



Data Glacier

Your Deep Learning Partner

G2M Insight for Cab Investment Firm

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03-March-2023

Business Problem

- US cab company is the majority of two kinds; Pink Cab and Yellow Cab. Our problem is to find out which Cab company would be a good choice to invest in. For this purpose, we should find that car's advantages(profits) compared to another one. We would invest in whichever cab company seems suitable in terms of market value.

The analysis has been divided into four parts:

- Data Understanding
- Data Analysis & Visualizing
- Finding the most profitable Cab company
- Recommendations for investment

Data Exploration

The data provided comprises four distinct files: Cab_Data.csv, Customer_ID.csv, Transaction_ID.csv, and City.csv.

Cab_Data.csv contains a comprehensive record of transaction details for two distinct cab companies.

Customer_ID.csv functions as a mapping table, providing a unique identifier that facilitates the linking of customer demographic data to transactions.

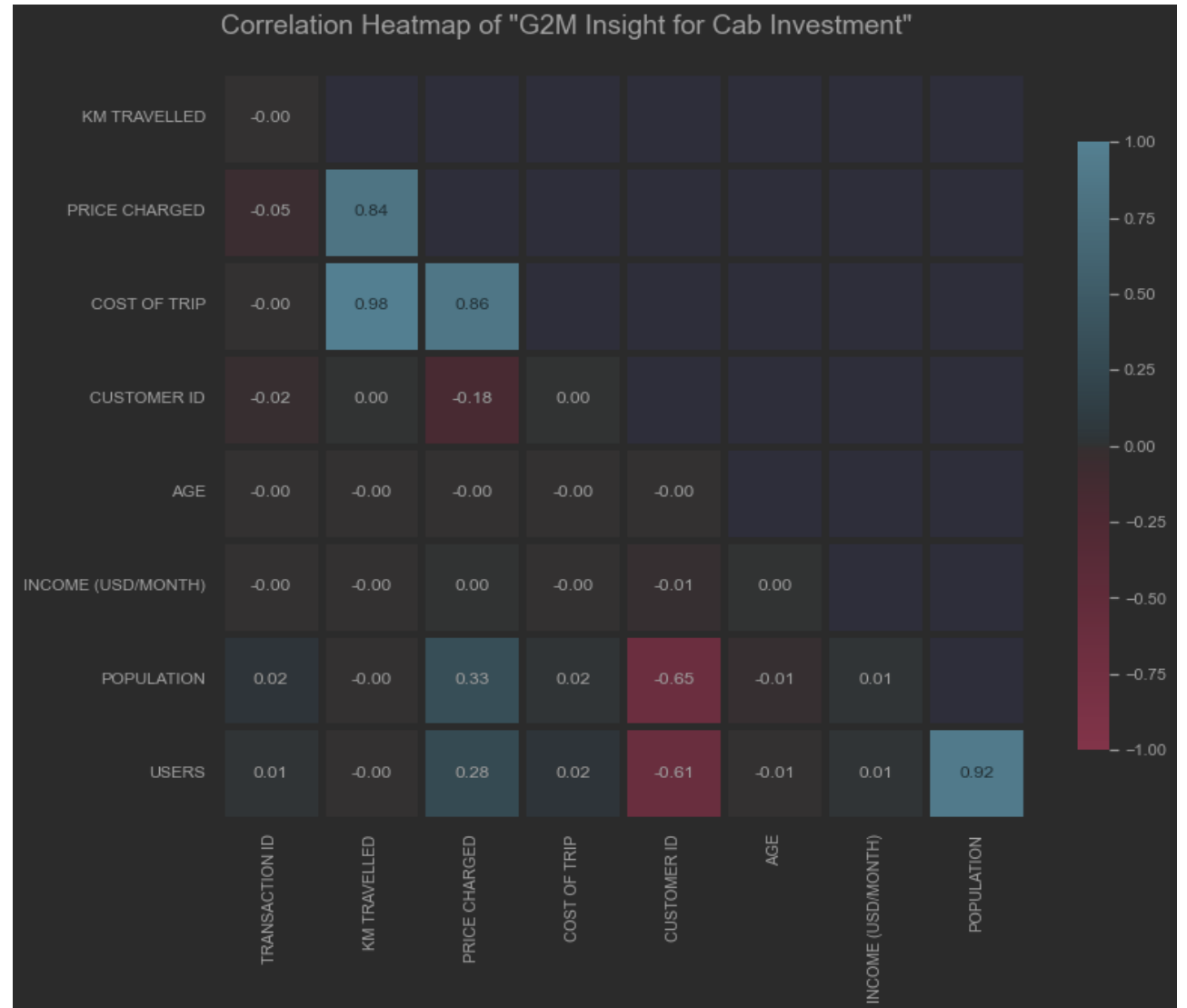
Transaction_ID.csv serves as a second mapping table, mapping transaction details to specific customers and payment modes.

Finally, City.csv presents a list of US cities, along with their respective populations and the number of cab users within each city.

Correlation Between Variables

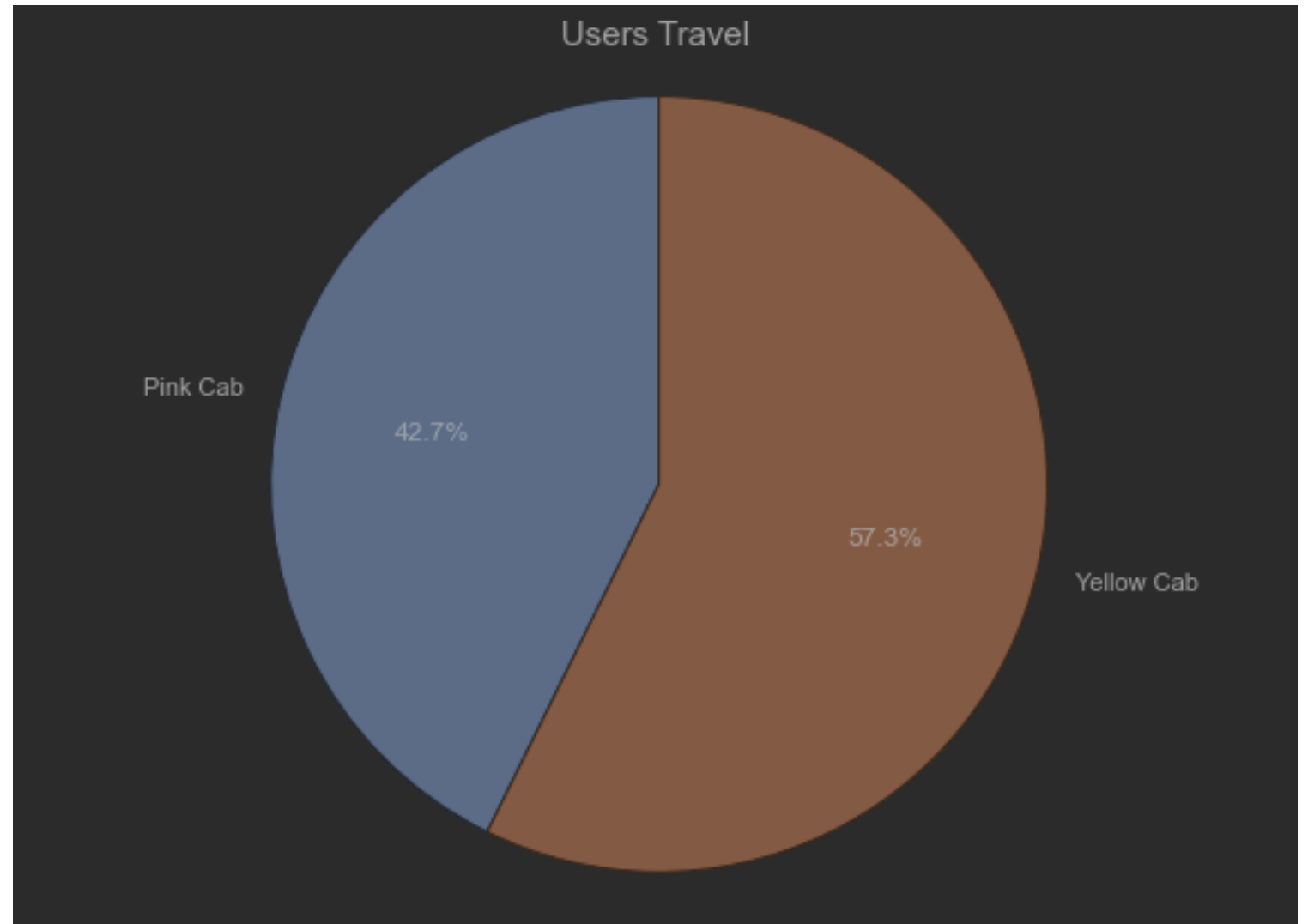
As we can see there is a strong correlation between

