



Data Glacier

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Exploratory Data Analysis

G2M Insight for Cab Investment Firm

21-06-2022

Agenda

- Executive Summary
- Approach
- EDA
- EDA Summary
- Recommendations



Executive Summary

- 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, XYZ is planning for an **investment in Cab industry**.
- XYZ has requested an **investment recommendation**, based on the data of two cab companies.
- Comparison **Exploratory Data Analysis** of all data related to the companies, cities, customers and transactions.
- Considering both company's transaction history, profitability, age reach, city dominance, stability and demand, I highly recommend **investing in the Yellow Cab Company**.

Approach

- Basic Data Exploration
- Data Cleaning and Preprocessing
- Exploratory Data Analysis
- Hypothesis Testing
- Recommendation



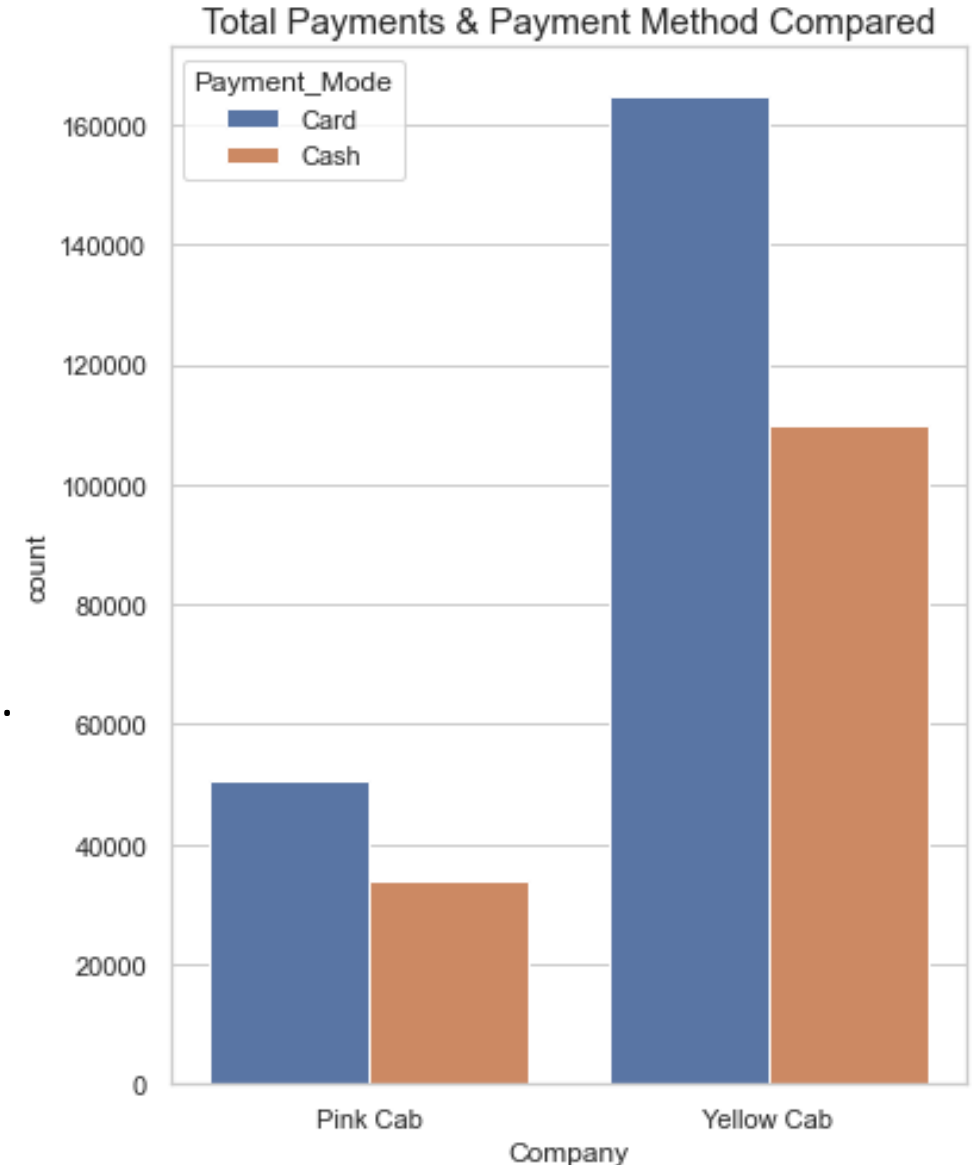
Exploratory Data Analysis

- Aim of the EDA is to **extract useful insights** that will ultimately help make an **investment recommendation**.



