



**Data Glacier**

Your Deep Learning Partner

# Exploratory Data Analysis

G2M insight for Cab Investment firm

5/15/2023

# Problem Statement

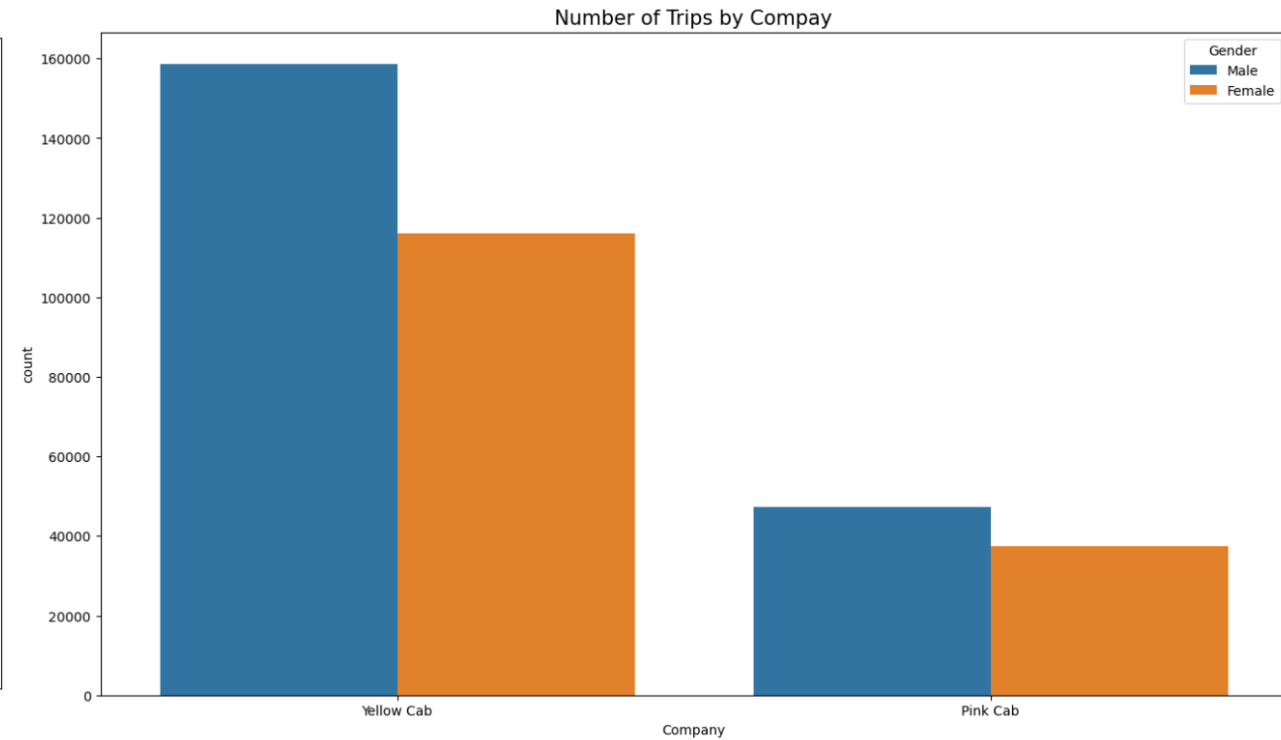
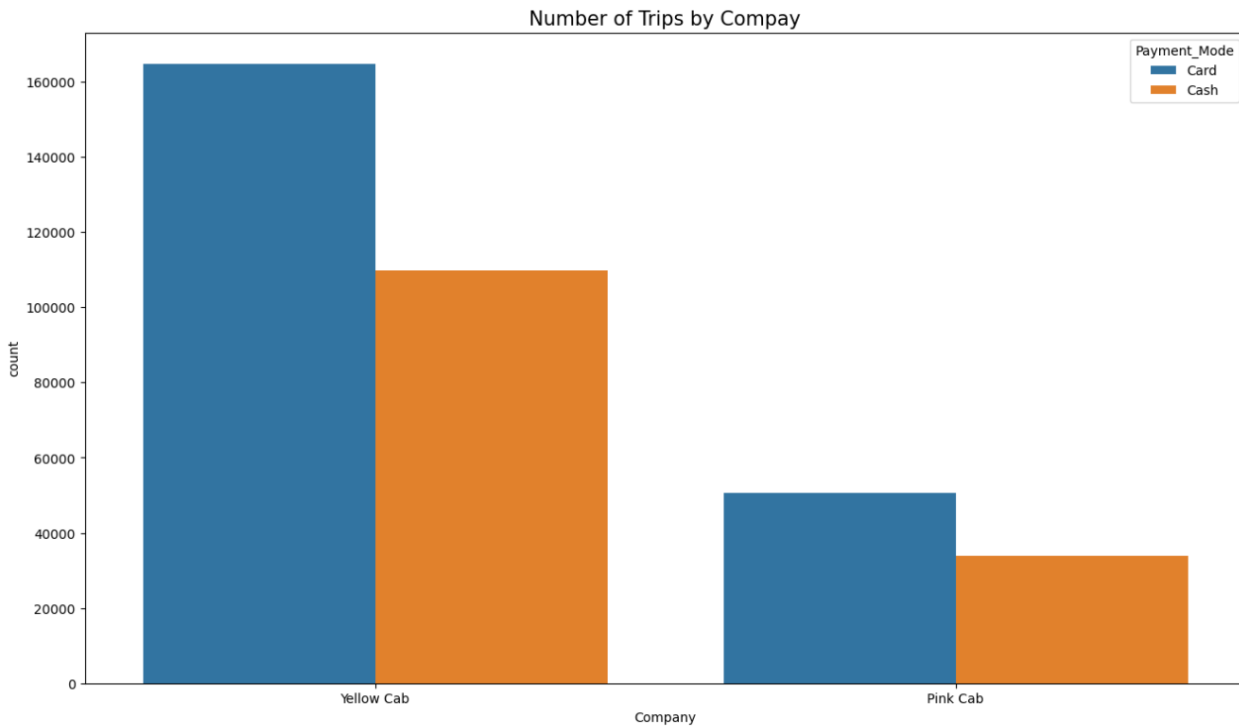
- Main objective is to provide insights to help XYZ identify the right cab company to make investment.
- Questions that will be discussed:
  - Customer segments based on gender, age, and payment method with profit difference
  - Company comparison regarding users and margin profits
  - Profits regarding seasonality and customer size

