



Data Glacier

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Exploratory Data Analysis

G2M INSIGHT FOR CAB INVESTMENT FIRM

Submitted by,
Soniya Sunny
Data Science Intern
LISUM10: 30
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EDA Summary

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Executive Summary

- **XYZ**, a private investment firm in the US, planning to expand business in **Cab** industry.
- They need to get some **data insights** about the ongoing cab investment market.
- From the data analytics, they need to figure out which **company** they should invest in, to achieve maximum profit.
- The objective is to provide relevant **recommendations** to make the right decisions in Cab Investments, that support their Go-to-Market (G2M) strategy.

Problem Statement

- Investment in Cab industry is a better decision, but the problem lies in which company they should invest in.
- The current **competitions** in the cab industry point towards the necessity of keen observations and research about the **market** before putting money into it.
- It is essential to collect sufficient data from various sources, analyze it properly, compare various competitors, figure out the factors that affect the market, understand the features that promotes the business and finally, choose the right company.

Approach

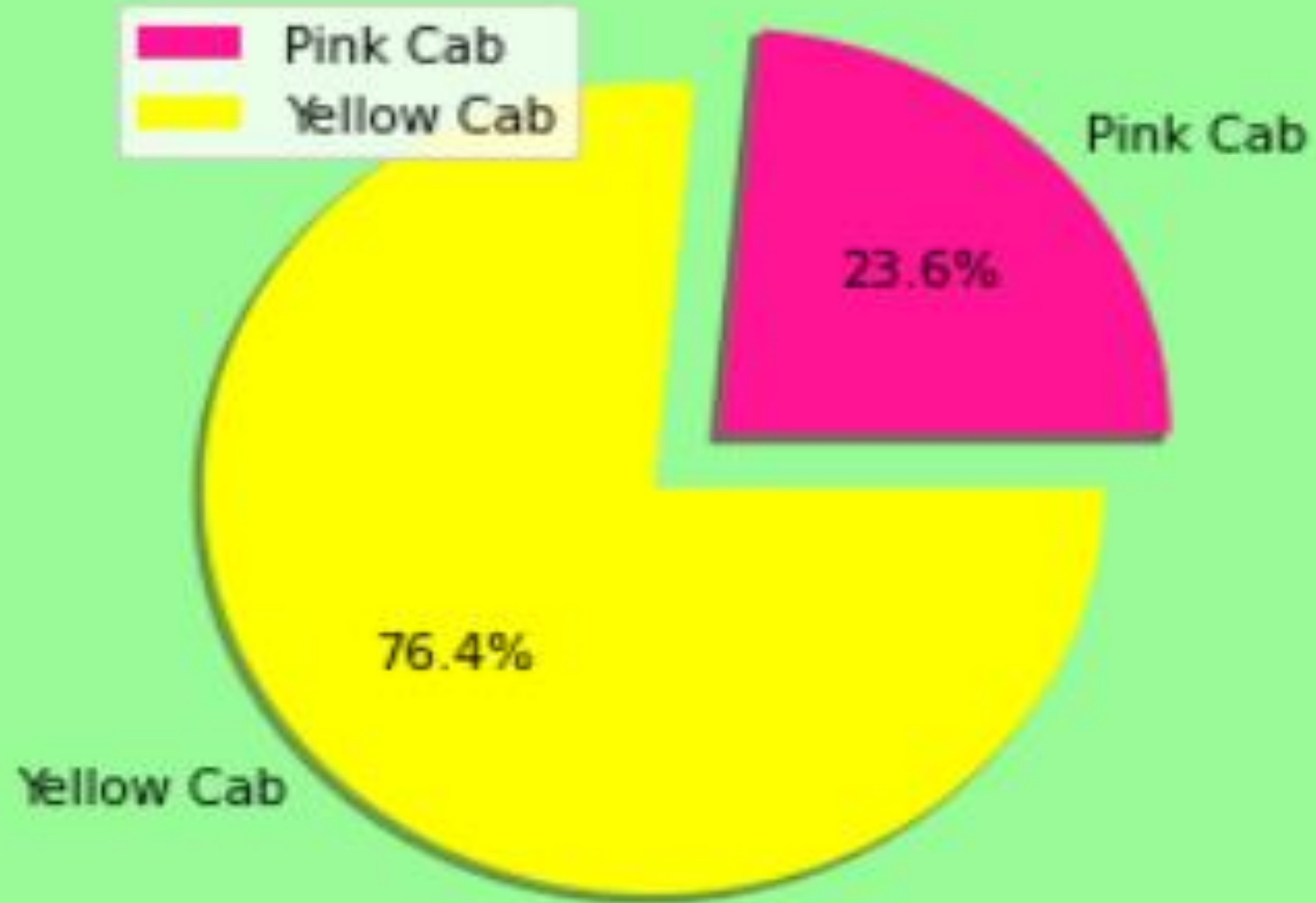
- Collect data
- Analyze the data
- Detect outliers
- Combine datasets
- Curate the data
- Feature engineering
- Detect correlations
- Analyze patterns
- Provide insights
- Tools used – Microsoft Excel, Python, Microsoft Power BI