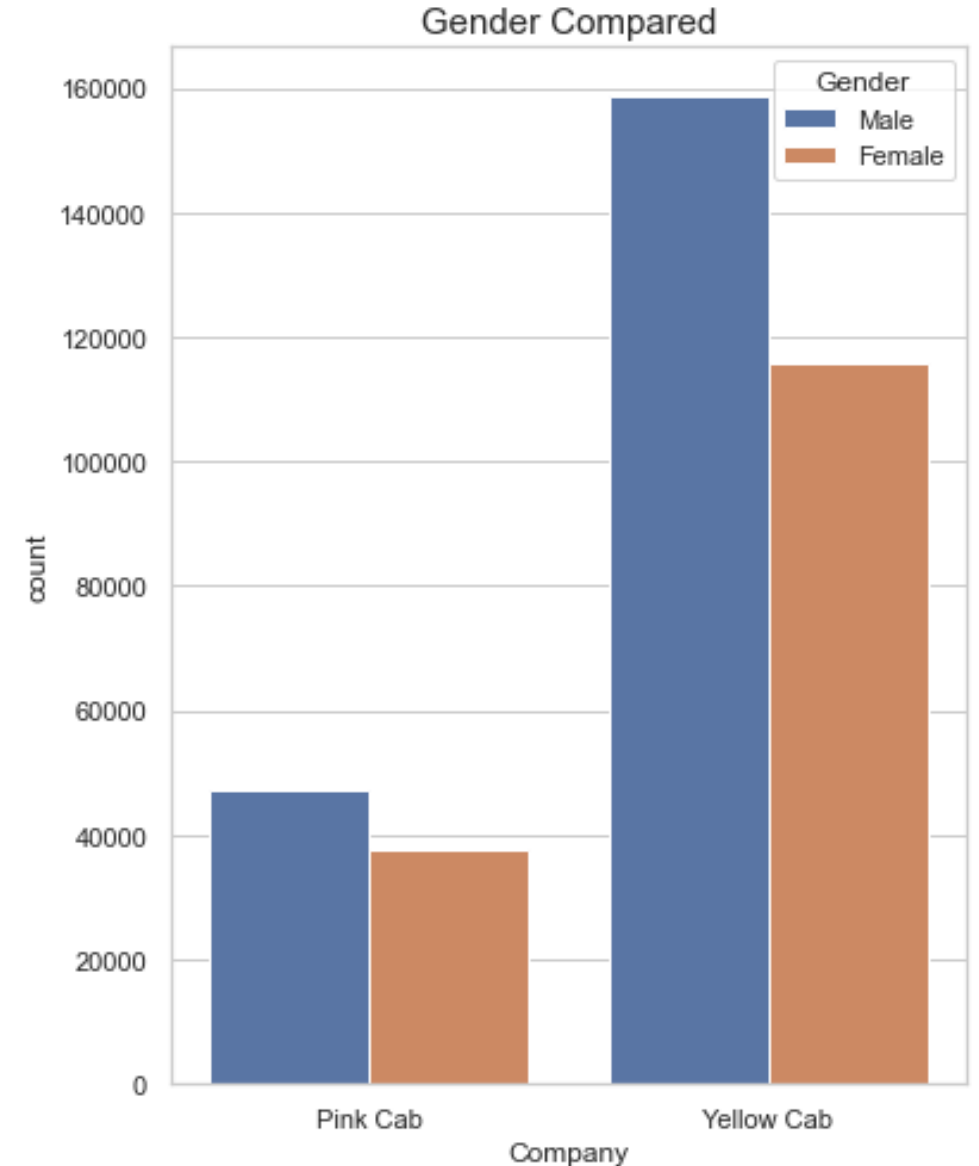
Payment Analysis

- **Yellow Cab:** Cards are most used as payment method by a large margin, also clearly has made more transactions in the same time period compared to Pink Cab.
- **Pink Cab:** Cards are most used as payment method. Although by a smaller margin compared to Yellow Cab.

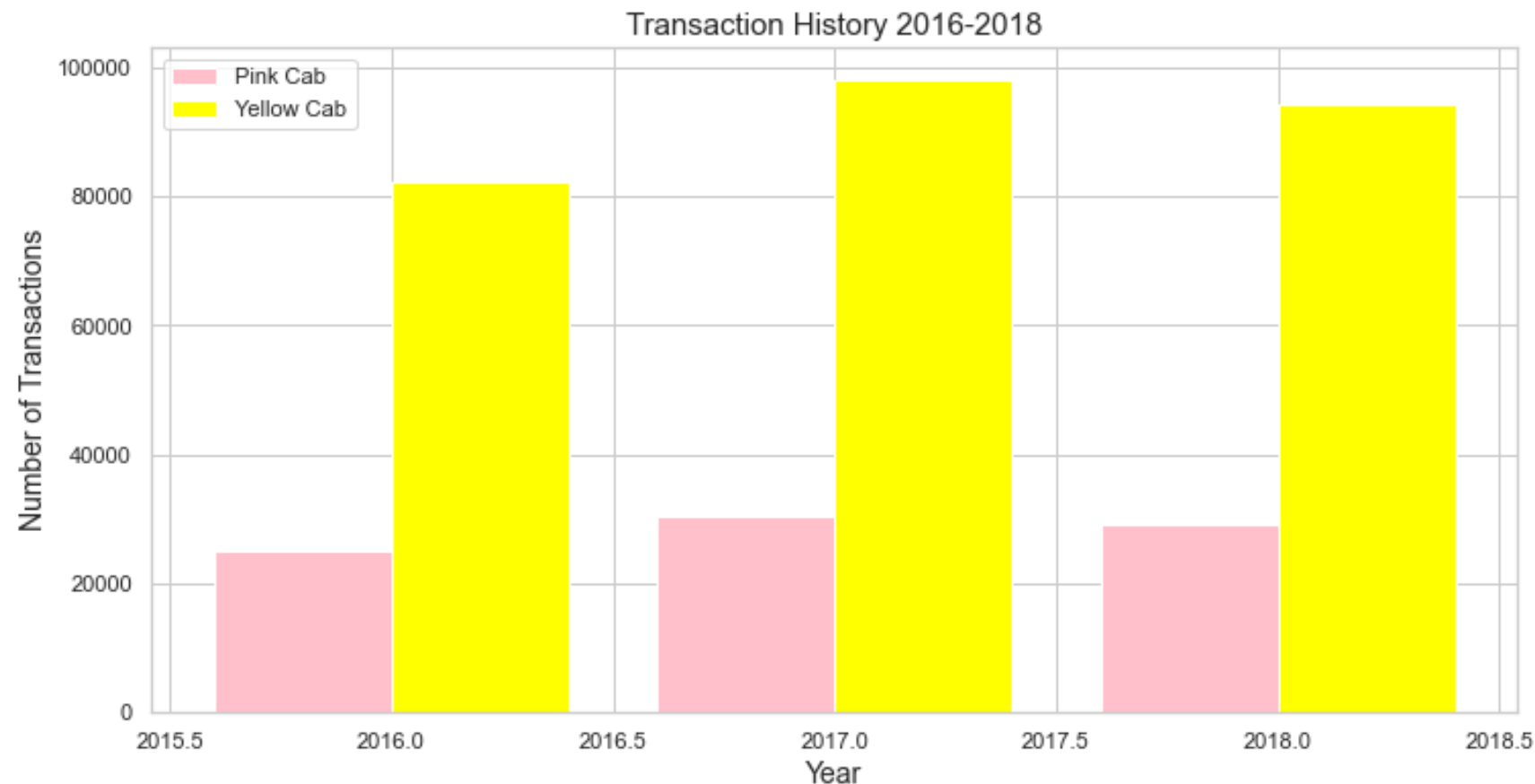


Gender Analysis

- **Yellow Cab:** Males are the most frequent gender using the yellow cab service.
- **Pink Cab:** Males are also the most frequent gender using the pink cab service, by a smaller margin. *(More balanced than Yellow Cab)*