# Data Exploration

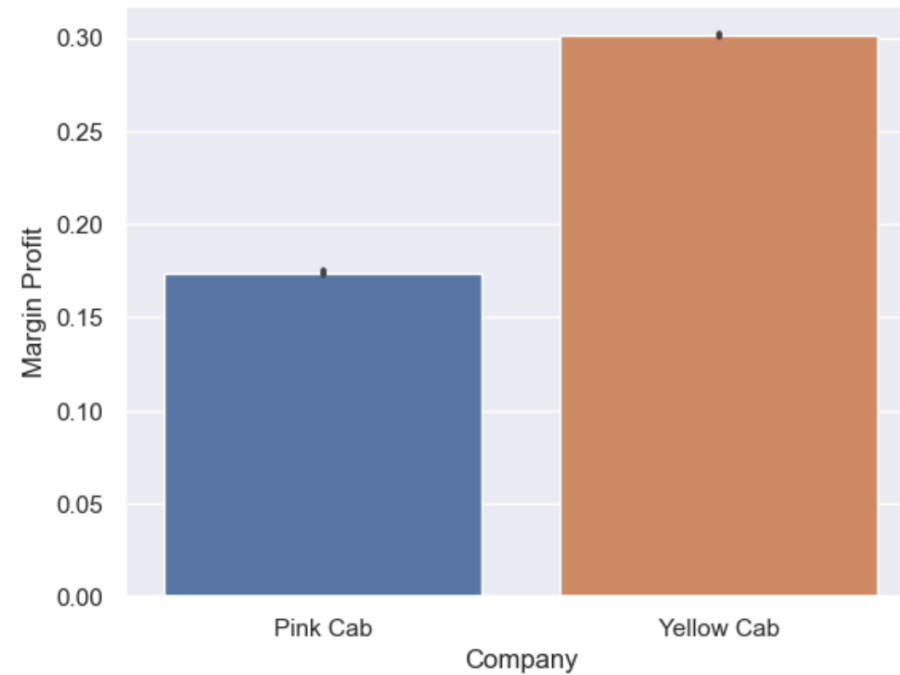
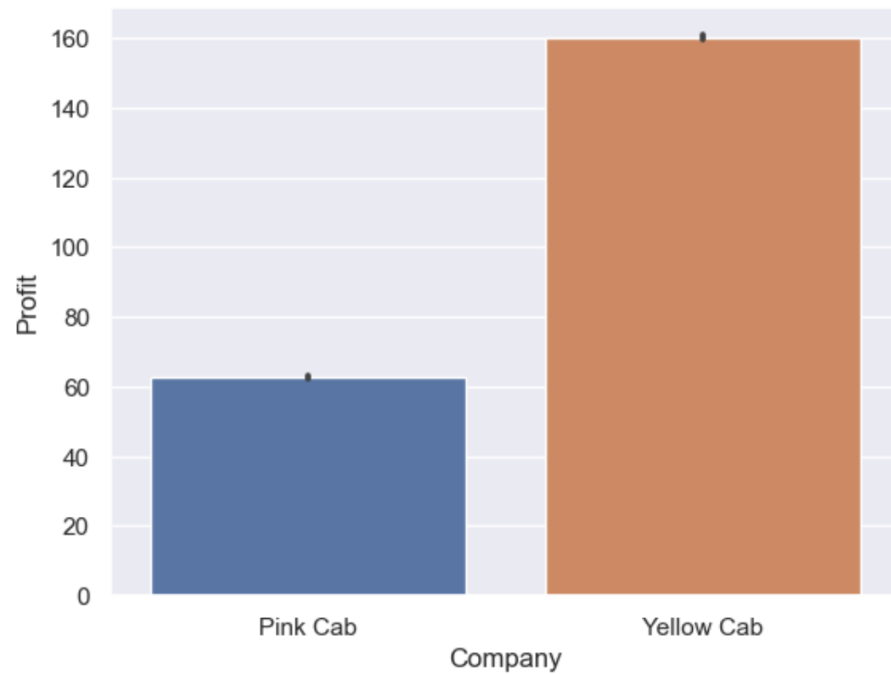
- Datasets are comprised of 17 unique features and more than 350,000 data entries range from 31/01/2016 to 31/12/2018.
  - Year and Month variables are extracted from Date of Travel to be used in finding trends in seasonality.
  - Profits are calculated using Price Charged and Cost of Trip for each transaction

Date of Travel	Company	City	KM Travelled	Price Charged	Cost of Trip	Customer ID	Payment_Mode	Gender	Age	Income (USD/Month)	Population	Users	year	month	Profit
1/8/2016	Pink Cab	ATLANTA GA	30.45	370.95	313.635	29290	Card	Male	28	10813	814885	24701	2016	1	57.315
1/6/2016	Pink Cab	ATLANTA GA	28.62	358.52	334.854	27703	Card	Male	27	9237	814885	24701	2016	1	23.666
1/2/2016	Pink Cab	ATLANTA GA	9.04	125.20	97.632	28712	Cash	Male	53	11242	814885	24701	2016	1	27.568
1/7/2016	Pink Cab	ATLANTA GA	33.17	377.40	351.602	28020	Cash	Male	23	23327	814885	24701	2016	1	25.798
1/3/2016	Pink Cab	ATLANTA GA	8.73	114.62	97.776	27182	Card	Male	33	8536	814885	24701	2016	1	16.844

