



Data Glacier

Your Deep Learning Partner

G2M Insight for Cab Investment Firm

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EDA Summary

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Introduction

Executive Summary:

XYZ is a private 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 and as per their Go-to-Market (G2M) strategy they want to understand the market before taking final decision.

Problem Statement:

In order to invest in the right company, XYZ firm wants to understand the cab industry market.

Objective

Provide actionable insights to help XYZ firm in identifying the right company for making investment.

Approach

- Data Understanding
- Data Cleaning and Manipulation
- Analysis
- Recommendation

Data Understanding

We were given four different datasets. The data was collected between January 31, 2016 and December 31, 2018.

The following datasets are provided for the analysis:

- **Cab_Data.csv** – This file includes details of transaction for 2 cab companies.
- **City.csv** – This file contains list of US cities, their population and number of cab users.
- **Customer_ID.csv** – This is a mapping table that contains a unique identifier which links the customer's demographic details.
- **Transaction_ID.csv** – This is a mapping table that contains transaction to customer mapping and payment mode.

Data Cleaning and Manipulation

Data Cleaning:

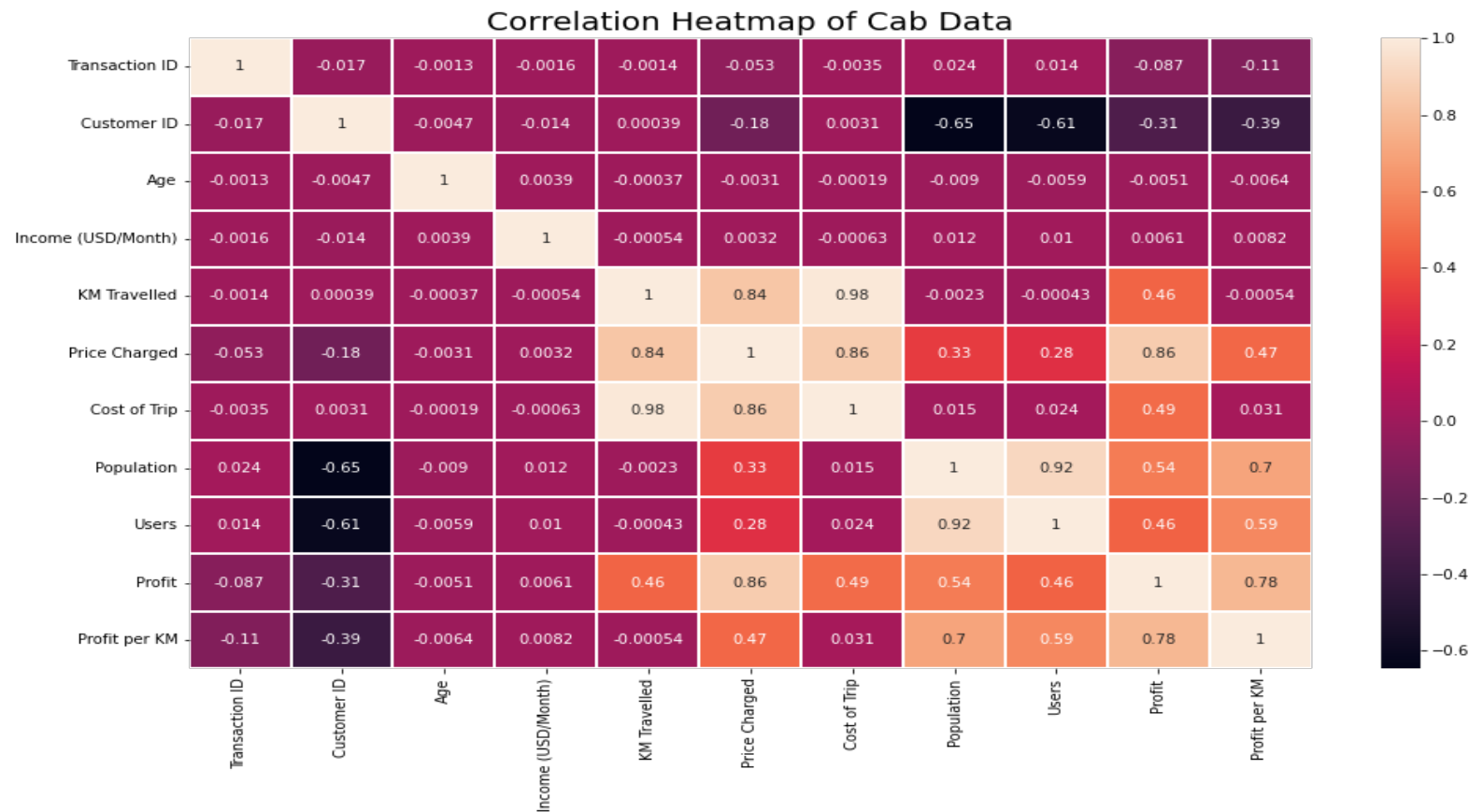
- There are no missing values in the datasets.
- There are no duplicates in the datasets.

Data Manipulation:

- The columns were changed to the appropriate category.
- The datasets were merged to create a single dataset.
- New columns were added, including Profit, Profit per KM, Income Class, Age Group, Year, and Months.