- Population vs Users
- Price Charged vs Cost of Trip vs KM Travelled



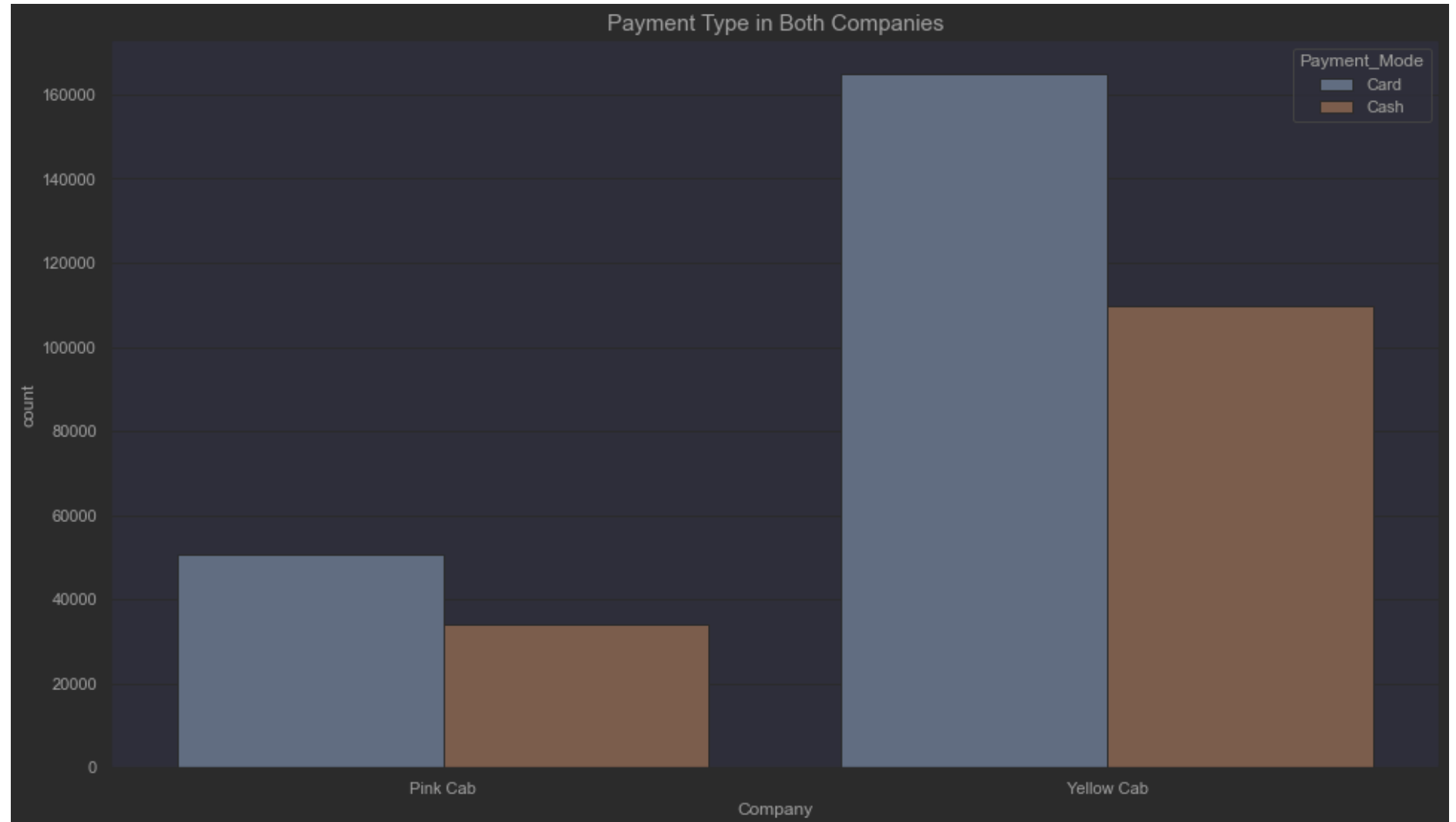
Which Company has more Users?