# Company Analysis

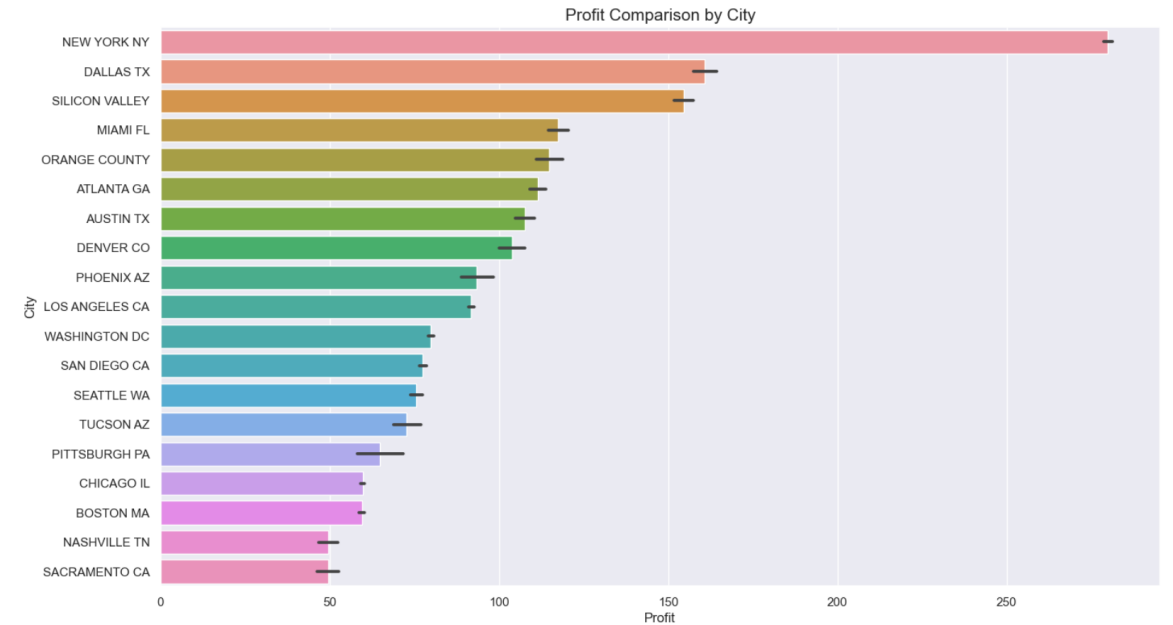
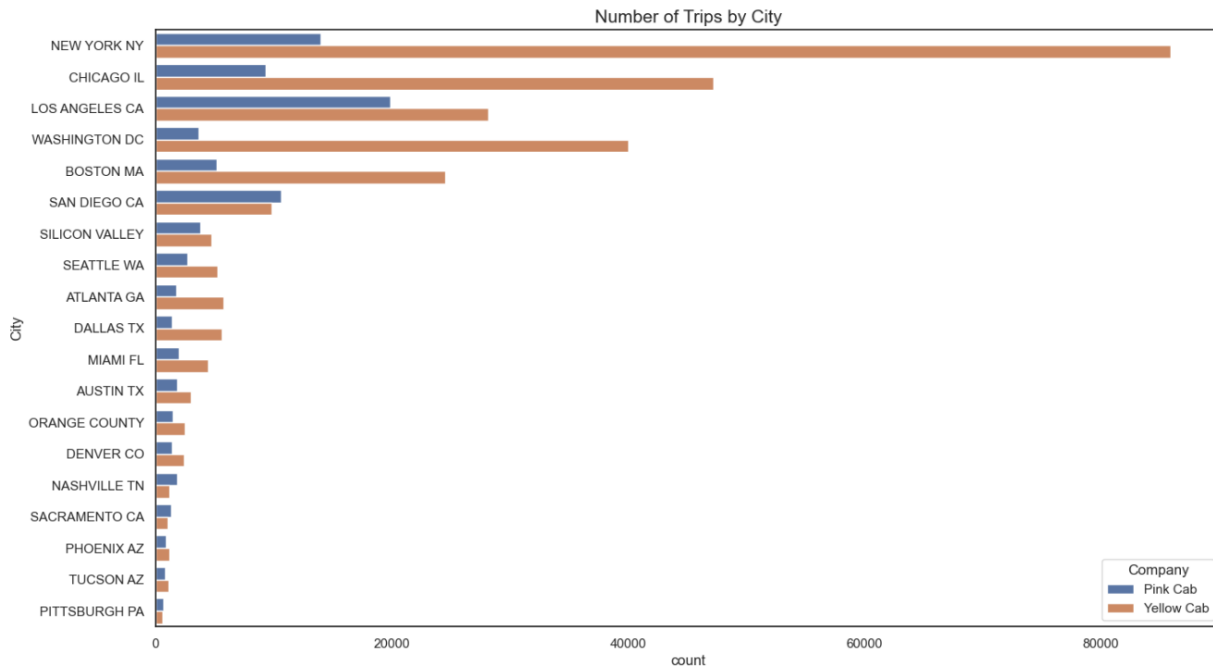


