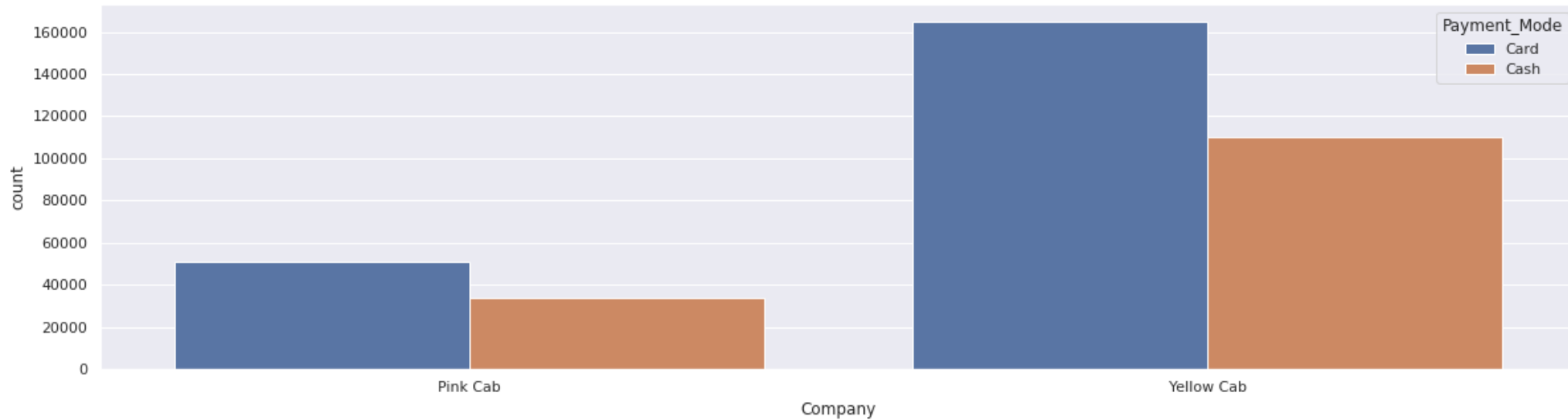
- Date of Travel column range from 2016-01-02 to 2018-12-31
- Teen's age range from 0-18, young adults 18-25, adults 25-35, mid-adults 35-55, the old 55 – 75 and senior citizens 75-100
- Annual income for low class ranges from 0-20000, middle class 20000-45000, upper middle class 45000-140000, High income guys 140000-200000.

Cab-rate-usage in different Cities



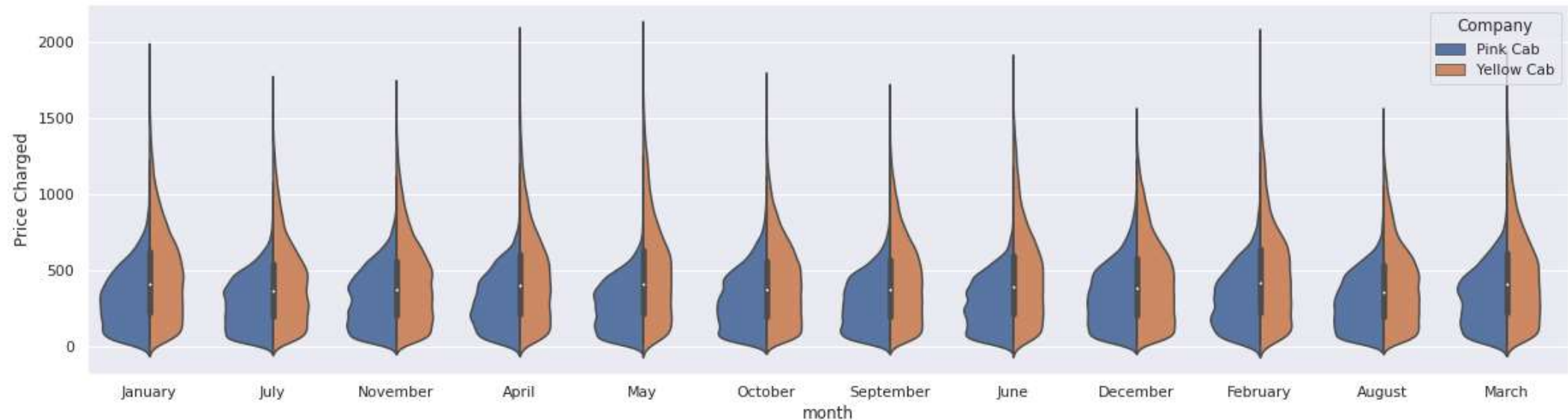
The plot shows the rate of cab usage in different cities. Some cities like New York have a high population but customers are tending to behave differently. The ratio of those that use cabs to those that don't use is very low. Others have low population but the ratio of those that are using cabs to those who don't is very high.