- As we can see users like to ride on Yellow cab more as compared to Pink Cab

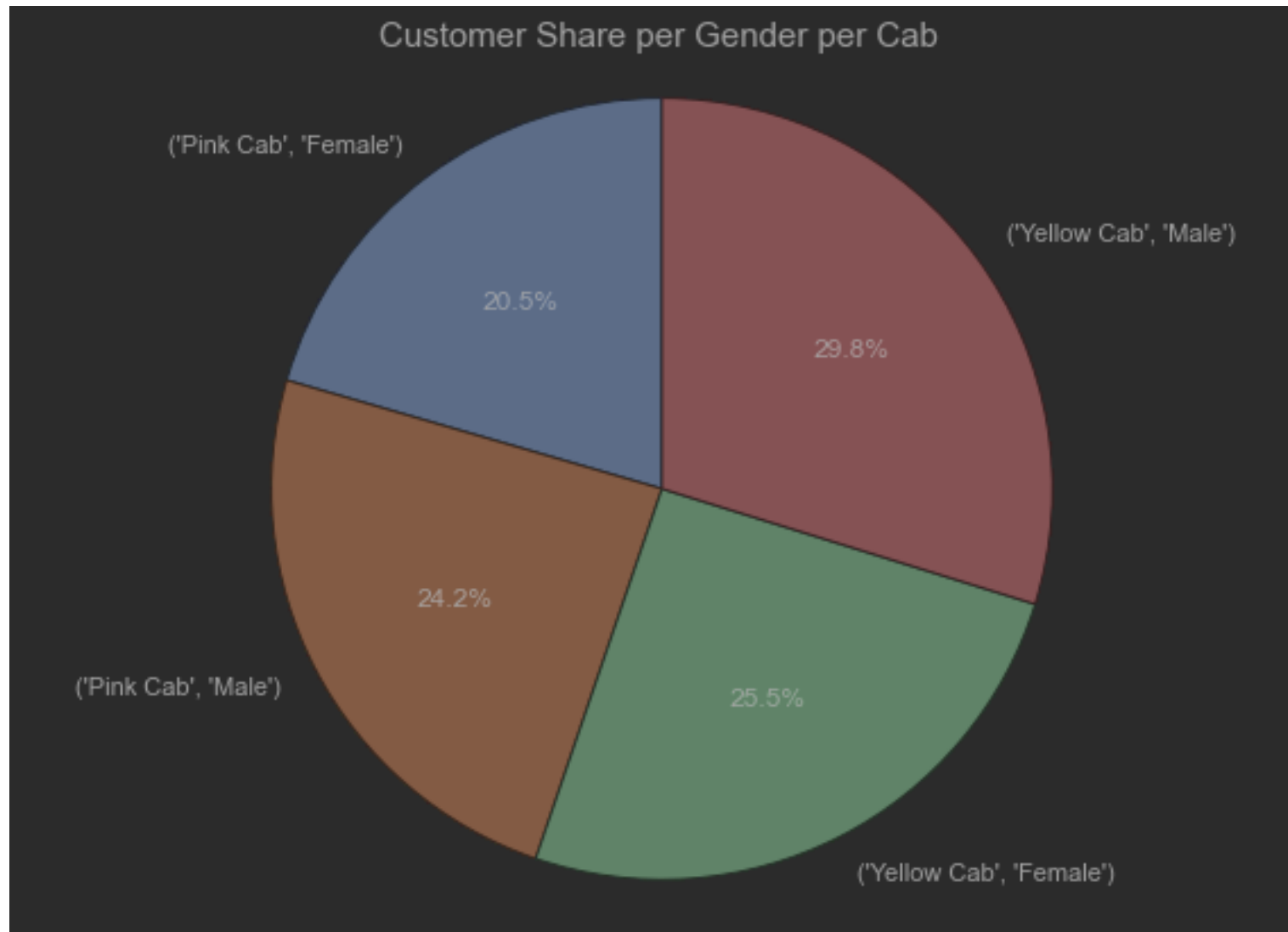


Payment Type

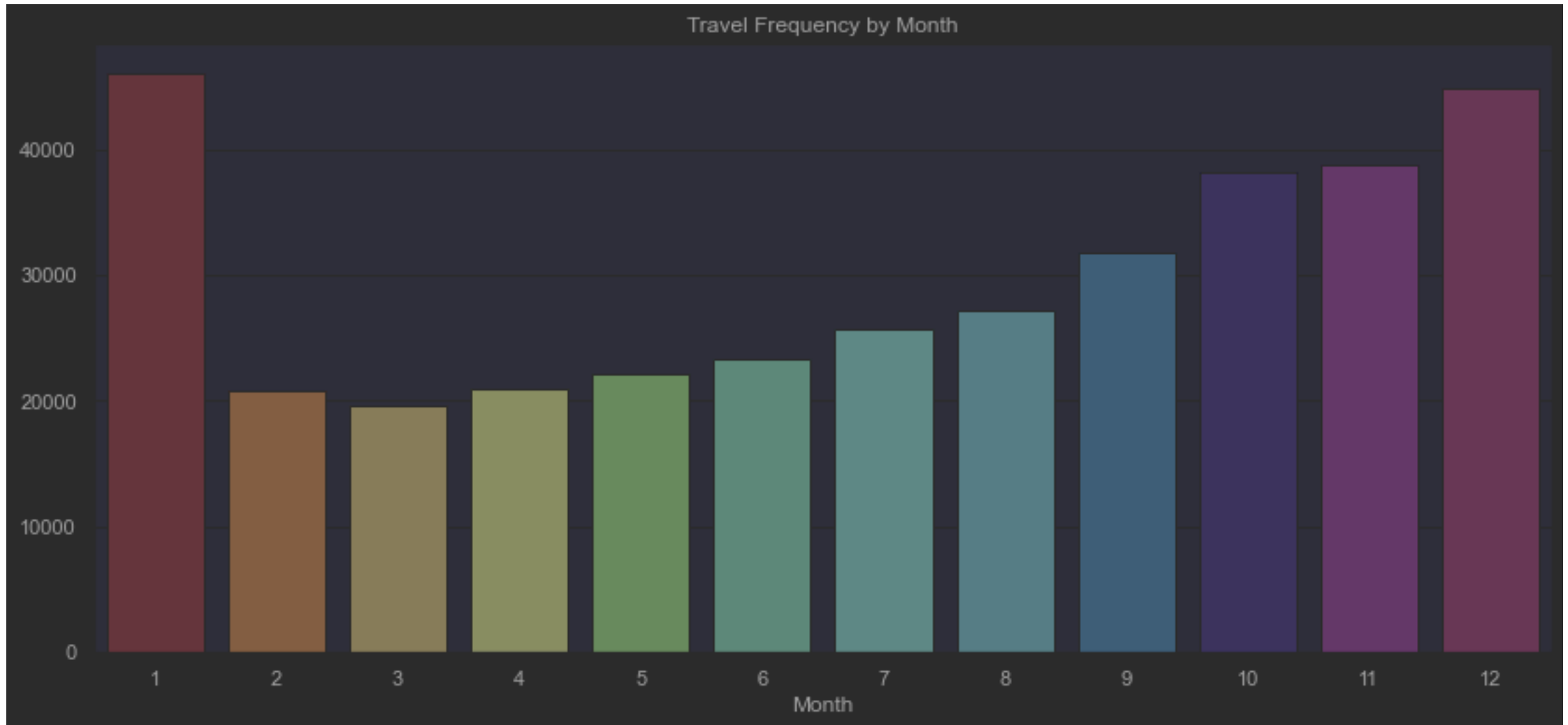
As we can see that users prefer to pay with a card more compared to cash