# Company Analysis

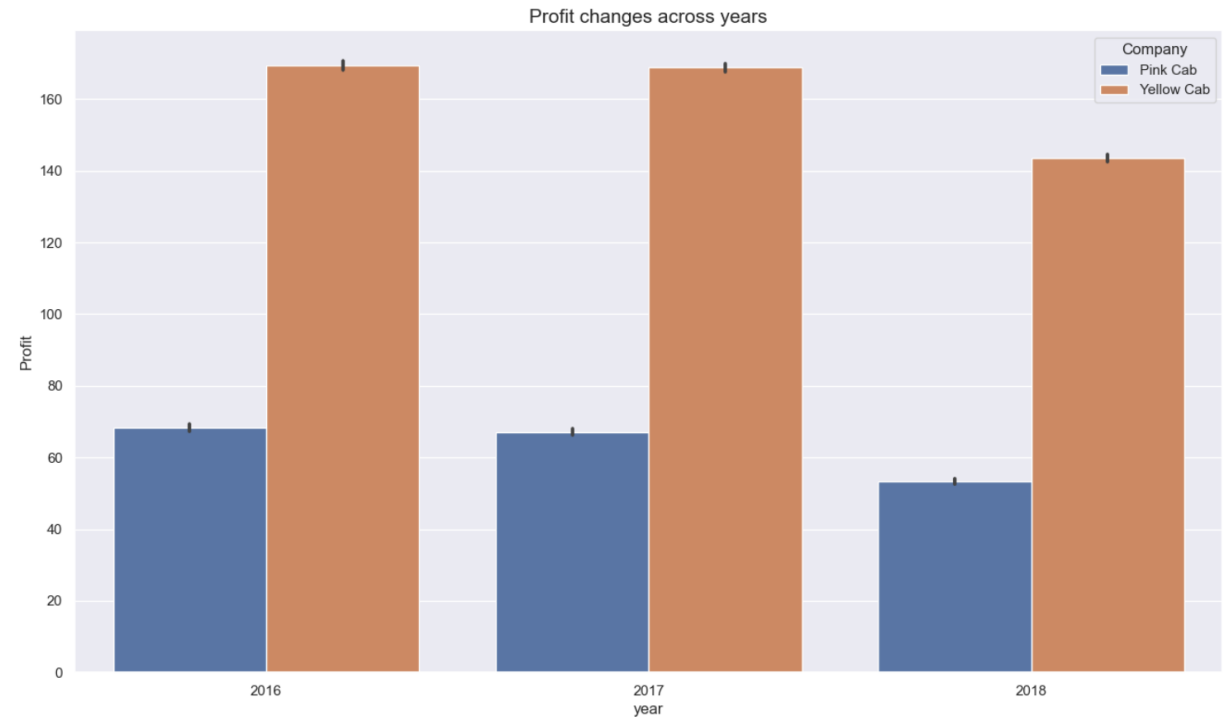
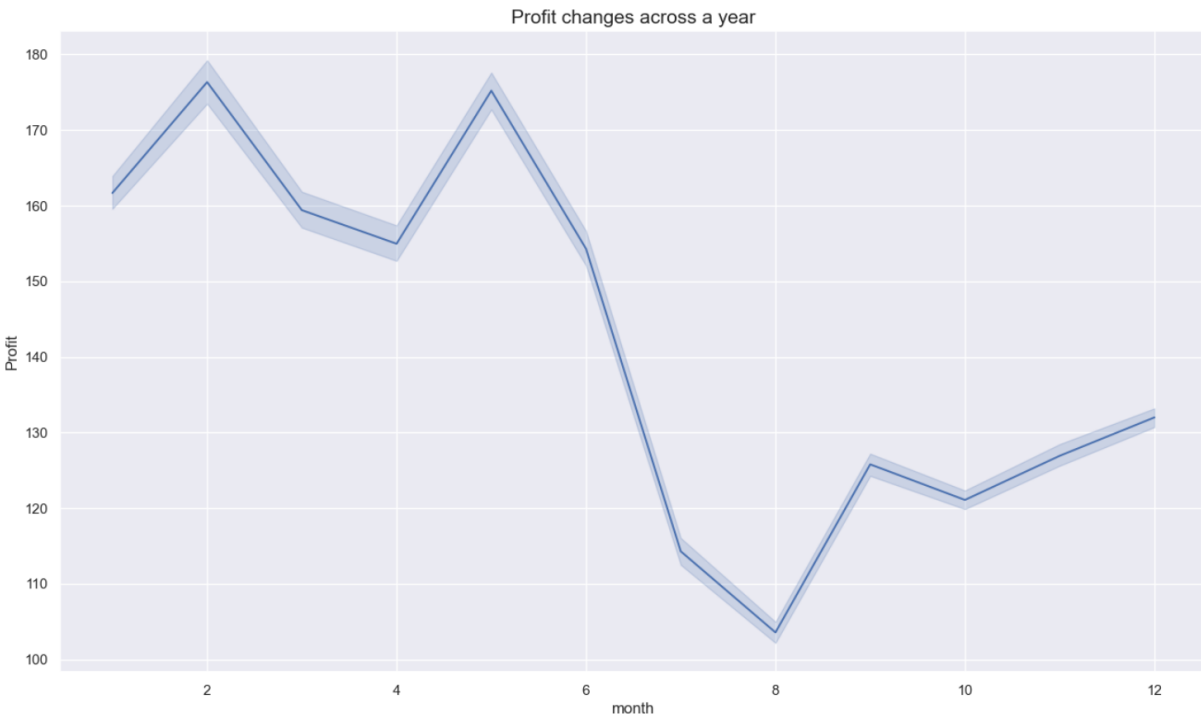