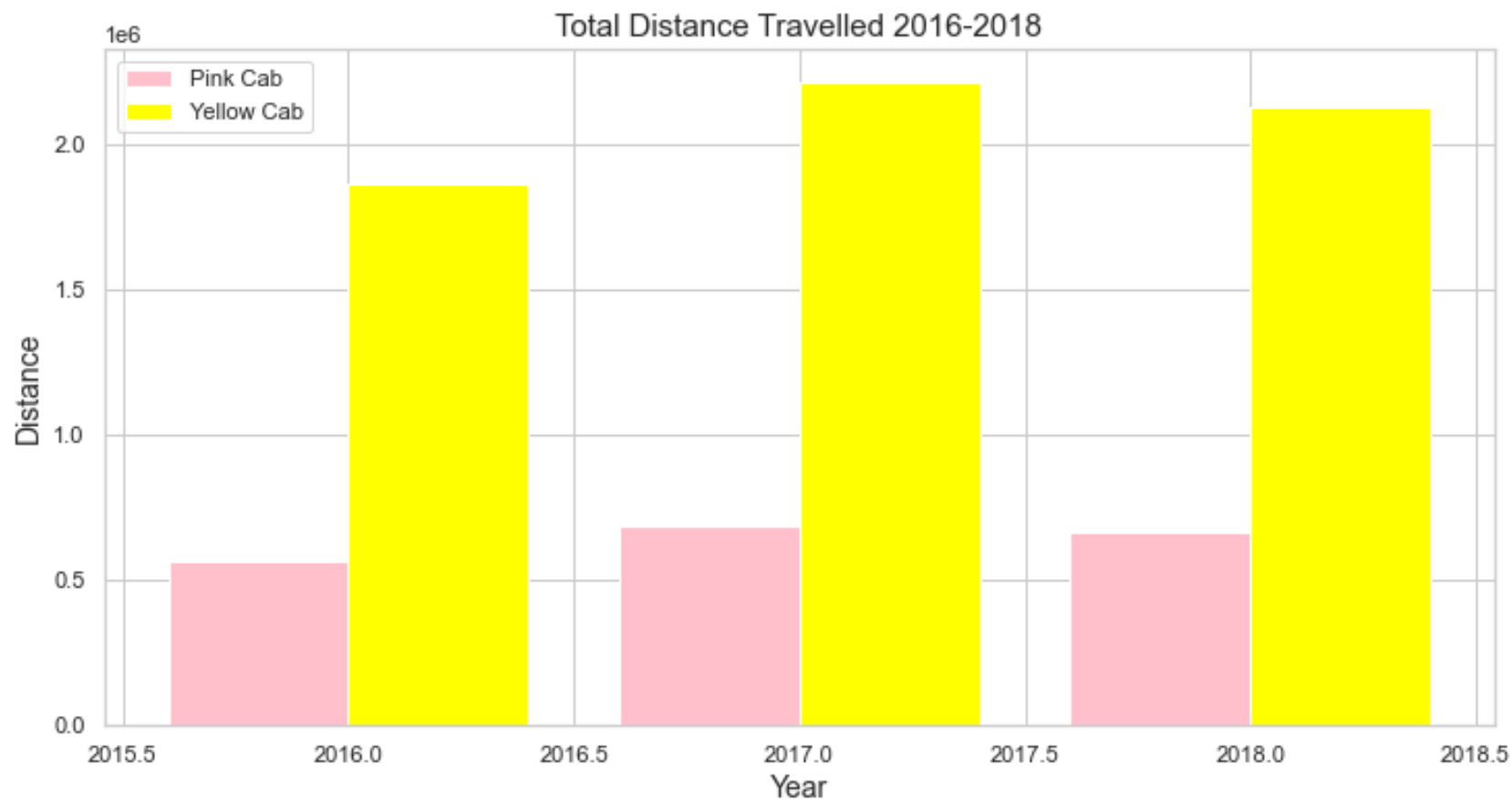


Transaction Analysis



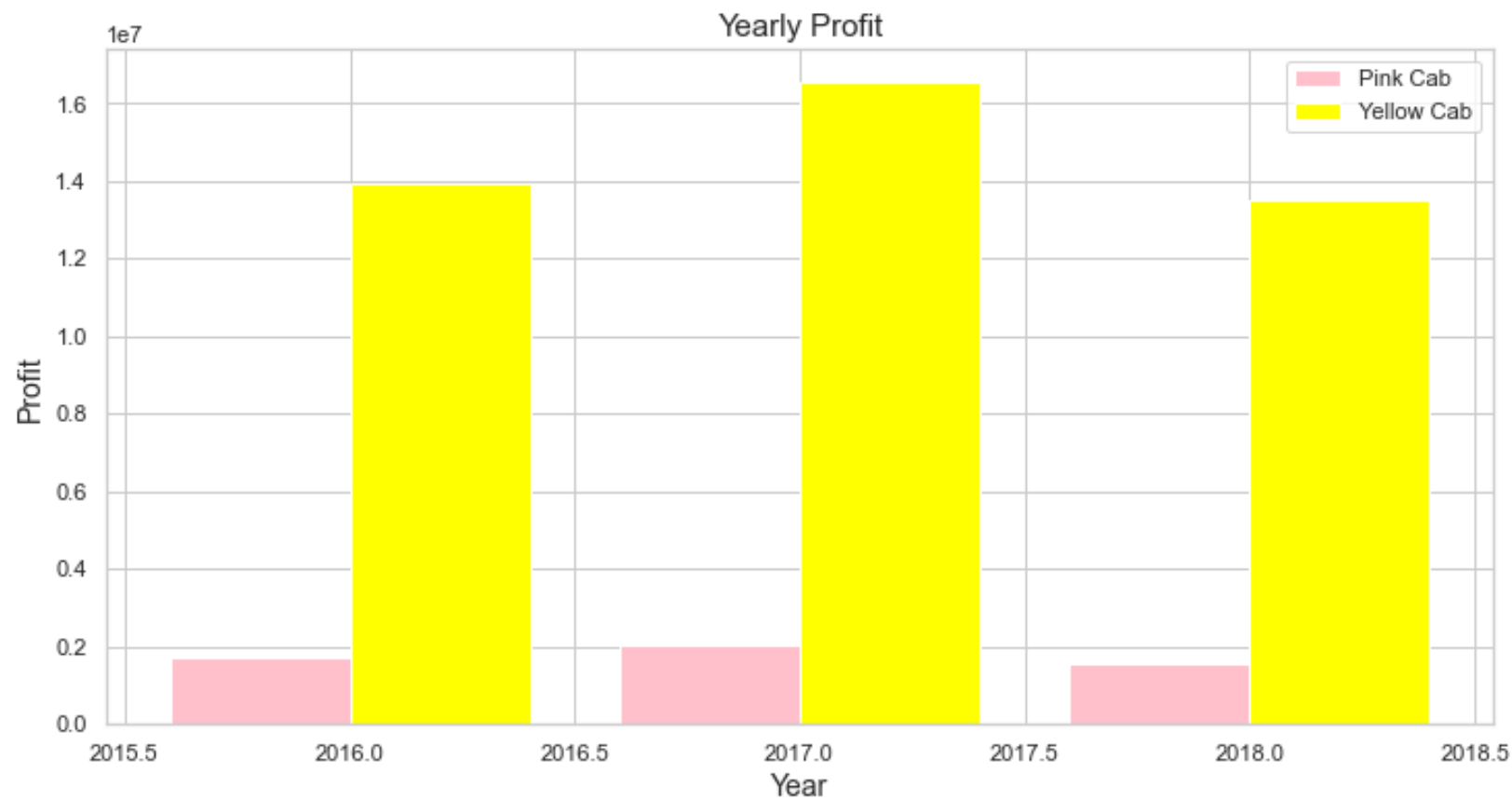
- From 2016-2018 Yellow Cab made considerably more transactions compared to Pink Cab.