Customer Share per Gender per Cab

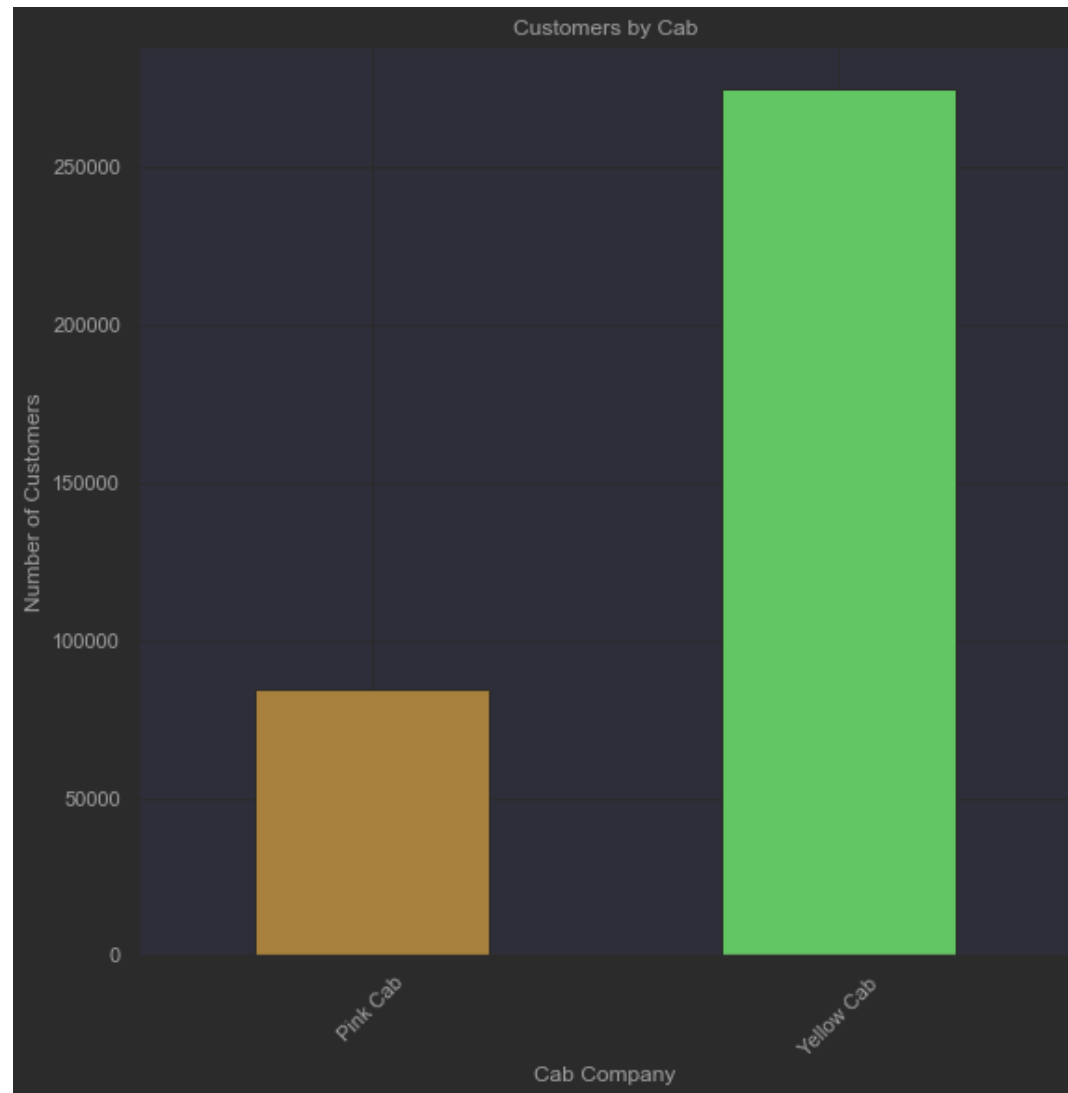


Travel Frequency by Month



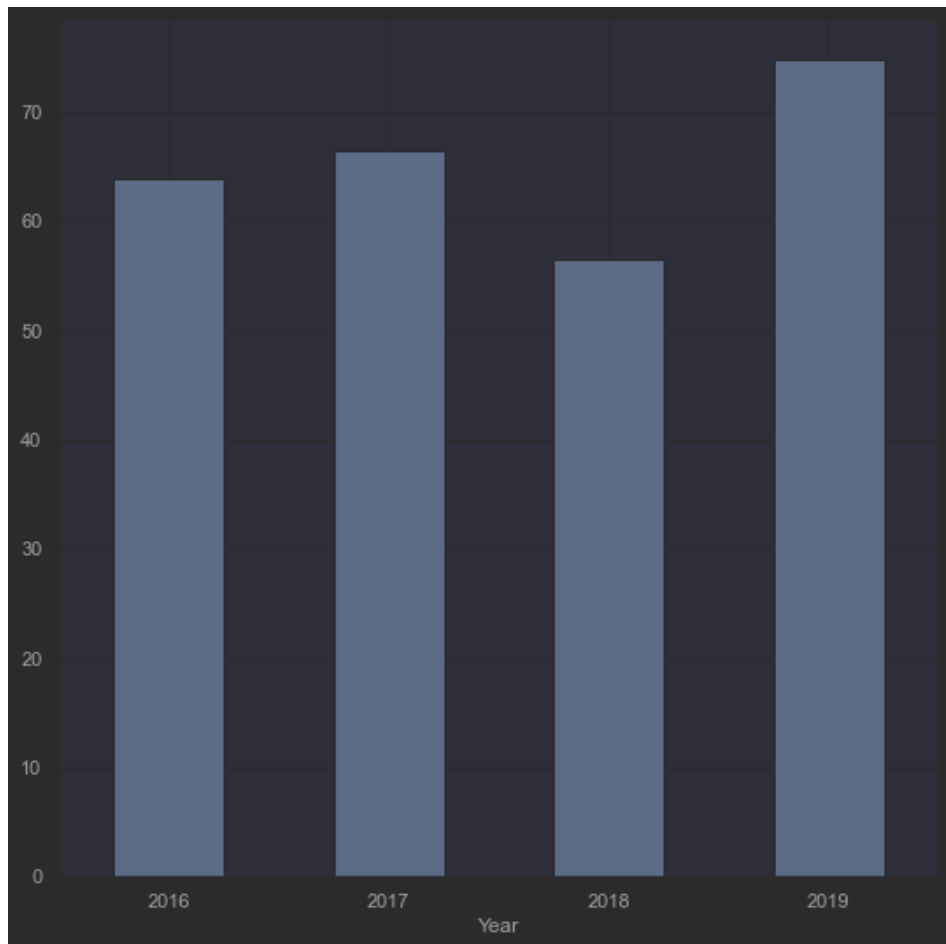