Count of customers in each company.



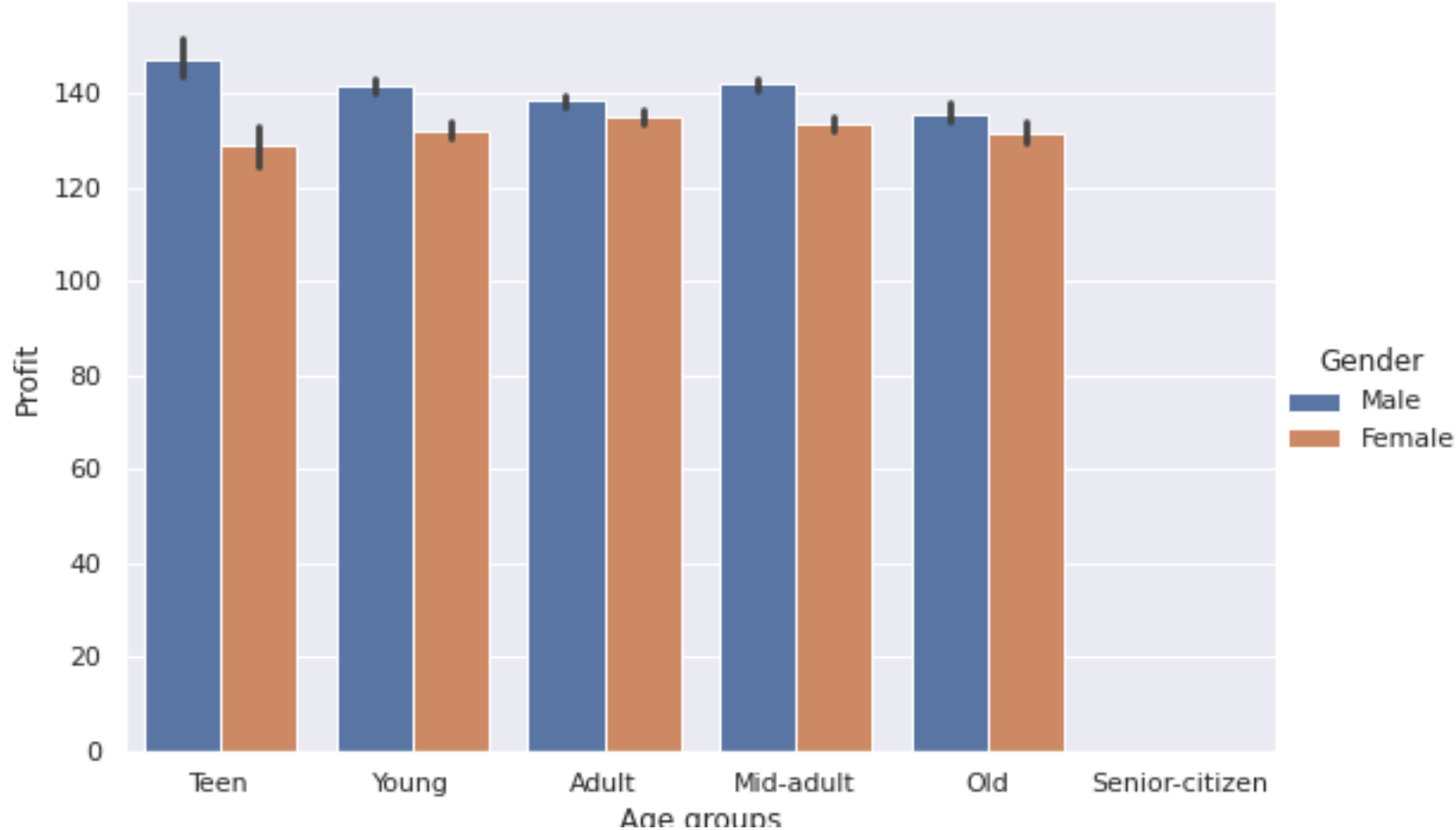
Yellow cabs have more customers than pink cabs. Also from the plot most customers prefer to use card to cash as their mode of payment in both companies.