Exploratory Data Analysis

- Datasets used:
 - Cab_Data.csv – Details of transaction for 2 cab companies
 - Customer_ID.csv – Mapping table that contains a unique identifier which links the customer's demographic details
 - Transaction_ID.csv – Mapping table that contains transaction to customer mapping and payment mode
 - City.csv – List of US cities, their population and number of cab users
 - US_Holiday_Dates_(2004-2021).csv - List of US holiday dates

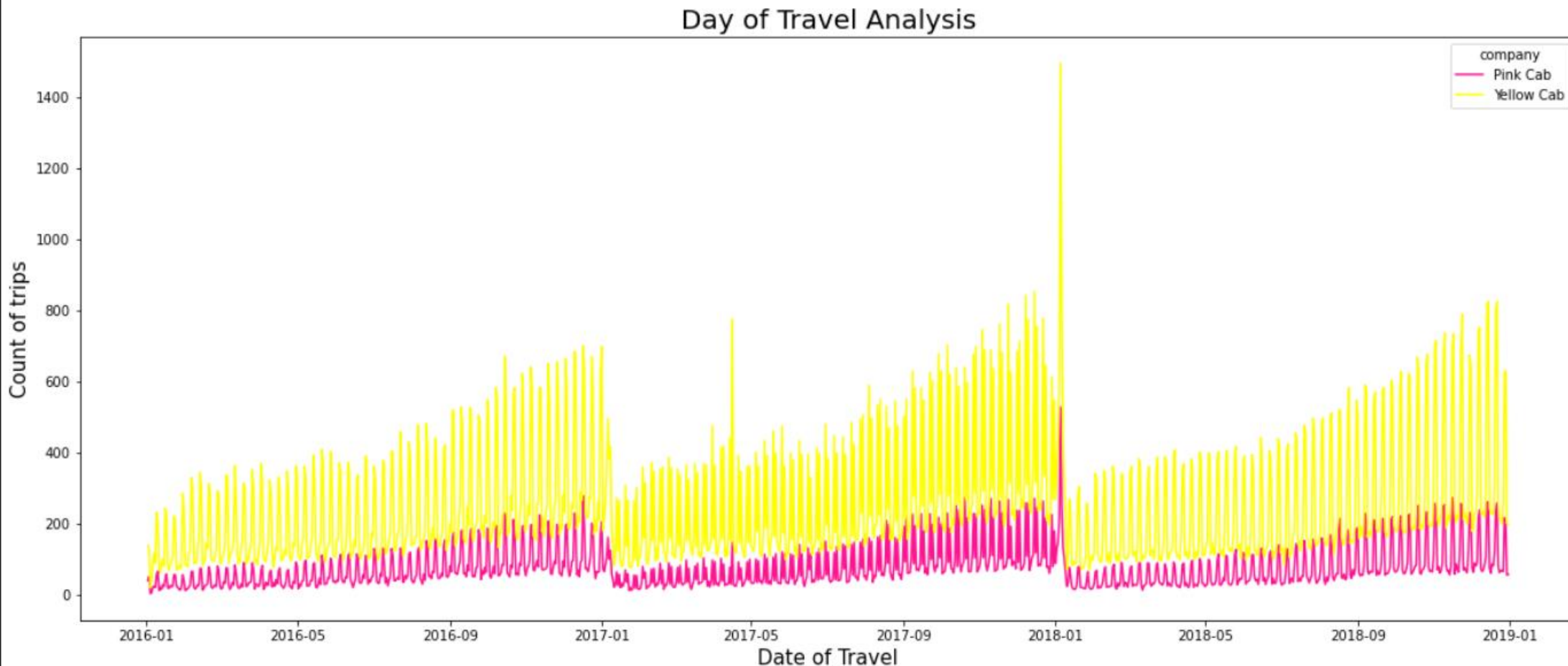


Exploratory Data Analysis



- Yellow Cab is about three-fourth of the Cab Industry as compared to Pink Cab.