Customer Distributions Regarding Cab

Yellow Cab has approx. 3x customer as compared to pink cab

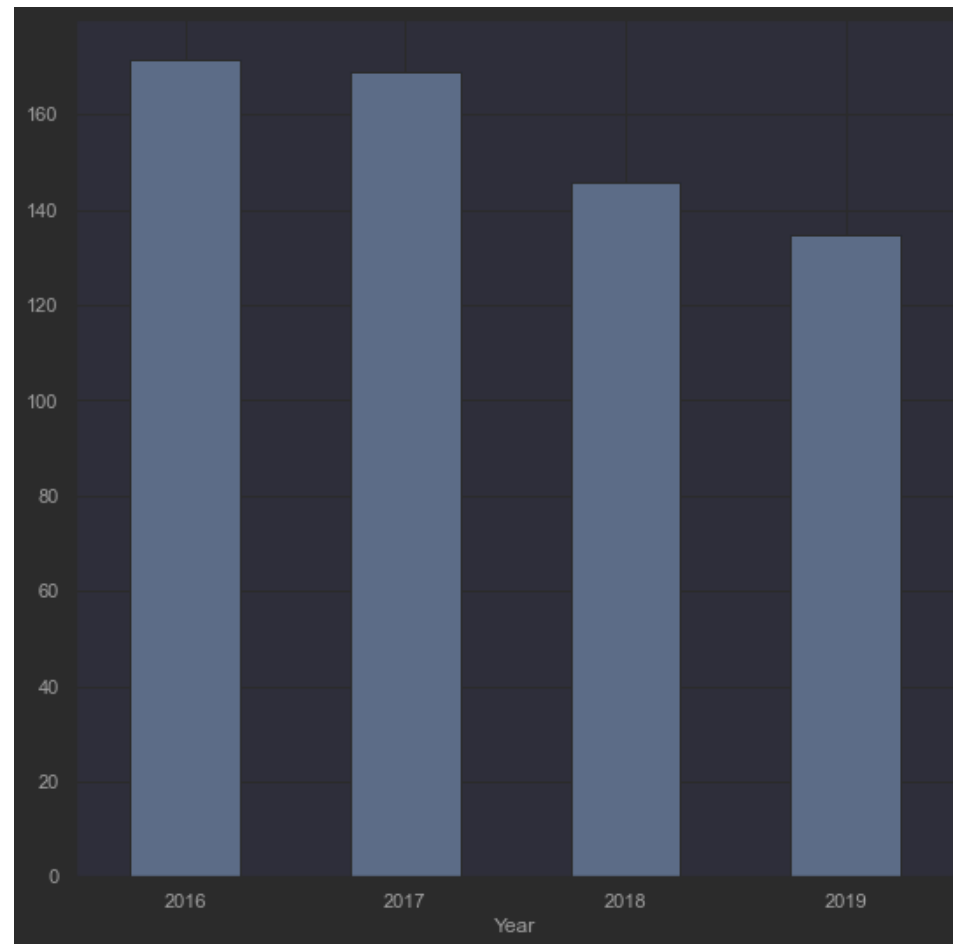


Average Profit Yearly for Pink & Yellow Cab