Price charged by both companies month wise



The pink cab charges are lower compared to yellow cab charges across the year. Most charges in pink cab are less than \$500 while yellow cab exceeds that range most of the time.

Profit analysis in all age groups based on gender

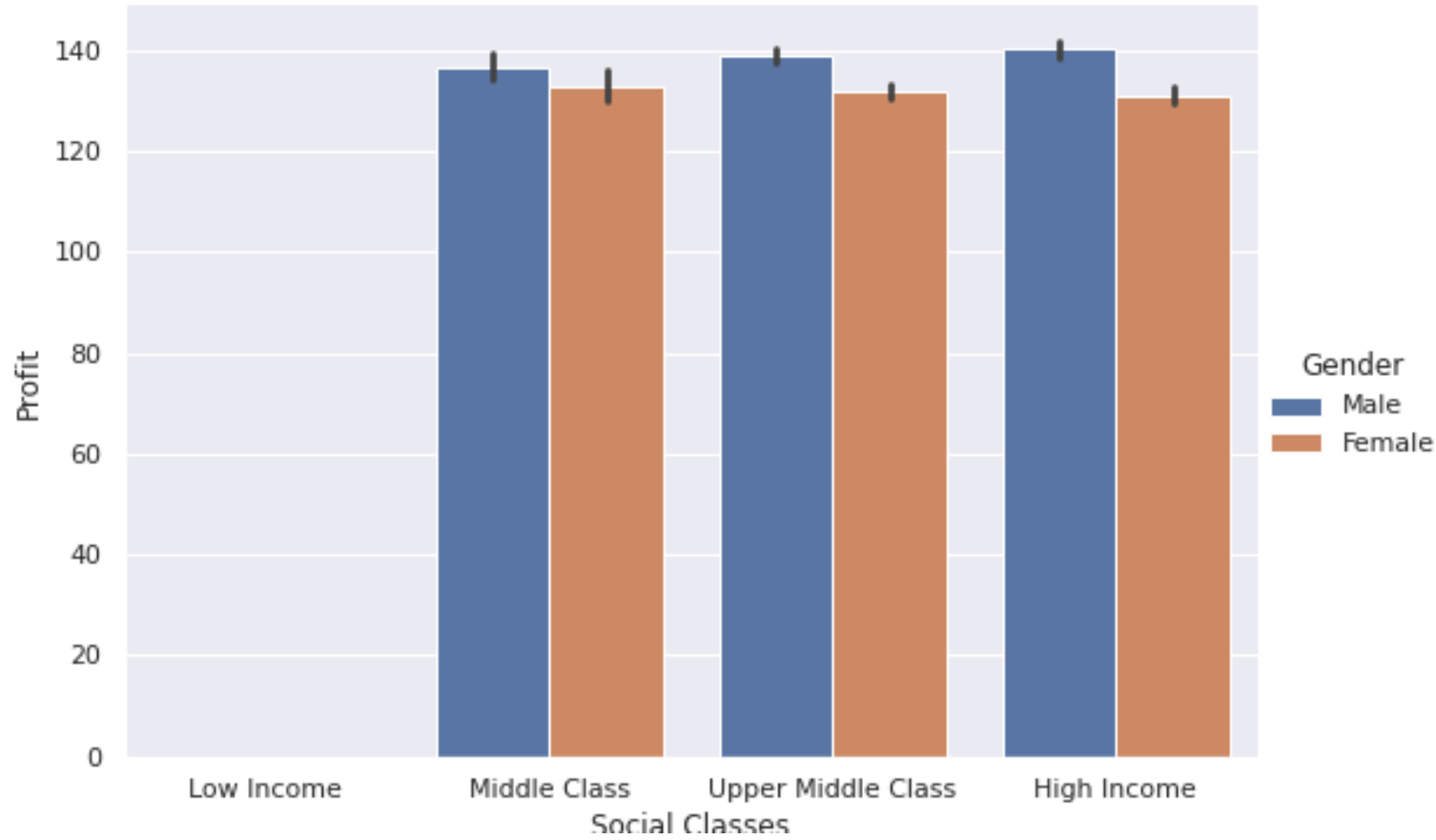


Male teenagers are the biggest contributors when it comes to profit. Though the male are the highest profit contributors in all age groups.