Distance Analysis



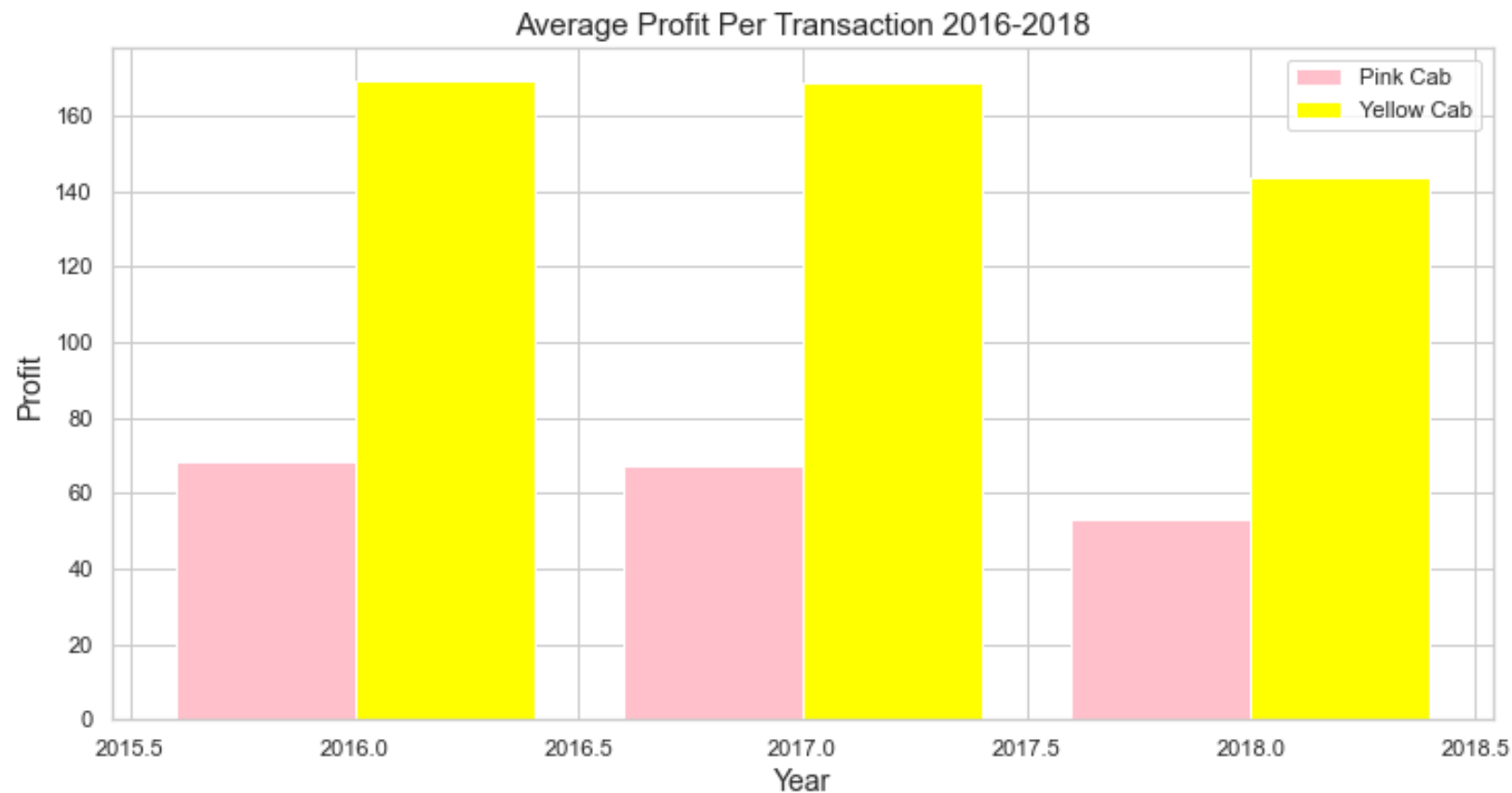
- From 2016-2018 Yellow Cab travelled considerably more compared to Pink Cab.

Profit Analysis



- Total Yearly Profit of Yellow Cab is numerous times more than Pink Cab.