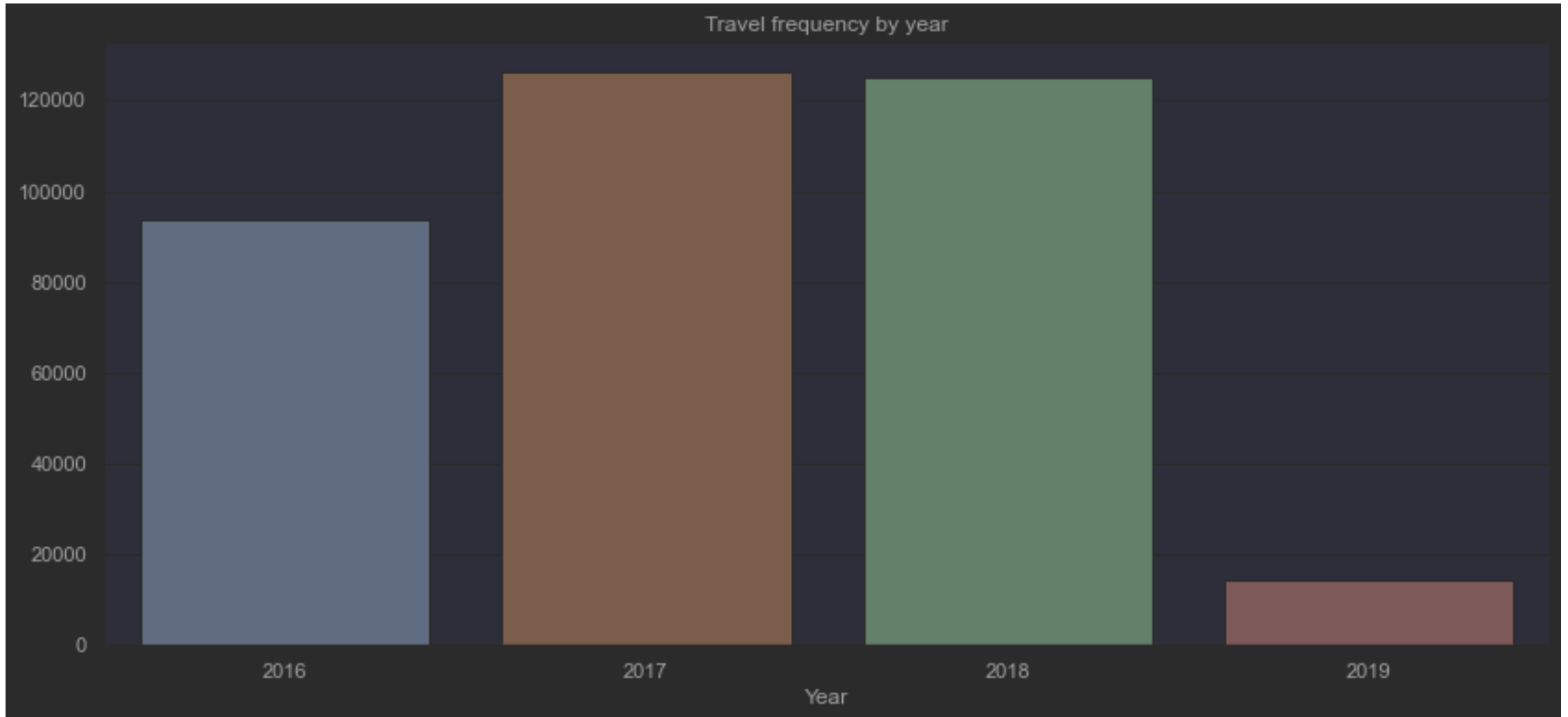
PINK CAB



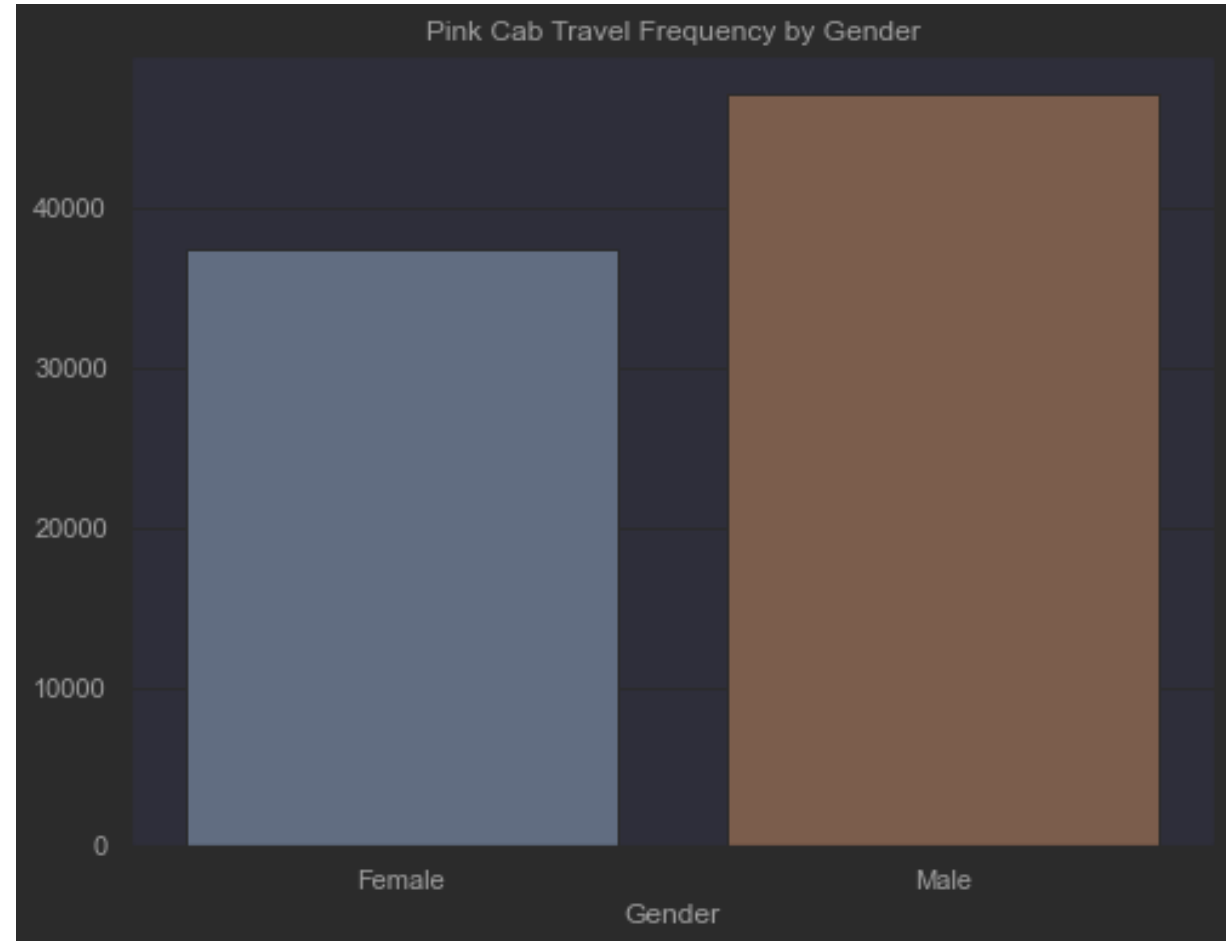
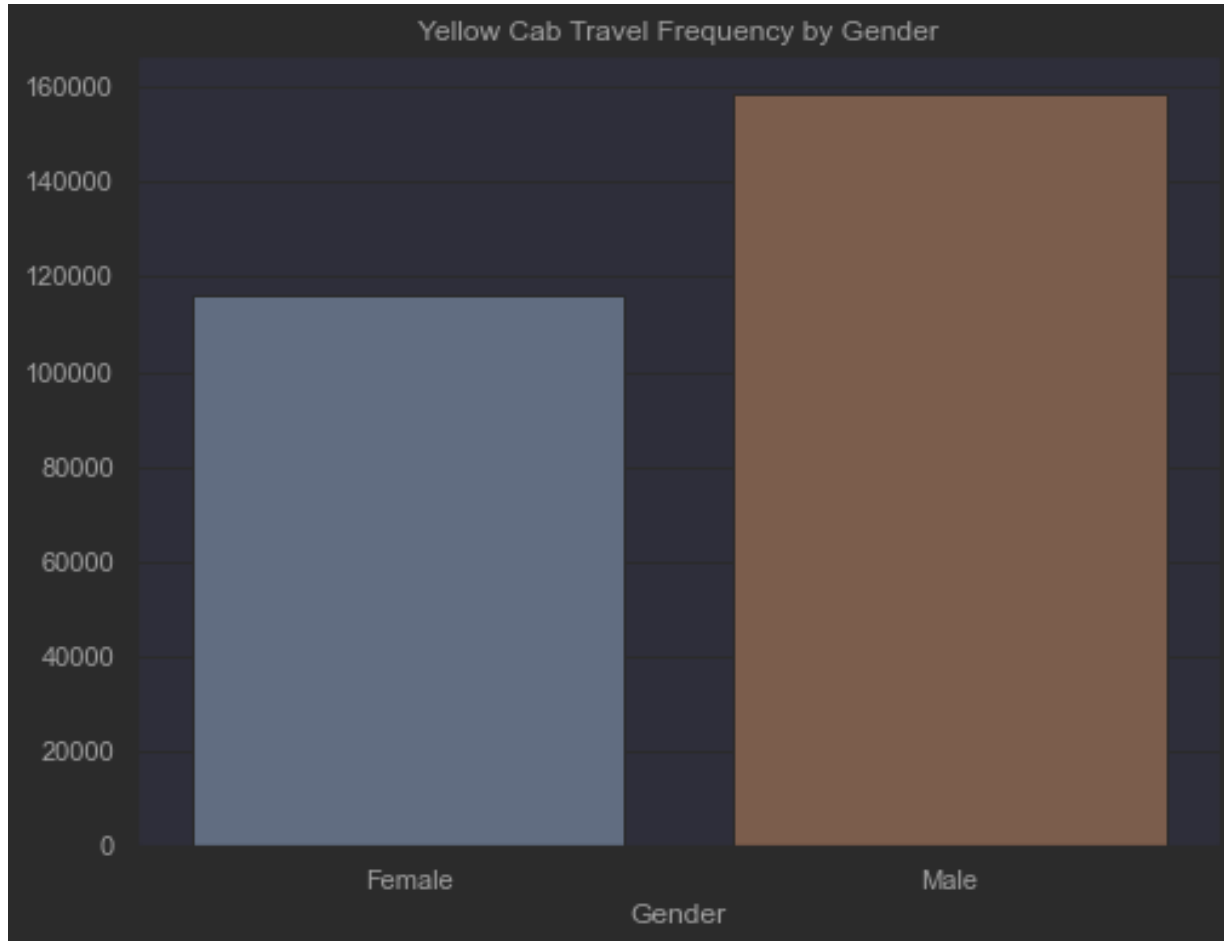
YELLOW CAB