Comparing different age groups, they all seem to be at the same level though there is a small difference in all age groups.

Despite the small difference, age Can't be used as a factor to consider why you should choose this city over the other, or this cab over the other

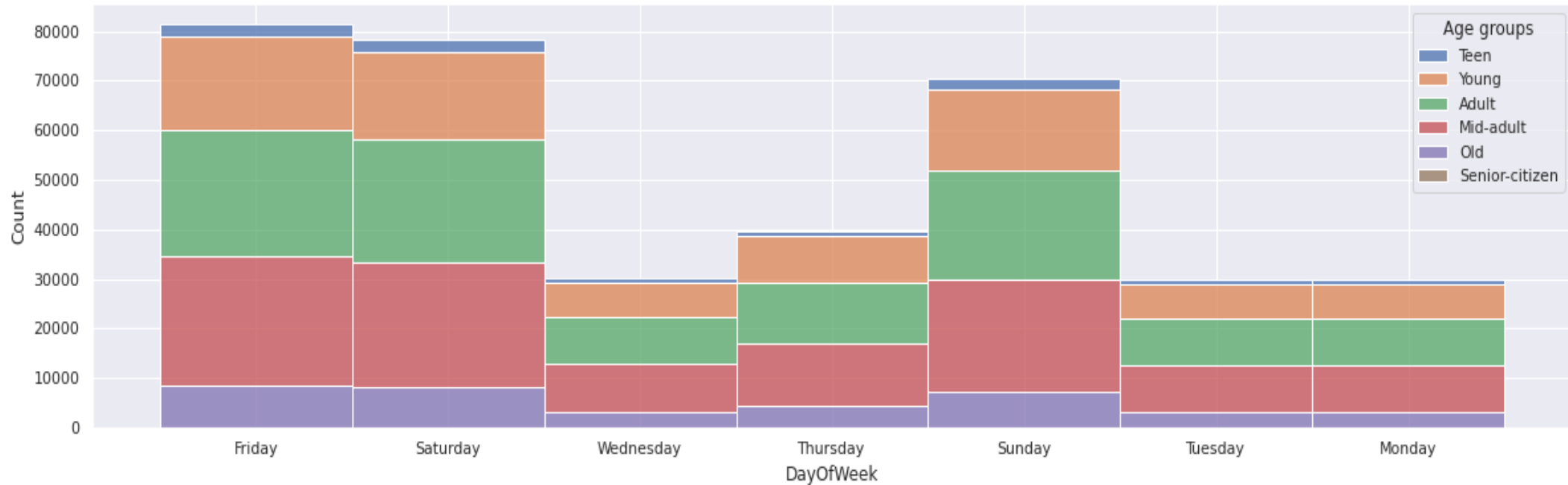
Profit analysis in all social classes based on gender



Just like in the previous plot, the males are the highest profit contributors to the growth of the cab industry in the US.

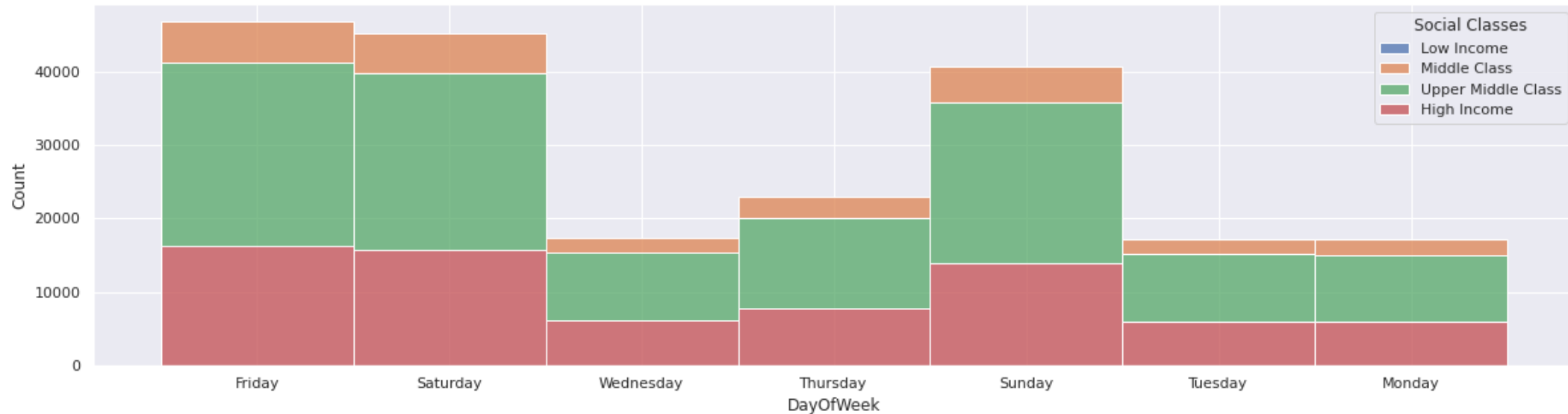
Again, all social classes seem to be almost at the same level.