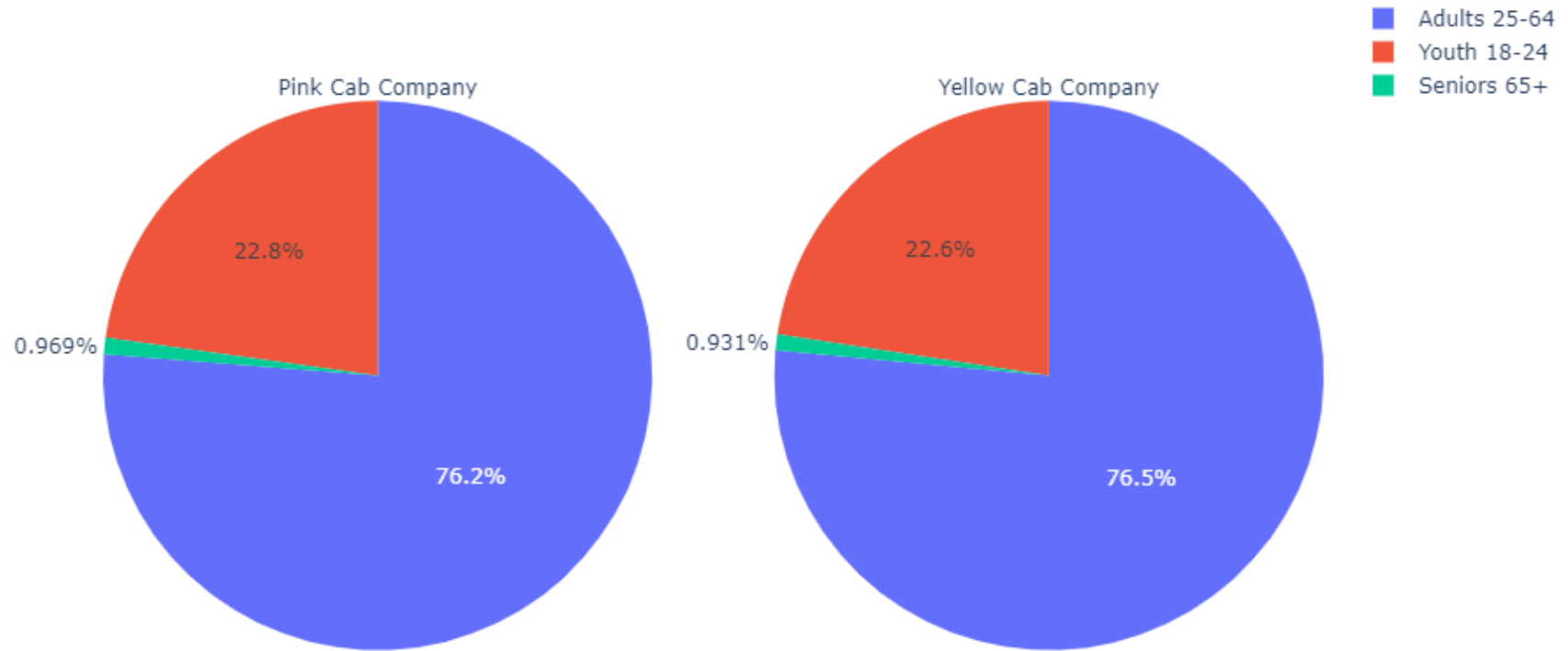
Profit Analysis cont.



- Yellow Cab made more profit on average per transaction from 2016-2018, compared to Pink Cab.

Age Analysis

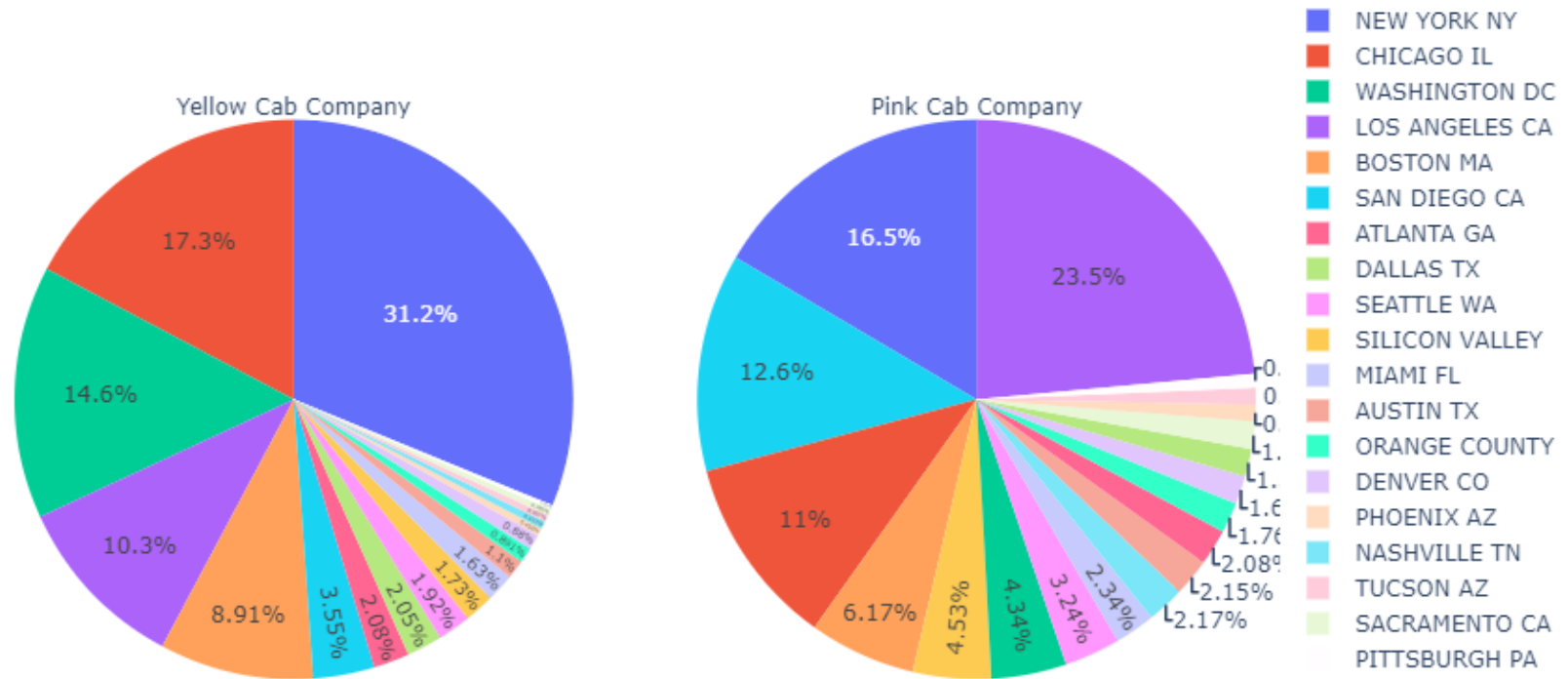
Cab Companies Customer Age Comparison



- The biggest market for both companies appears to be Adults, followed by Youth and a small portion of Senior customers.