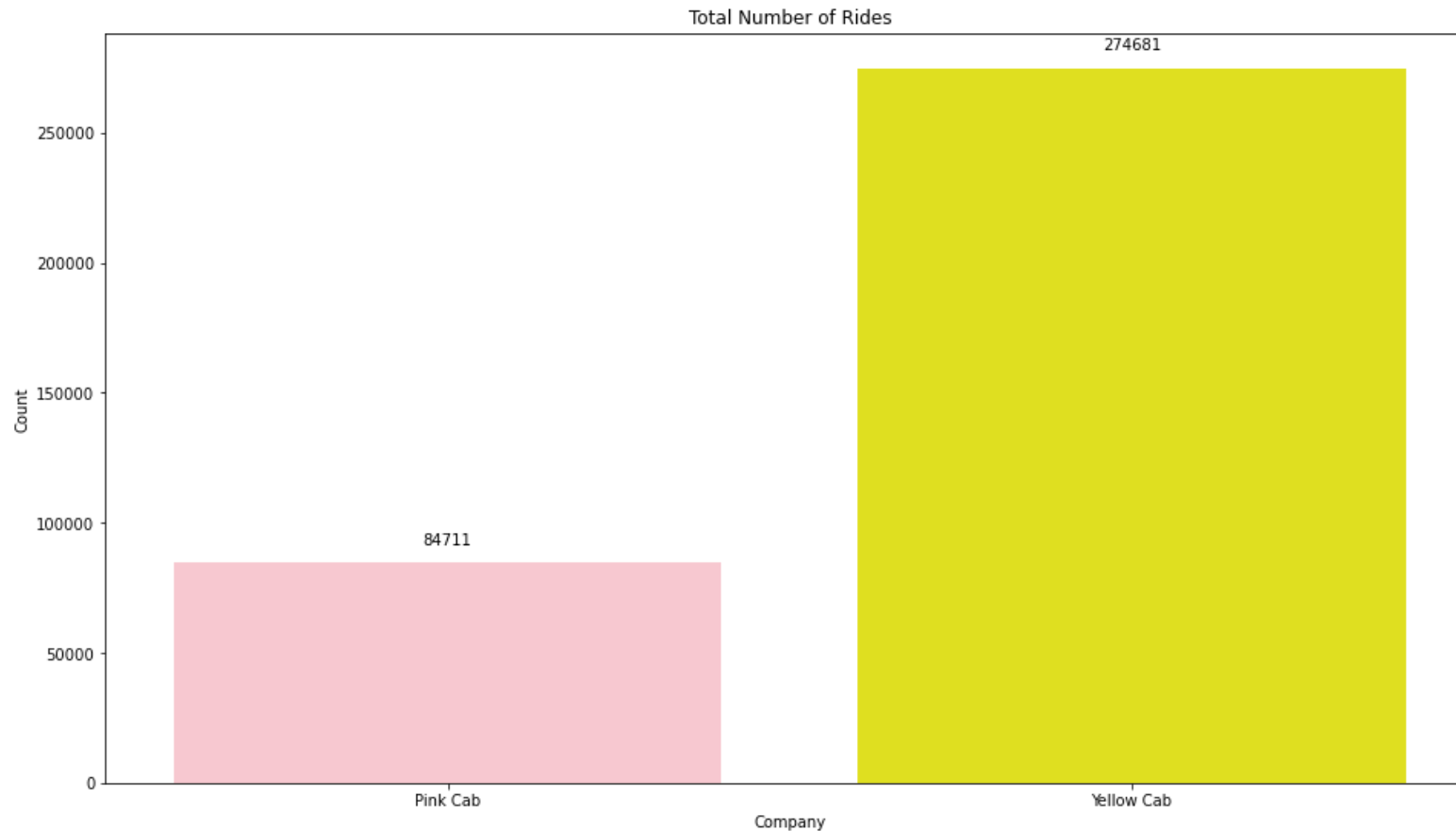
Exploratory Data Analysis

Correlation between Variables: There is a strong correlation between Price Charged and KM Travelled, Cost of Trip and KM Travelled, Cost of Trip and Price Charged, Profit and Price Charged, Population and Users.