Customer distribution in various days of the week



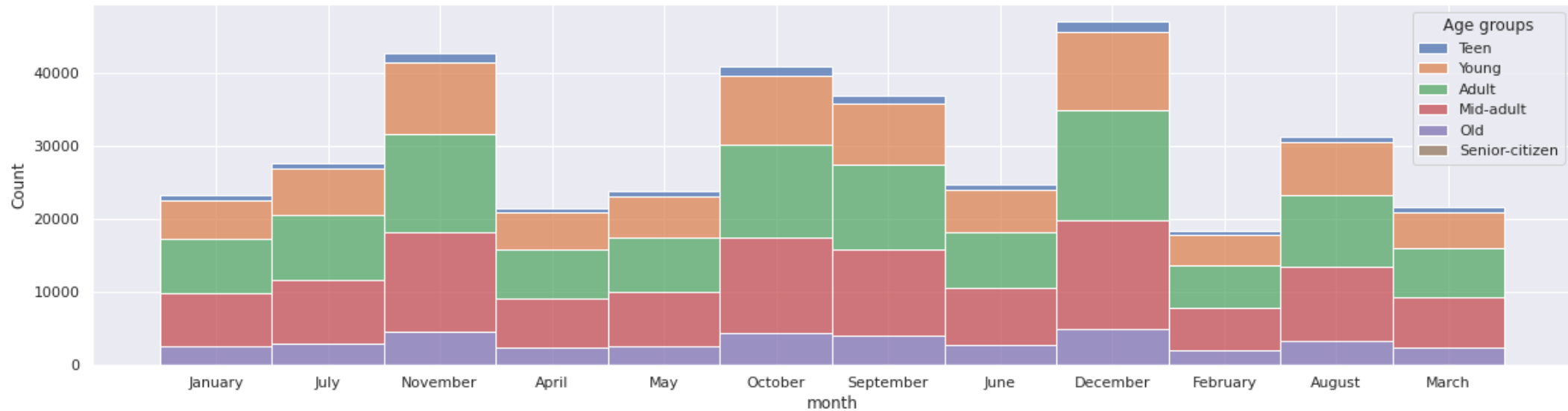
Friday, Saturday and Sunday are the busiest days of the week with adults and mid adults being the highest users.