City Analysis

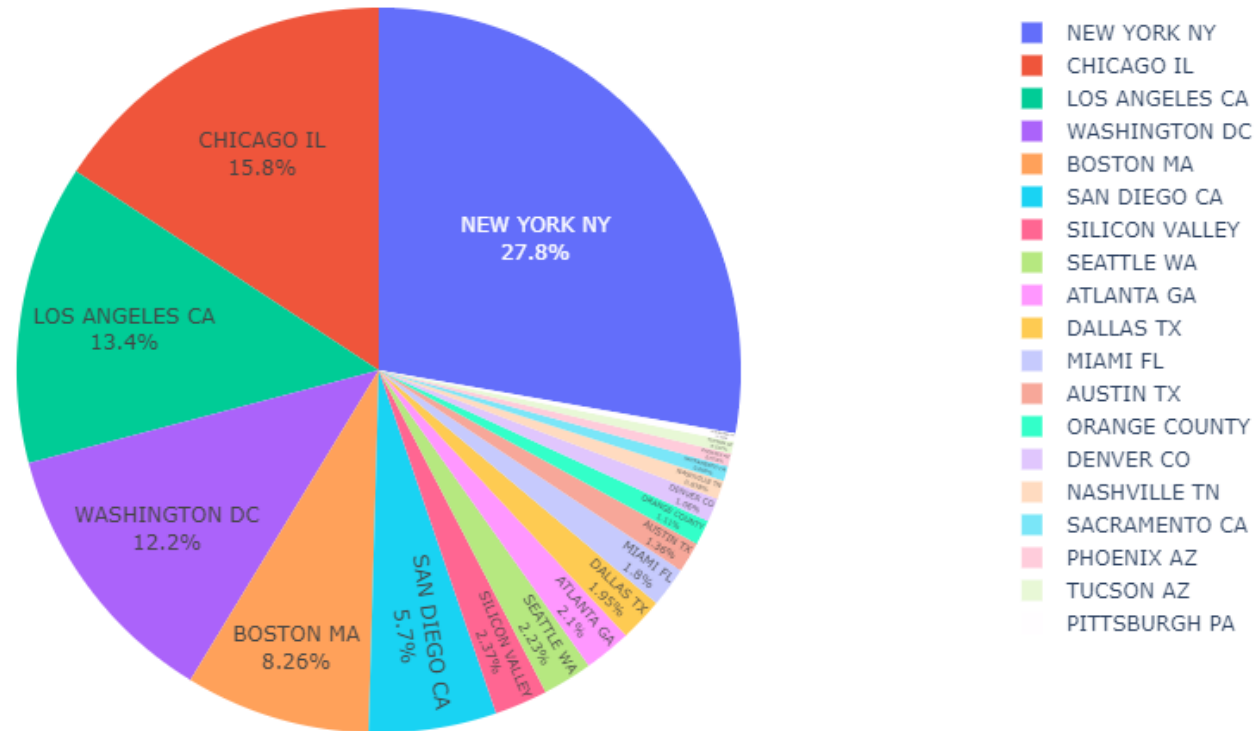
KM Travelled by City, Company Comparison



- **Pink Cab Company:** Company is mostly active in Los Angeles, New York, San Diego, Chicago and Boston.
- **Yellow Cab Company:** Company is mostly active in New York, Chicago, Washington, Los Angeles and Boston.

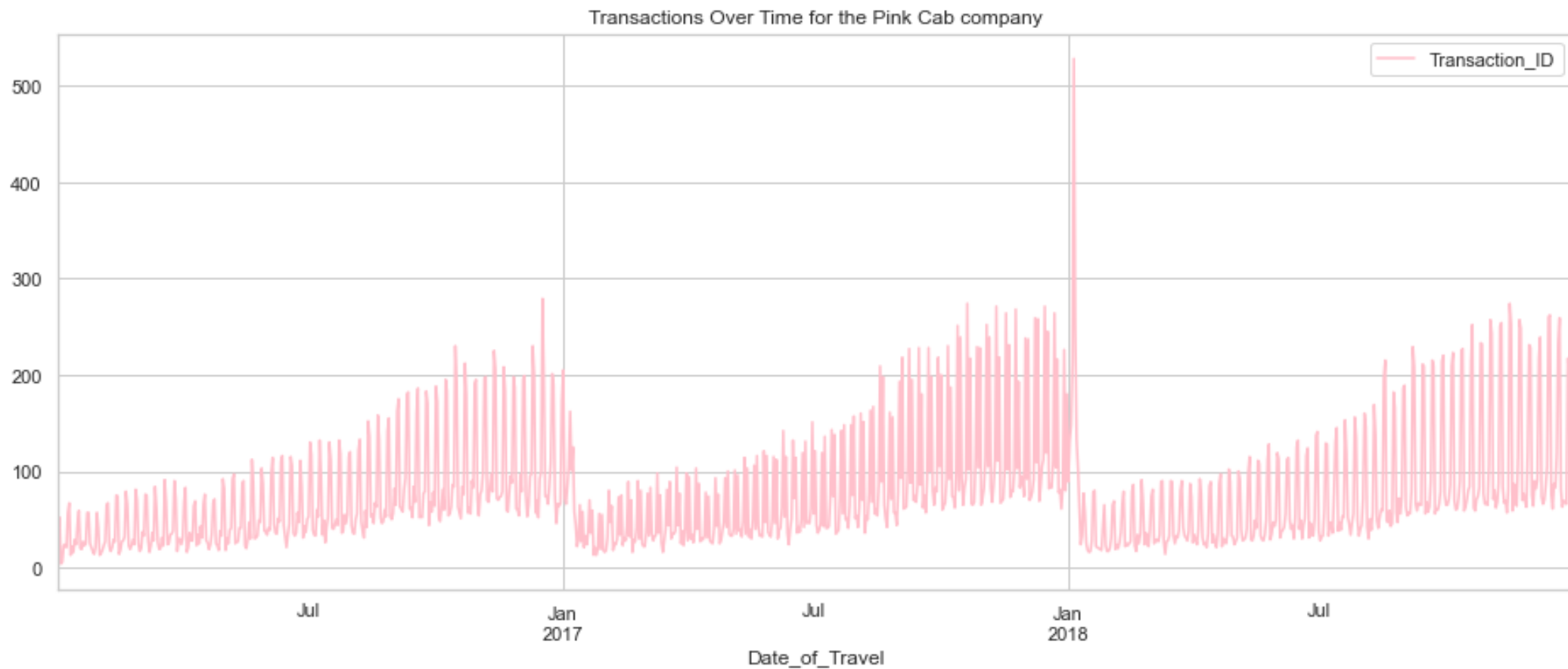
City Analysis cont.