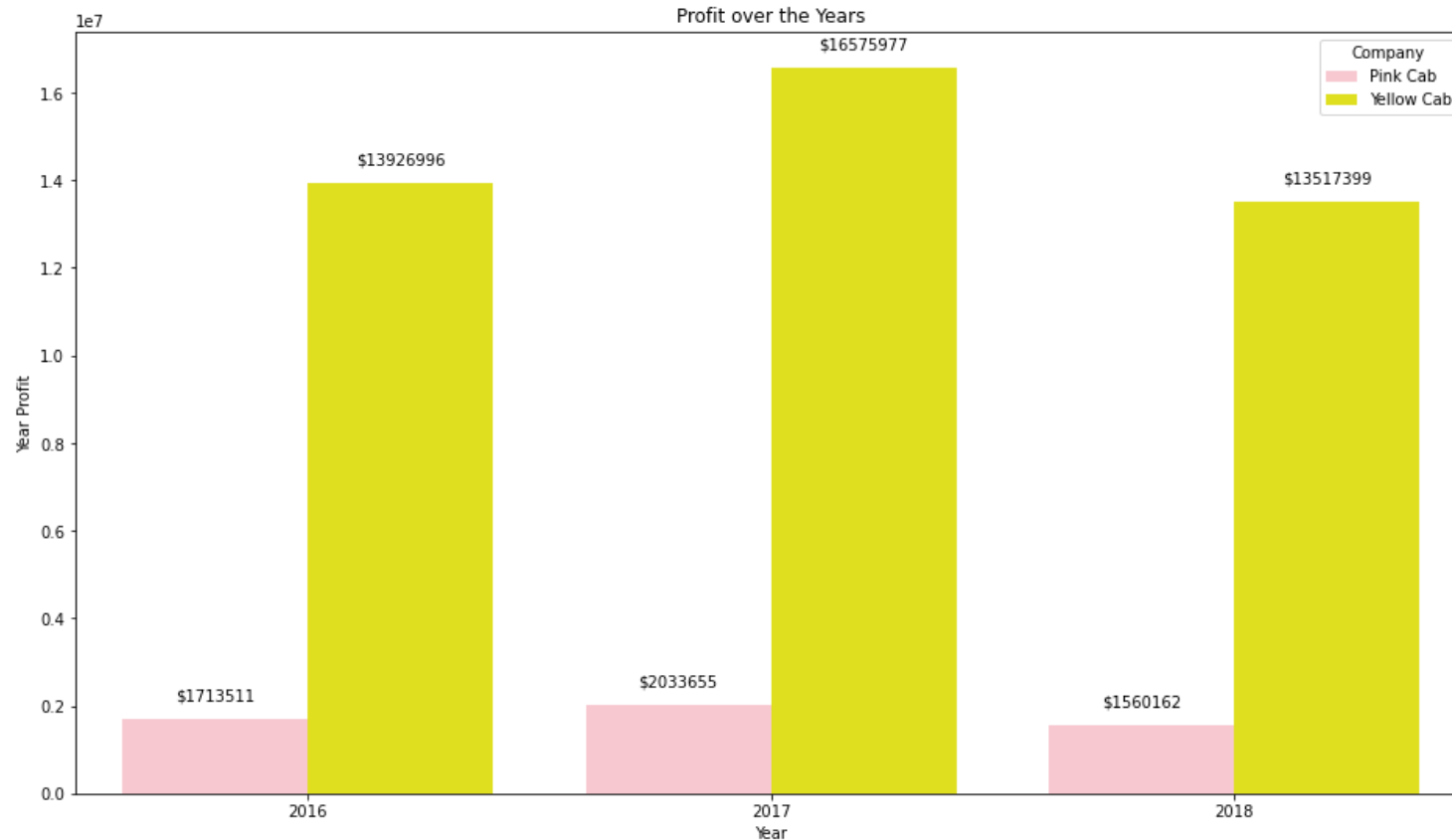
Exploratory Data Analysis

Total number of Rides: Yellow Cab company has a total of 274,681 rides, while Pink Cab company has a total of 84,711 rides.



Exploratory Data Analysis

Profit Earned: Yellow Cab company has earned more than eight times the earnings of Pink Cab company, and Yellow Cab company has earned more profit per kilometre travelled.

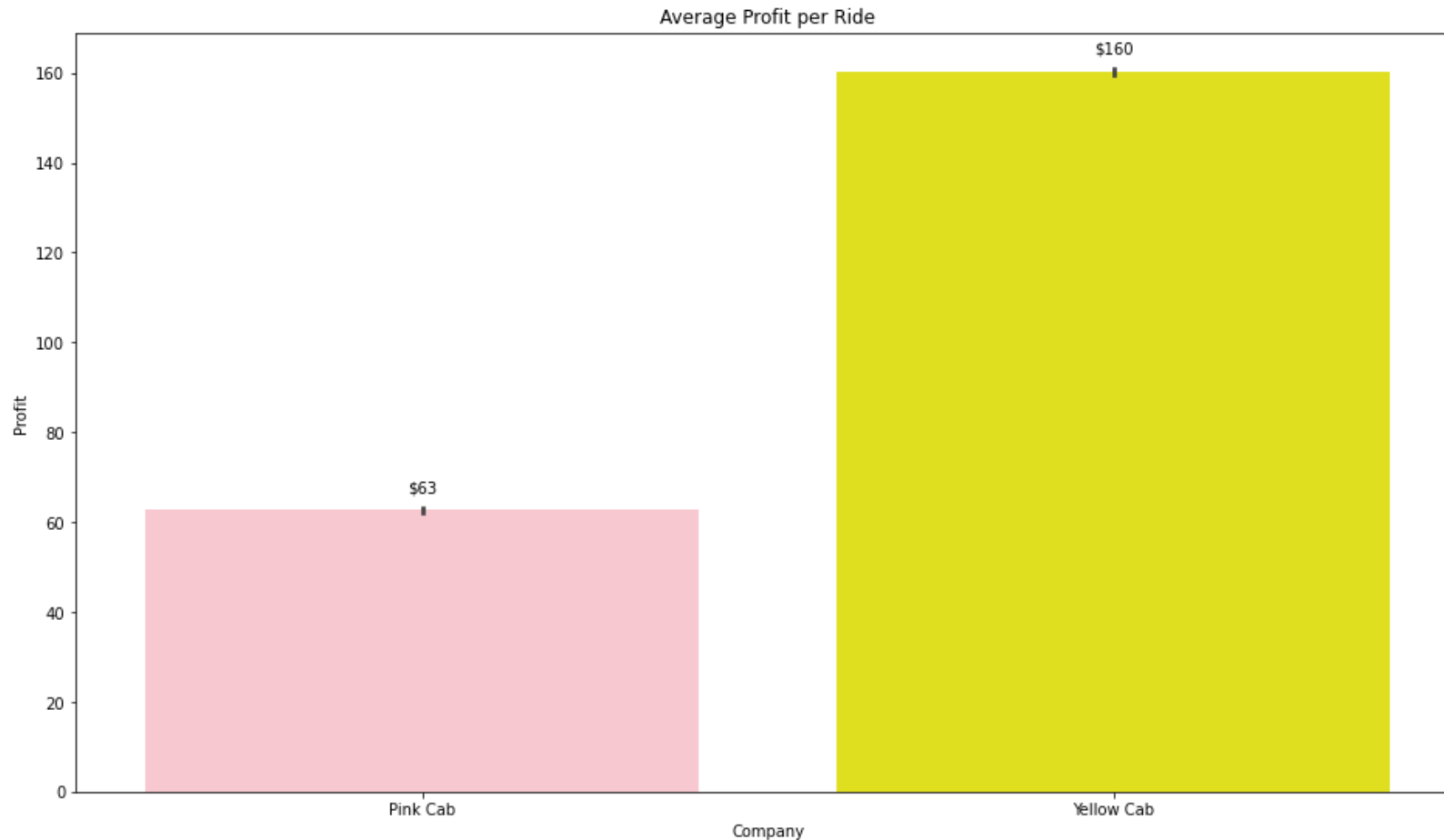


Company	Profit	Profit per KM
Pink Cab	\$5.3M	2.769906
Yellow Cab	\$44.0M	7.105501