Company:	Pink Cab	Yellow Cab
Average Profit:	\$62.65	\$160.26
Average Margin	17.4%	30.1%

# Geographical Analysis

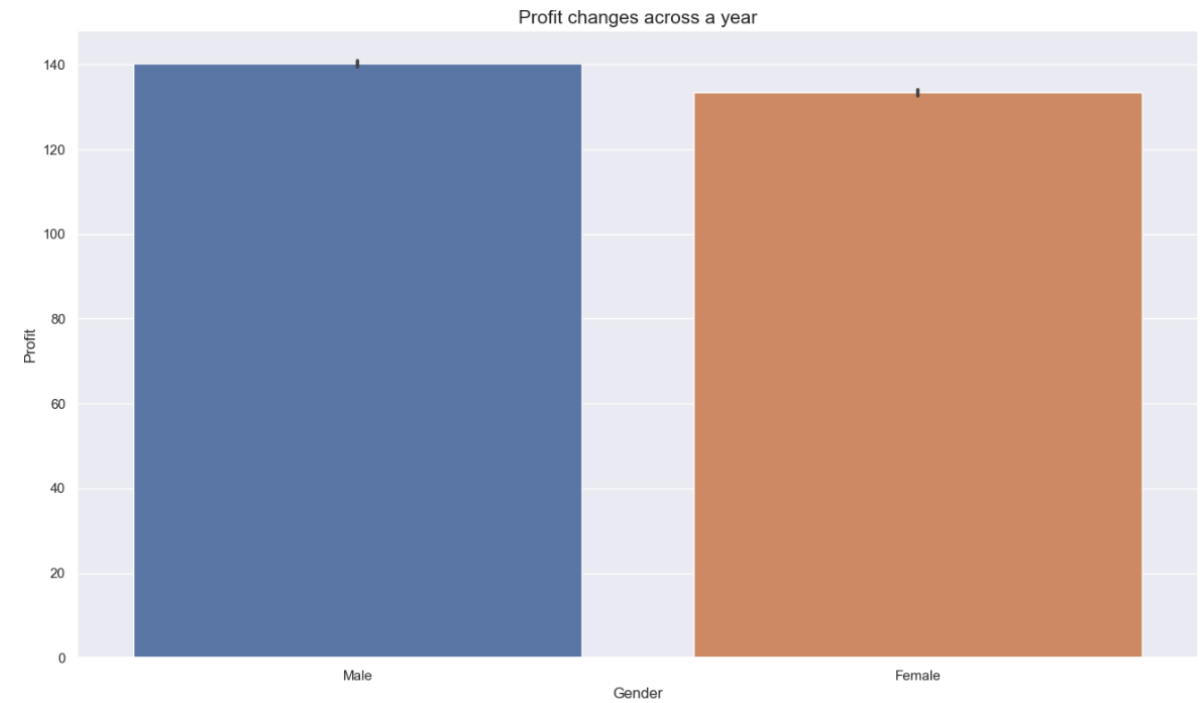
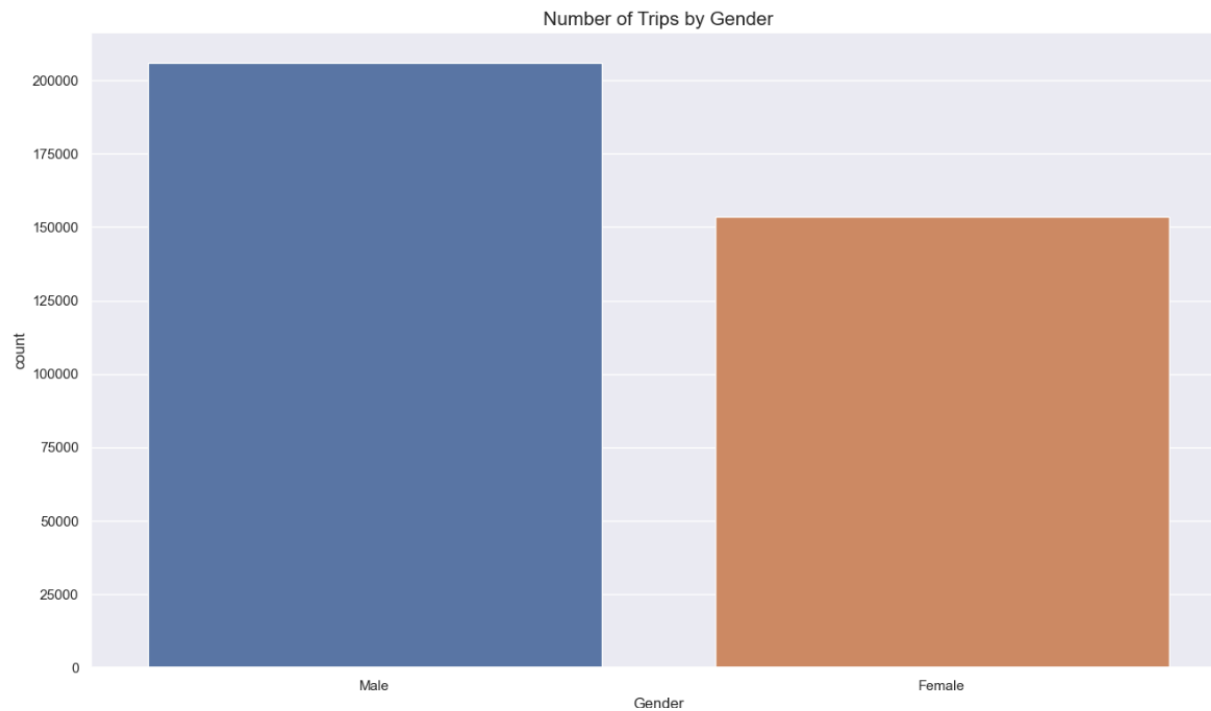