Total Transactions by City



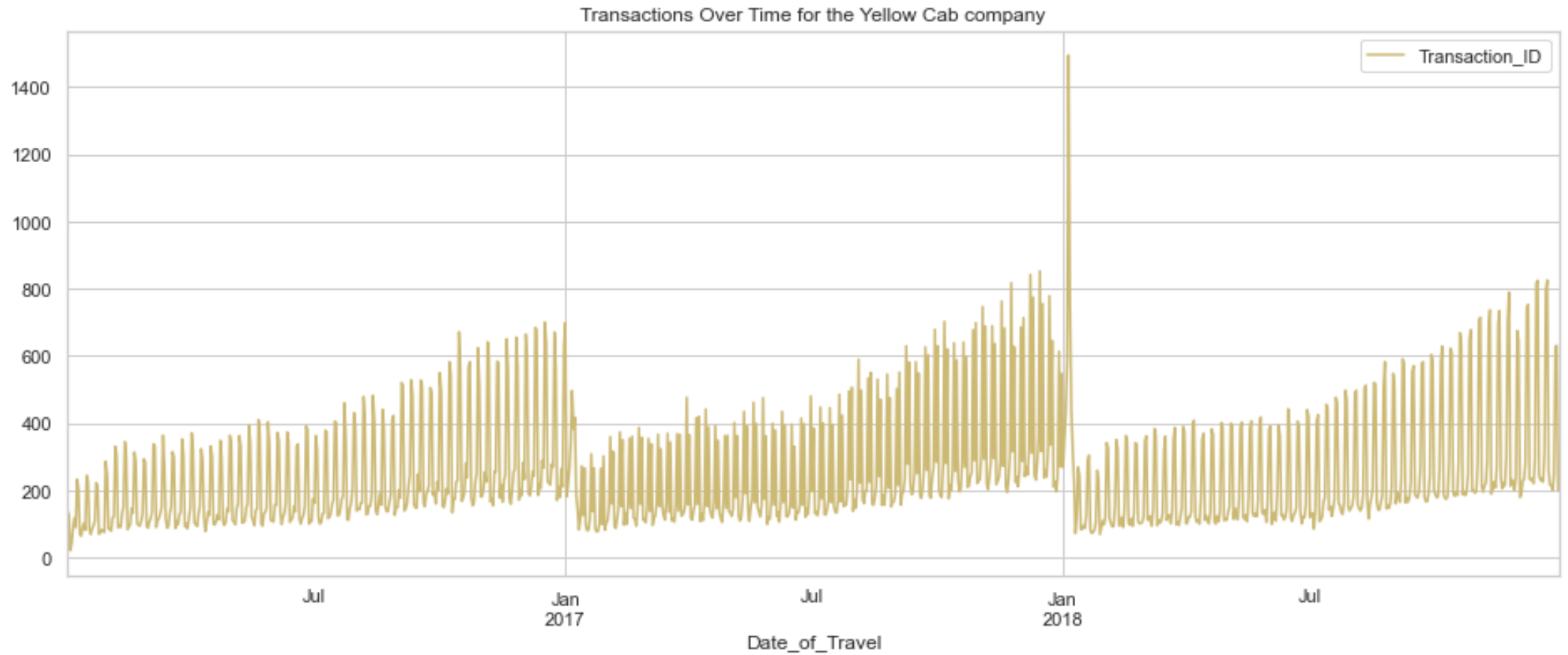
- New York has the most transactions, followed by Chicago, Los Angeles, Washington and Boston etc.

Time Series Analysis : Pink Cab – Transactions over time



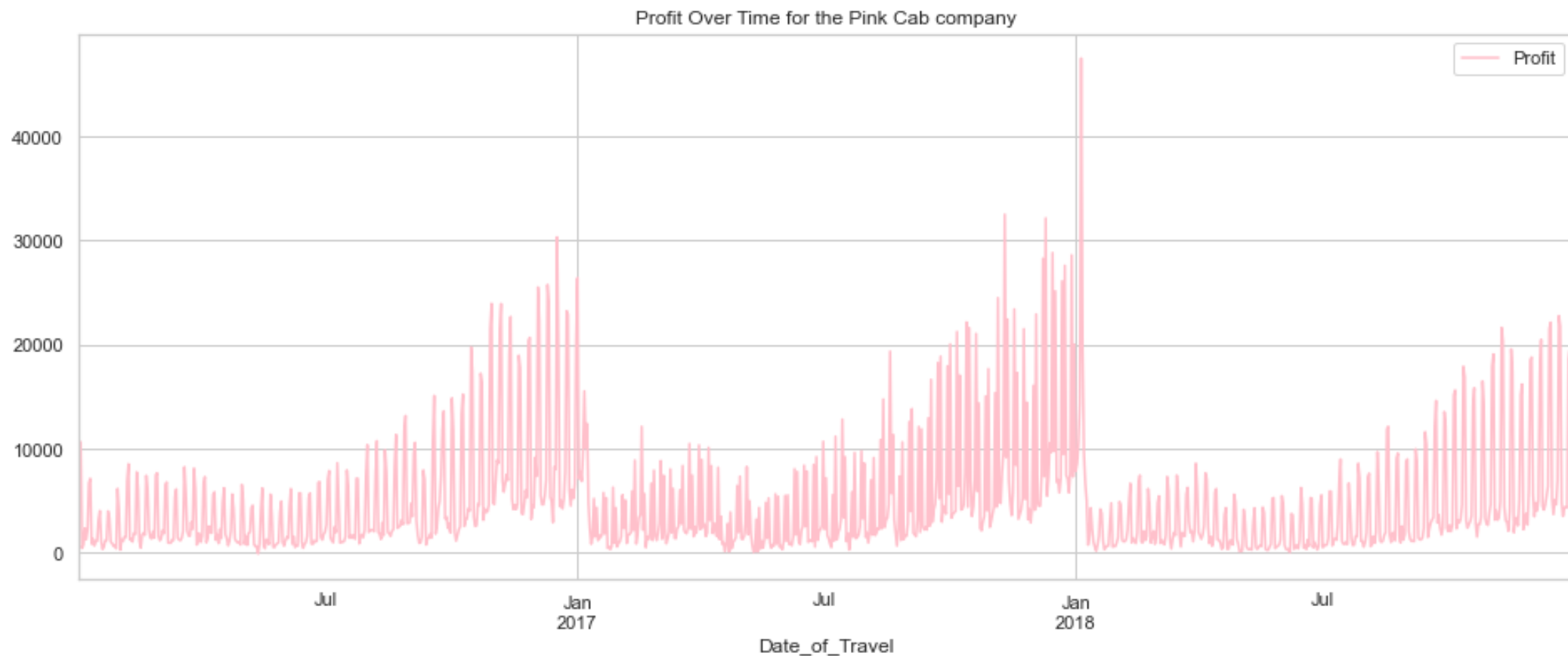
- Clear upward trend in transactions throughout each year.
- October - December appears to be the most busy time