Year	Company	Year Profit	Percent Change (%)
2016	Pink Cab	1713511.27	NaN
2016	Yellow Cab	13926996.40	NaN
2017	Pink Cab	2033655.24	18.683505
2017	Yellow Cab	16575977.40	19.020476
2018	Pink Cab	1560162.00	-23.282867
2018	Yellow Cab	13517398.79	-18.451875

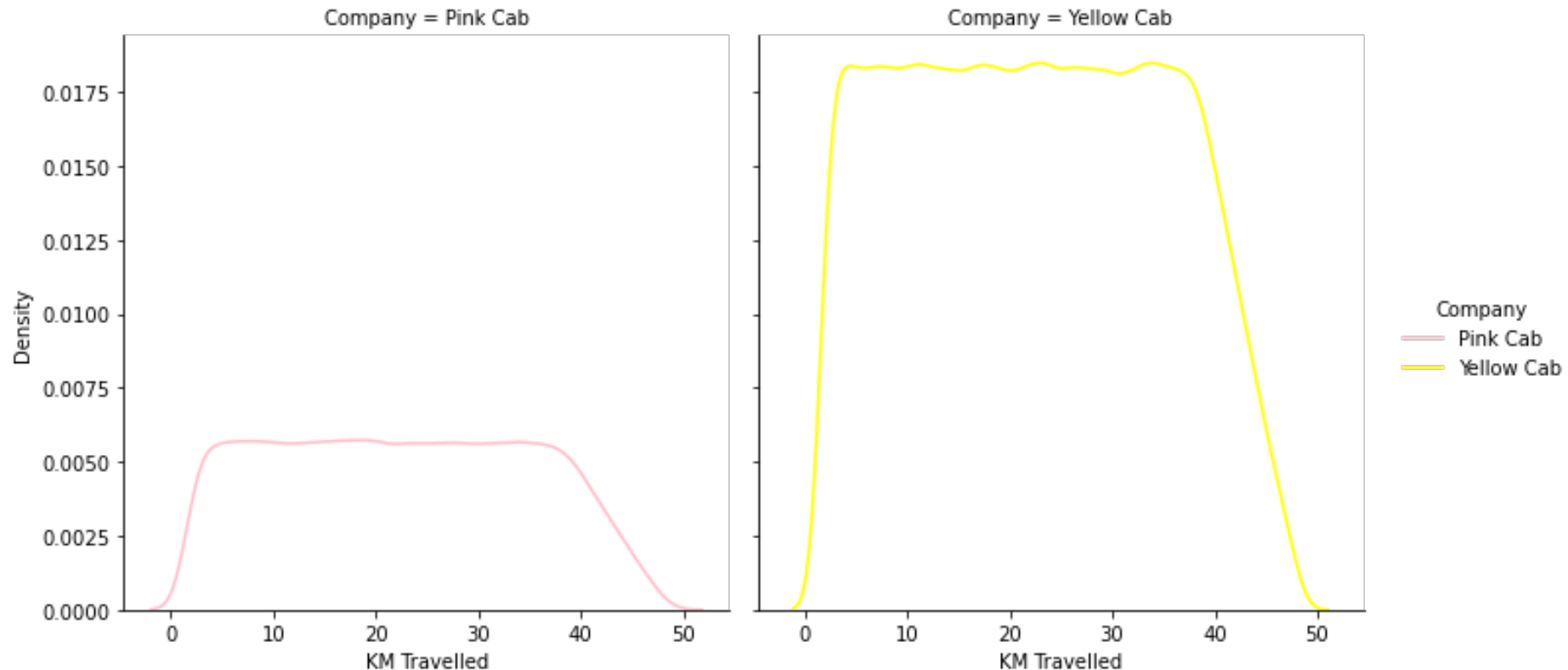
Exploratory Data Analysis

Average Profit per Ride: Yellow Cab company's average profit per ride is \$160, while Pink Cab company's average profit per trip is \$63.