Customer distribution in various days of the week with respect to social classes



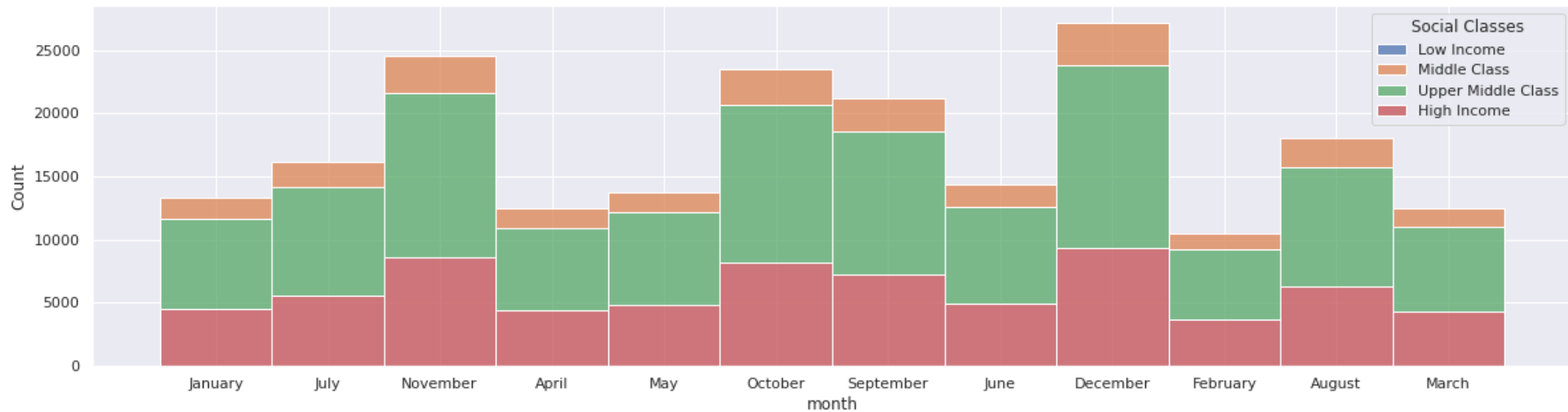
Friday, Saturday and Sunday are the busiest days of the week with upper middle class and high income being the highest users.

Customer distribution in various months of the year with respect to age groups



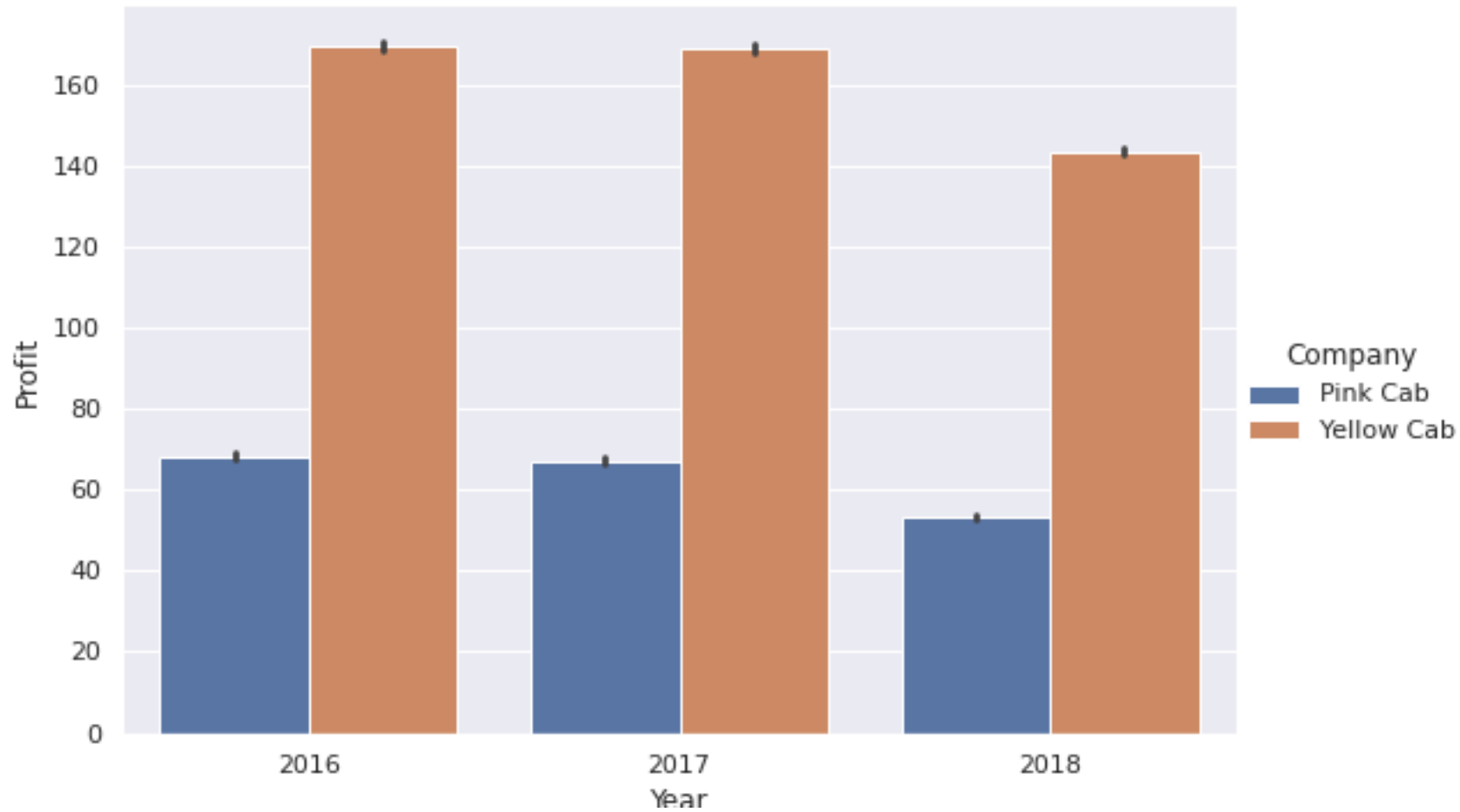
The last months of the year have more customers than other months. Still the adults and mid-adults being the most frequent users.