Time Series Analysis : Yellow Cab – Transactions over time



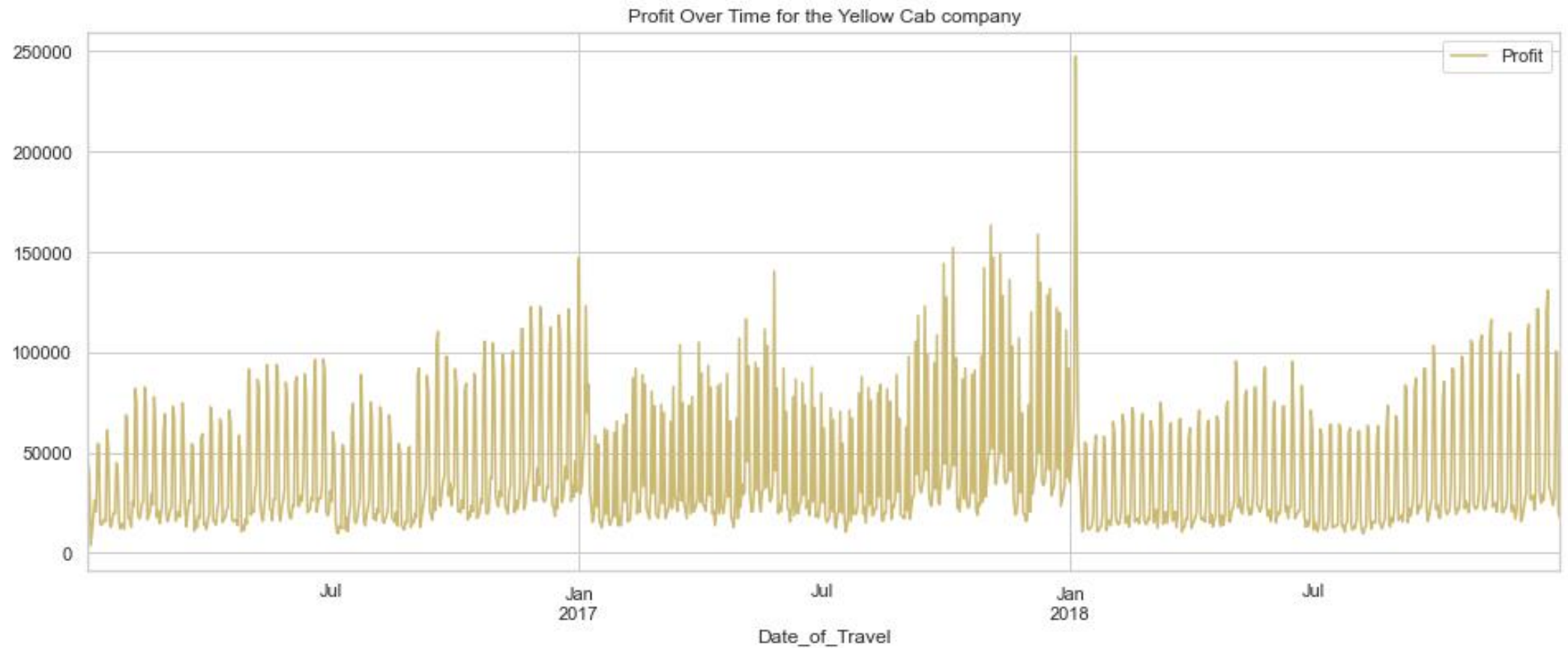
- Upward trend in transactions throughout each year.

Time Series Analysis : Pink Cab – Profit over time



- Upward trend in profit throughout each year.
- October - December appears to be the most profitable time.

Time Series Analysis : Yellow Cab – Profit over time



- Some stability and an increase in October – December.

EDA Summary

- **Transaction History:** Yellow Cab has more than **double the transactions every year** from 2016 – 2018 compared to Pink Cab.
- **Profitability:** Yellow Cab made **more than double the profit per transaction every year** from 2016-2018 compared to Pink Cab.
- **Age Reach:** Yellow Cab is popular with Young Adults (*Age < 25*), although its **biggest market lies with Adults (*Age 25-64*)** and it has some reach with the Seniors (*Age > 65*).
- **Stability & Demand:** Yellow Cab's income is much more stable and **in demand throughout the year**, compared to Pink Cab, which is heavily spiked at the end of the year.
- **City Dominance:** Yellow Cab is **dominating the market** in some of the **biggest cities**, including New York, Chicago and Washington DC.



Recommendation

Considering both company's transaction history, profitability, age reach, city dominance, stability and demand, I highly recommend **investing in the Yellow Cab Company.**



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Thank You