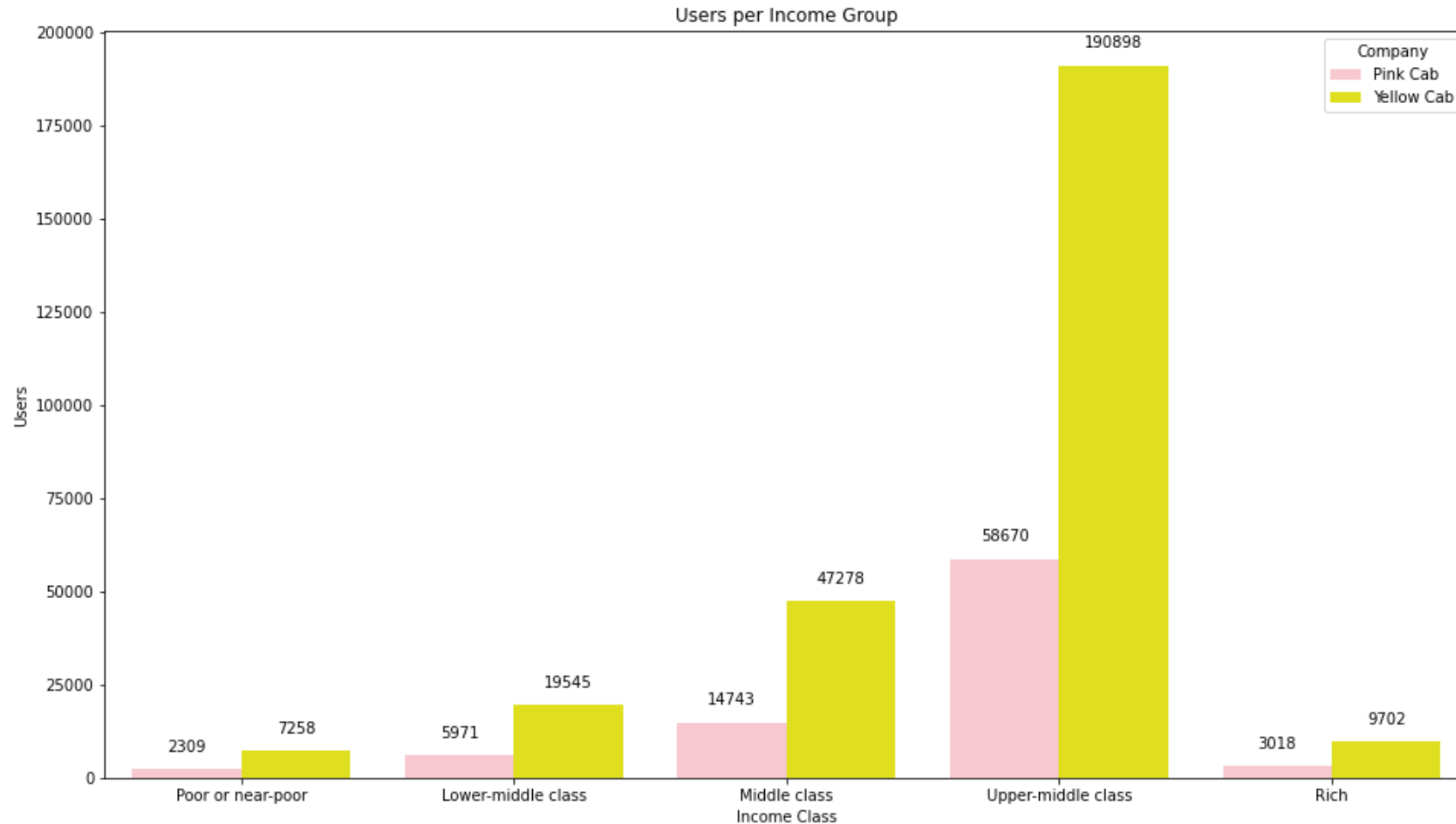
Exploratory Data Analysis

Distribution of Kilometre Travelled: For both companies, most rides range from 2 kilometres to 48 kilometres.



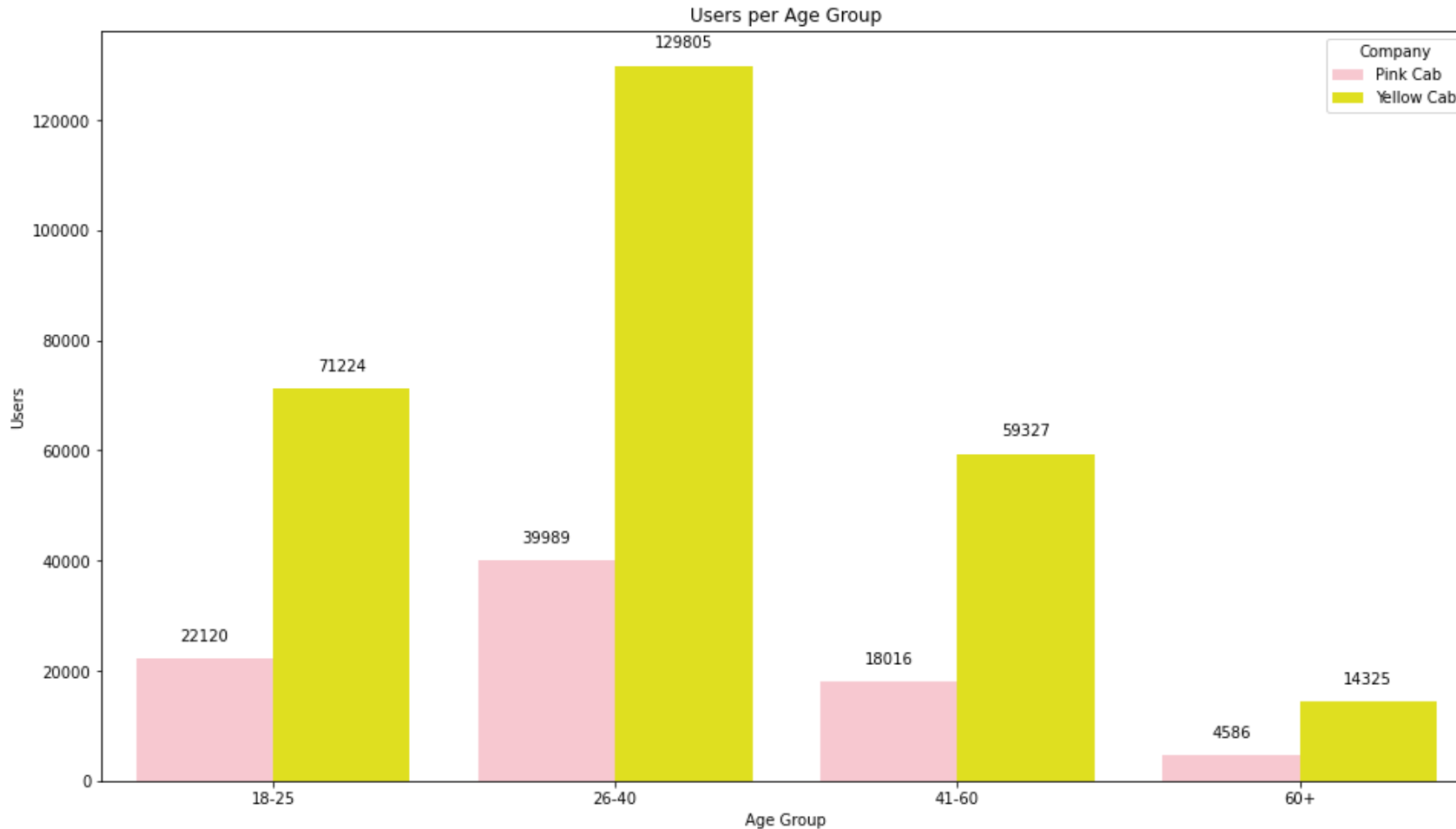
Exploratory Data Analysis

Income Class: Yellow Cab company has more users in each income class than Pink Cab company.