Customer distribution in various months of the year with respect to social classes.

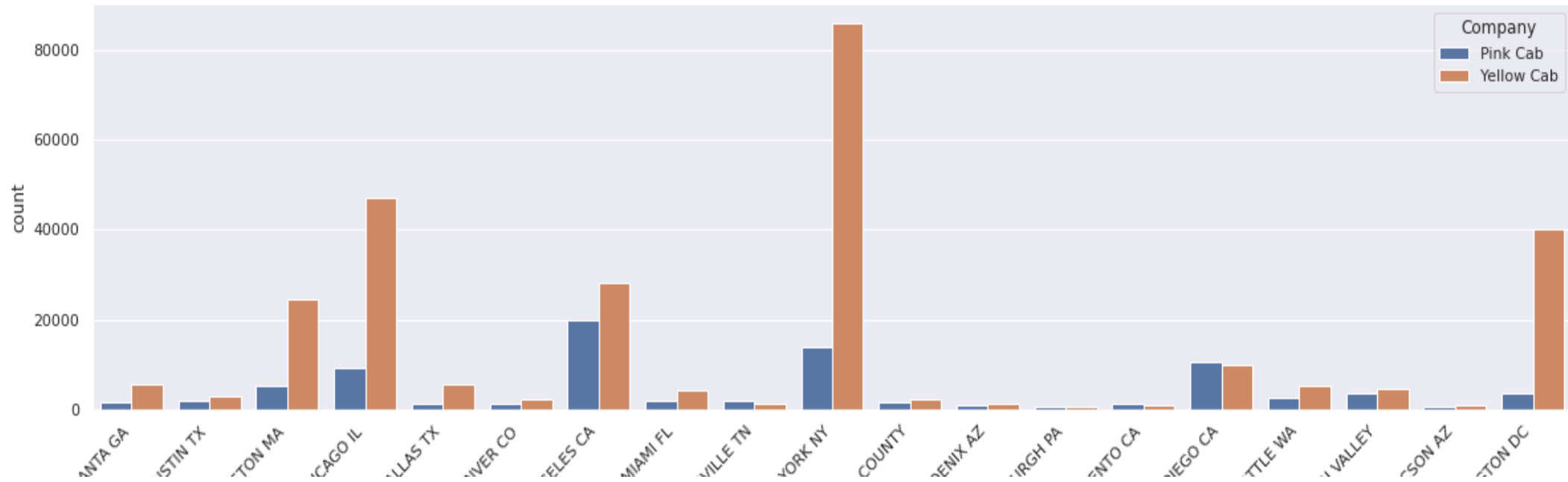


The last months of the year have more customers than other months. Still the high income and Upper middle class being the most frequent users

Profit Analysis Yearly



Cab Distribution Different Cities.



Yellow cabs are more than pink cabs in most cities

Recommendations

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

1. XYZ company should target cities that high population of adults and mid adults [25-55] years. People in this age bracket use cabs a lot.
2. Yellow cabs have a high customer retention than pink cabs
3. Yellow cabs rake more profits yearly than pink cabs
4. Yellow cabs are more in different cities compared to pink cabs.
5. Over the weekends, most cabs should be in good condition since a lot of people use cabs in these days. In terms of investment, they should invest in the yellow company

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

Thank You



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