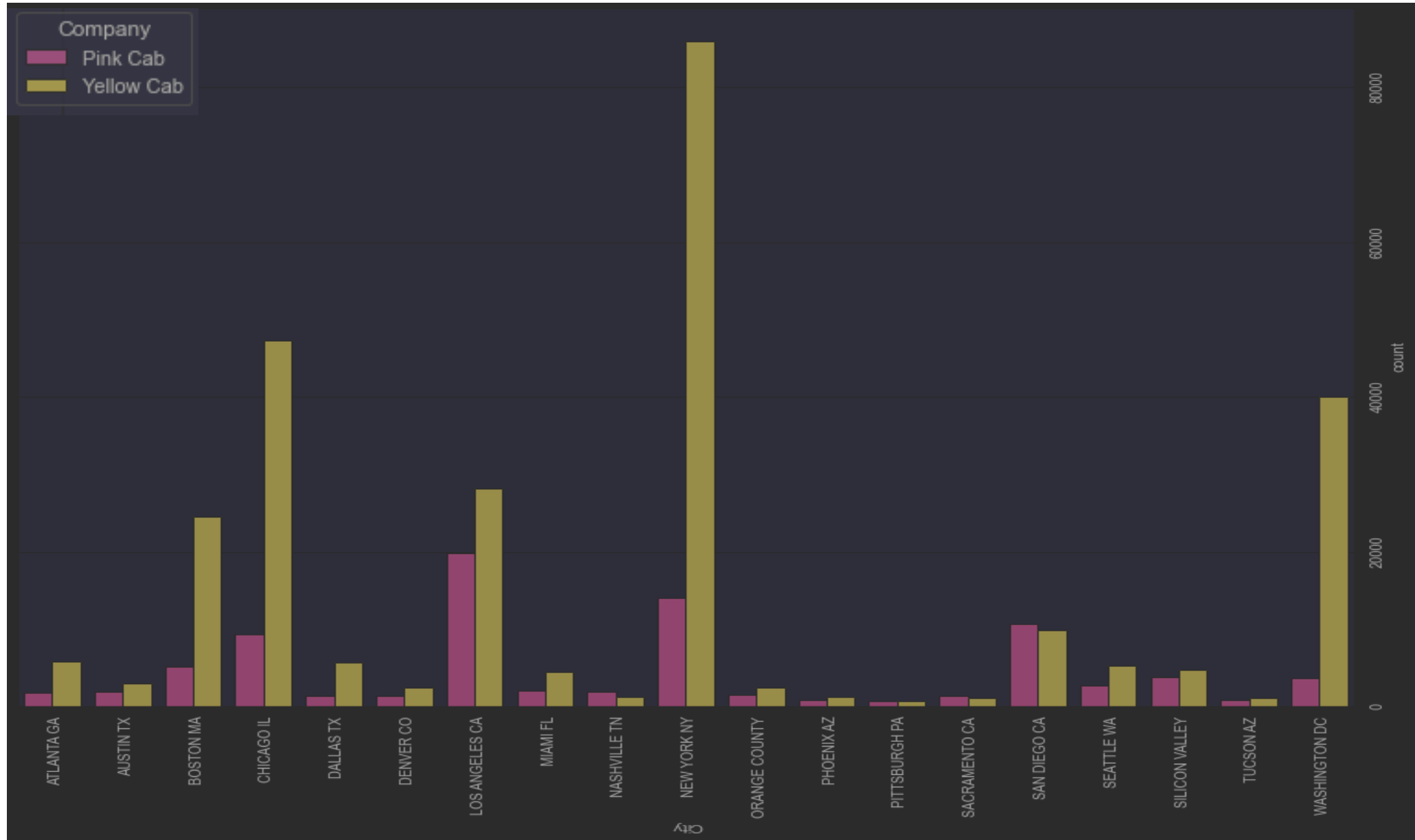
Travel Frequency by Year



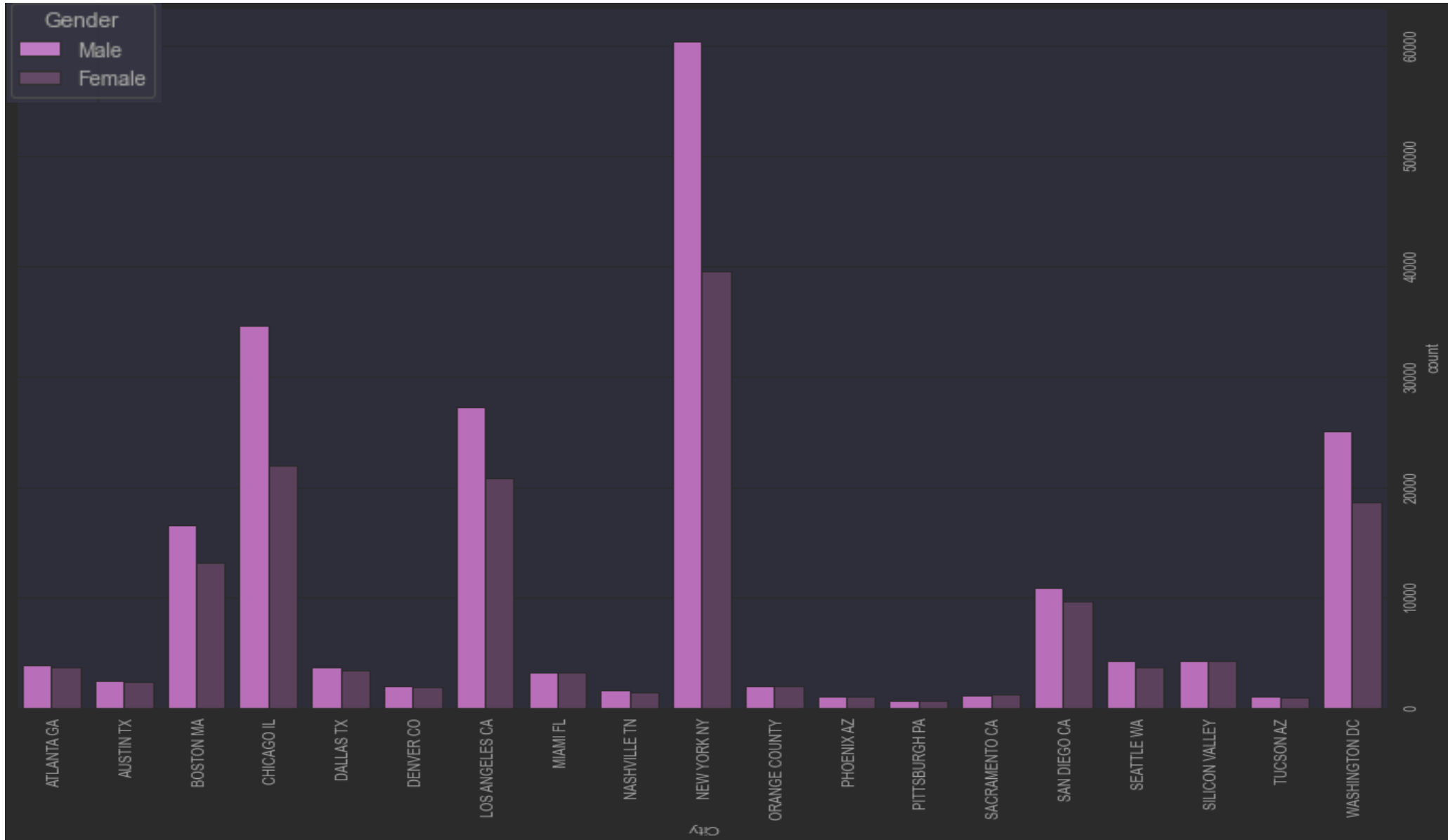
Yellow & Pink Cab Travel Frequency by Gender