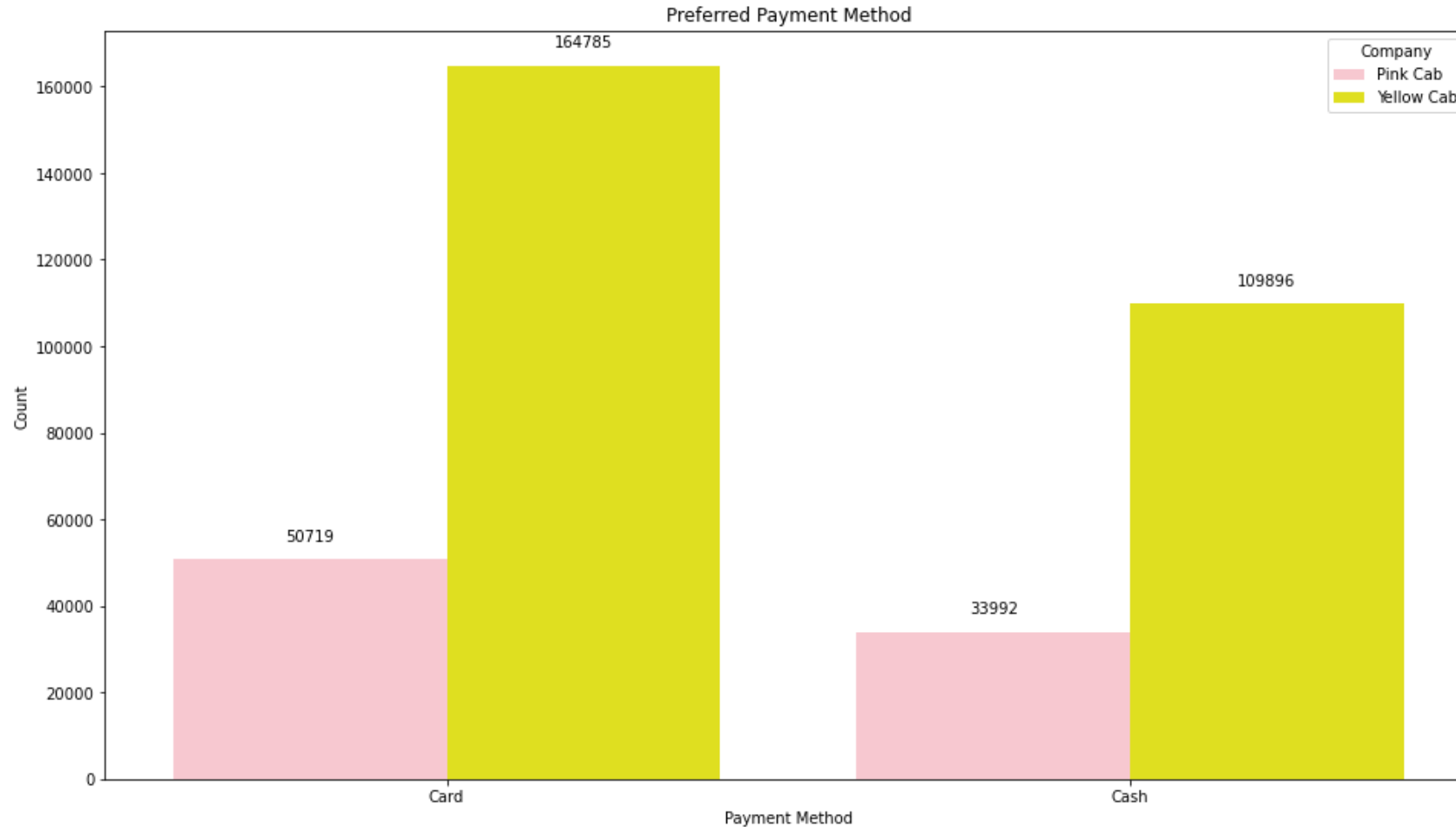
Exploratory Data Analysis

Age Group: Yellow Cab company has more users in each age group than Pink Cab company.