# Seasonality Analysis



Profit drops were observed both during summer season and during 2018.

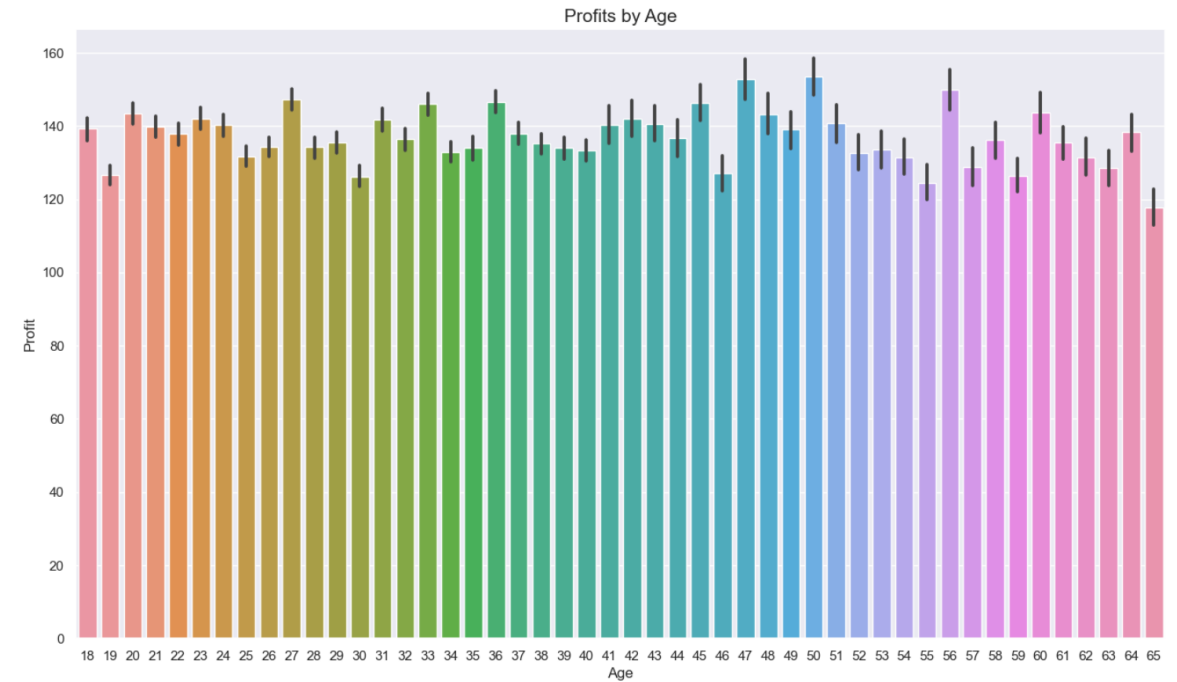
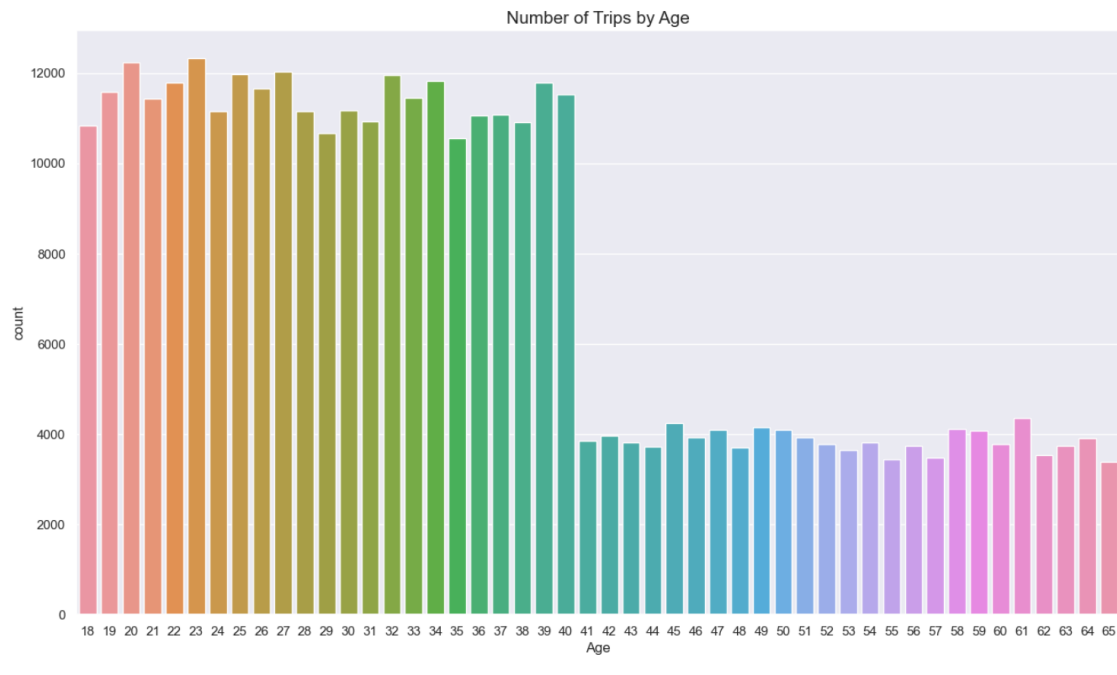
# Customer Analysis



Male customers have more trips than female customers, and slightly higher profits than female customers



# Customer Analysis



Younger Adults have much more trips compared to older adults who are older than 40 years old;  
There is no big difference in profits among different age groups.

# Recommendations

1. Yellow Cab Company produces higher margin profits, so investment in yellow cab firm will likely bring more benefits
2. Profits of trips drop dramatically in summer seasons in general, it's recommended to invest in the other time during a year.
3. Male customers tend to bring more profits than female customers, advertisements could be targeted more towards male user groups.
4. Number of users are correlated with the average profit amount, so investment in cities with larger user base would be recommended

# Thank You!