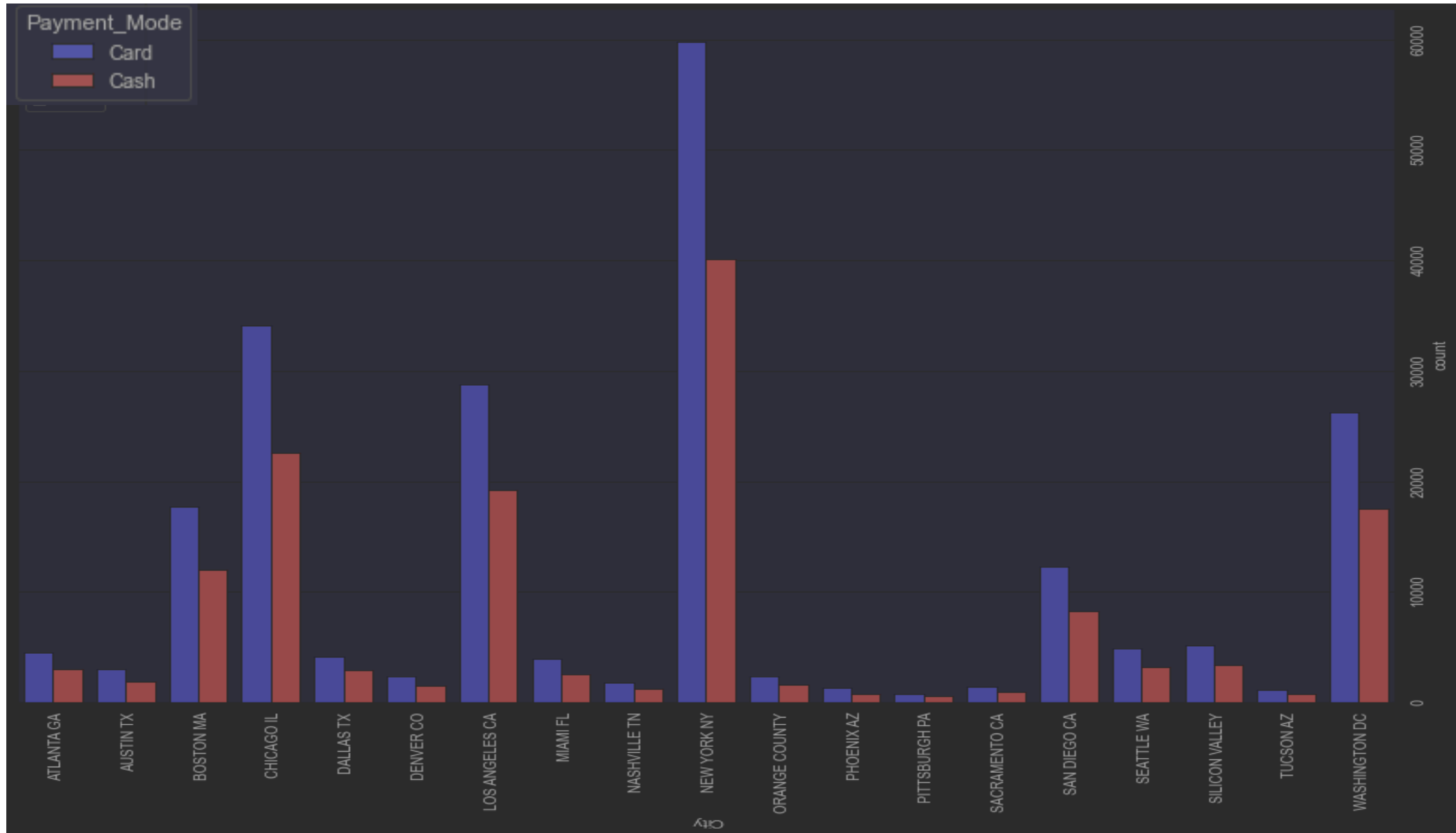
Pink & Yellow Cabs regarding Cities



Gender regarding Cities



Payment Type regarding Cities



EDA Conclusion

The Exploratory Data Analysis (EDA) conducted on the data of Pink Cab and Yellow Cab companies reveals various insights. The master data frame does not contain any missing values. Our analysis indicates that Yellow Cab generates more profit than Pink Cab and is more popular among users. However, the profit of Yellow Cab has been decreasing over the years, while that of Pink Cab has been increasing.

Additionally, we observed that the months of January and December have the highest number of travels, which is expected since they are typically holiday months. In summary, based on our findings, investing in Yellow Cab would be a more favourable option.

Hypothesis Test

Hypothesis 1: Is there any difference in profit according to Gender

H0 : There is no difference according to Gender in both cab companies.

H1 : There is difference according to Gender in both cab companies.

PINK CAB

P value is 0.11515305900425798 So,

We accept null hypothesis (H0) that there is no difference regarding gender for Pink Cab

Yellow CAB

P value is 6.060473042494144e-25 So,

We accept alternative hypothesis (H1) that there is a difference according to gender for Yellow Cab

Conclusion: There is no difference regarding Gender in both cab companies

Hypothesis 2: Is there any difference in Profit regarding Age

H0 : There is no difference regarding Age in both cab companies.

H1 : There is difference regarding Age in both cab companies.

PINK CAB

P value is 0.4816748536155635 So,

We accept null hypothesis (H0) that there is no difference according to gender for Pink Cab

Yellow CAB

P value is 6.328485471267631e-05 So,

We accept alternative hypothesis (H1) that there is a difference according to gender for Yellow Cab

Hypothesis 3: Is there any difference in Profit concerning Payment mode

H0 : There is no difference concerning Payment_Mode in both cab companies.

H1 : There is difference concerning Payment_Mode in both cab companies.

PINK CAB

P value is 0.7900465828793288 So,

We accept null hypothesis (H0) that there is no difference according to gender for Pink Cab

Yellow CAB

P value is 0.2933060638298729 So,

We accept null hypothesis (H0) that there is no difference according to gender for Yellow Cab

Conclusion: There is no difference in payment mode for both cab companies

Recommendations

- Yellow Cab Company is better than Pink Cab Company Because:
 - ✓ Profit Margin
 - ✓ More Users
 - ✓ More transactions per Year

Thank You



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