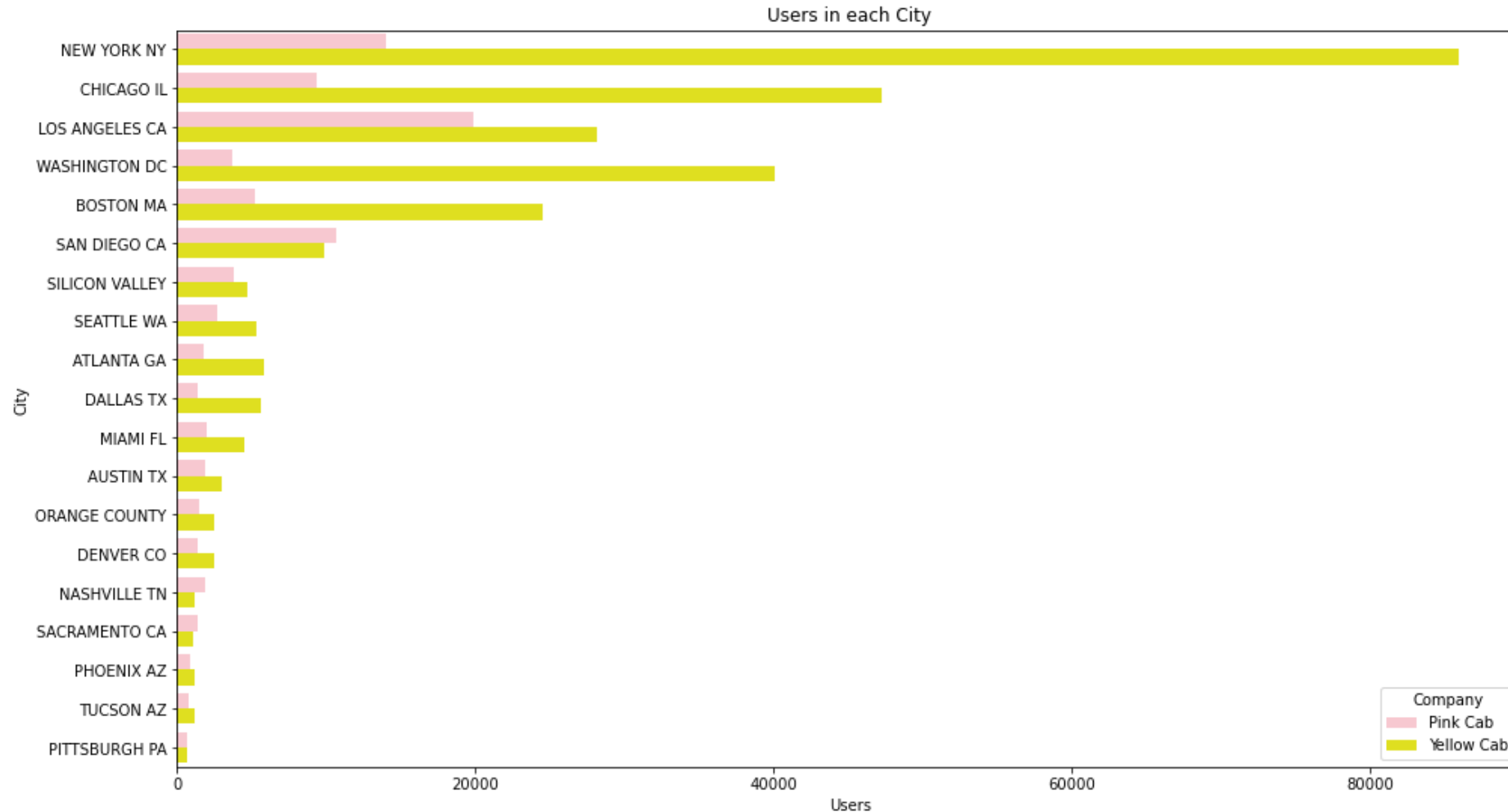
Exploratory Data Analysis

Payment Mode: Card payment is the preferred method for both cab companies.



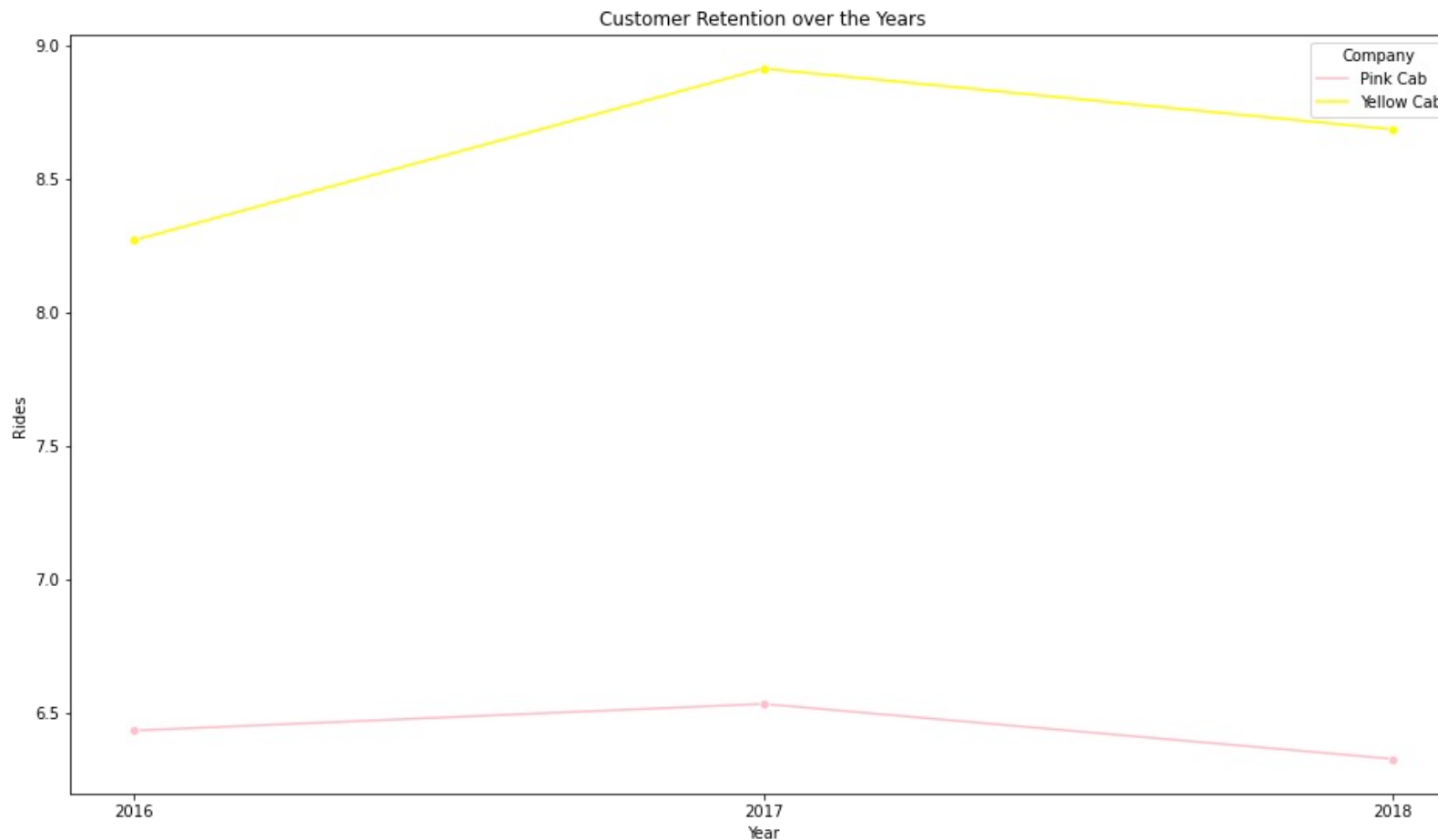
Exploratory Data Analysis

Customer Reach: Yellow Cab company outnumbers Pink Cab company in the Top 5 cities with the most users.



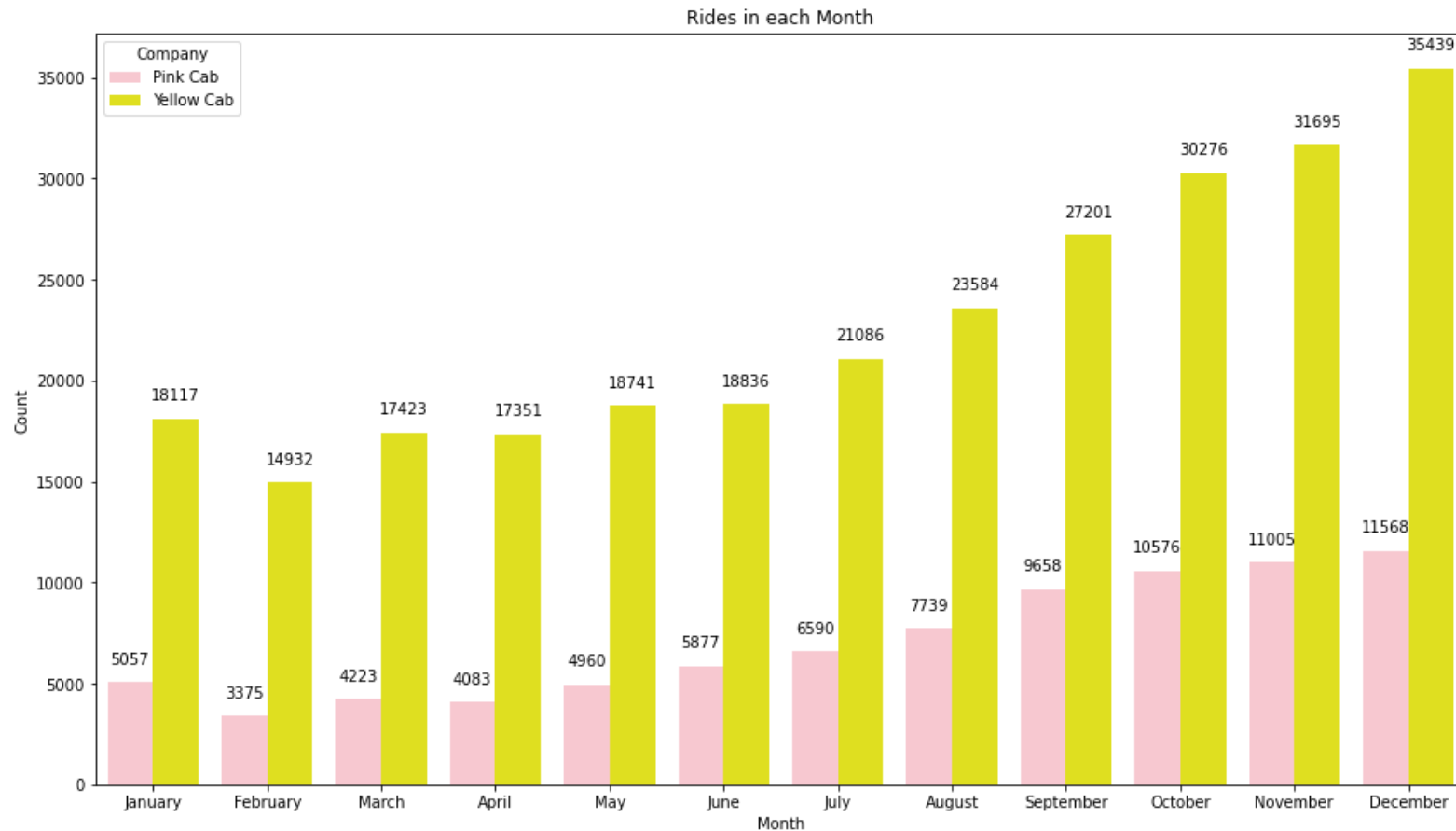
Exploratory Data Analysis

Customer Retention: Yellow Cab company is doing a better job than Pink Cab company in terms of customer retention.



Exploratory Data Analysis

Monthly Rides: There are more rides from September to December, which indicates that there is a significant demand for cabs throughout those months.



EDA Summary and Recommendation

Number of Rides: Yellow Cab company has more number of rides over the years.

Profit: Yellow Cab company has earned more than eight times the earnings of Pink Cab Company, and Yellow Cab Company has earned more profit per kilometre travelled.

Average Profit per KM: Yellow Cab company average profit per KM is more than three times the average profit per KM of the Pink Cab company.

Income Class: Yellow Cab company has more users in each income class than Pink Cab.

Customer Reach: Yellow Cab company outnumbers Pink Cab in the Top 5 cities with the most users.

Customer Retention: Yellow Cab is doing a better job than Pink Cab in terms of customer retention.

Based on the analysis and answered questions, we can conclude that **Yellow Cab** company is a better investment option than Pink Cab company.

Thank You



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