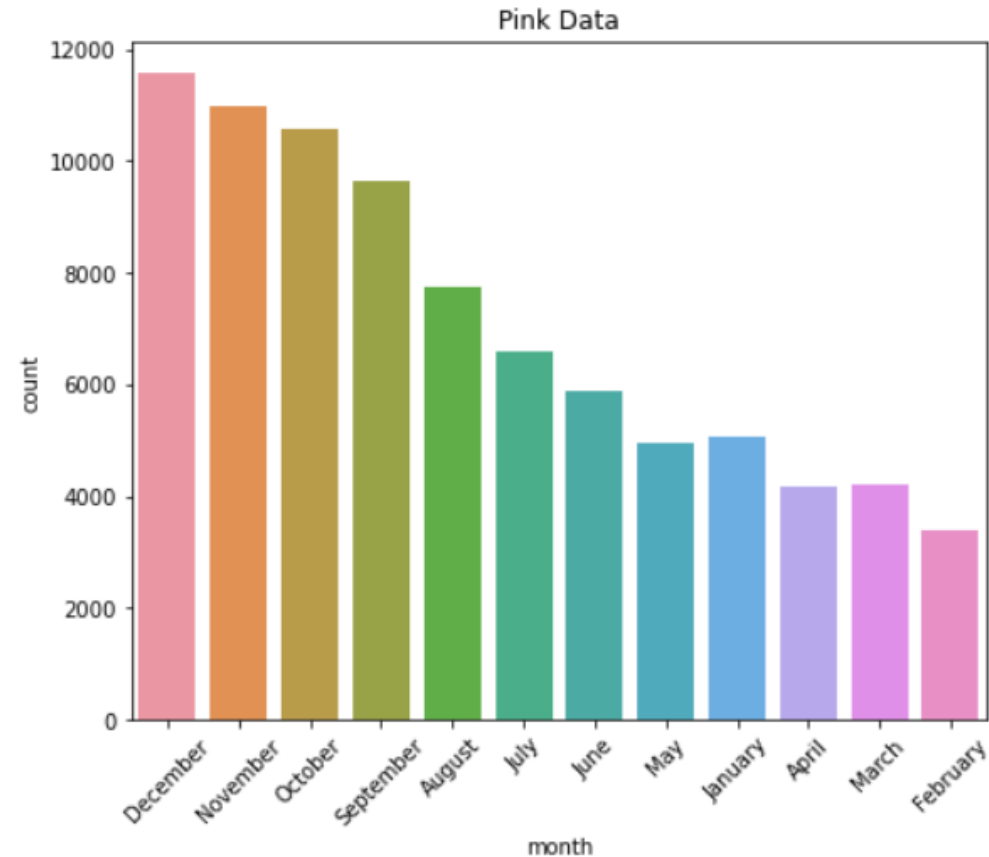
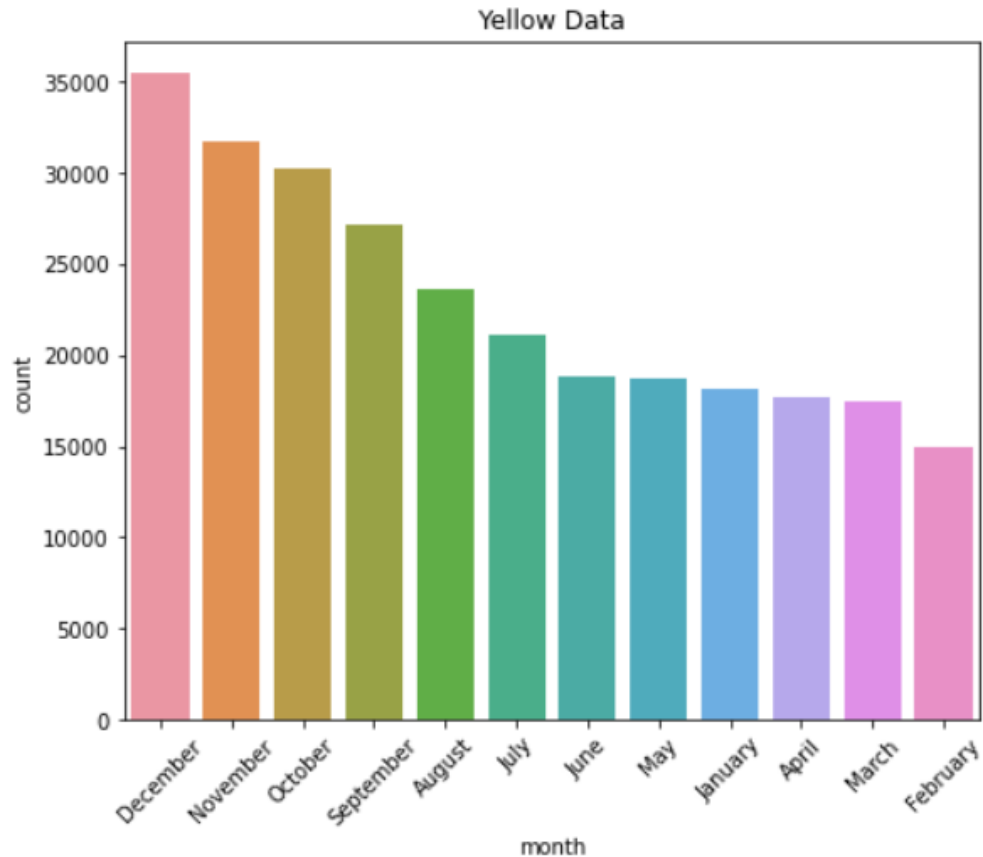
Seasonality: Date of Travel Analysis



- * The overall time analysis of data shows the seasonality of trips.
- * We can see a pattern for each year.
- * The count of trips is increasing throughout the year, from January to December.
- * The pattern repeats each year

Seasonality: Date of Travel Analysis

Month Analysis

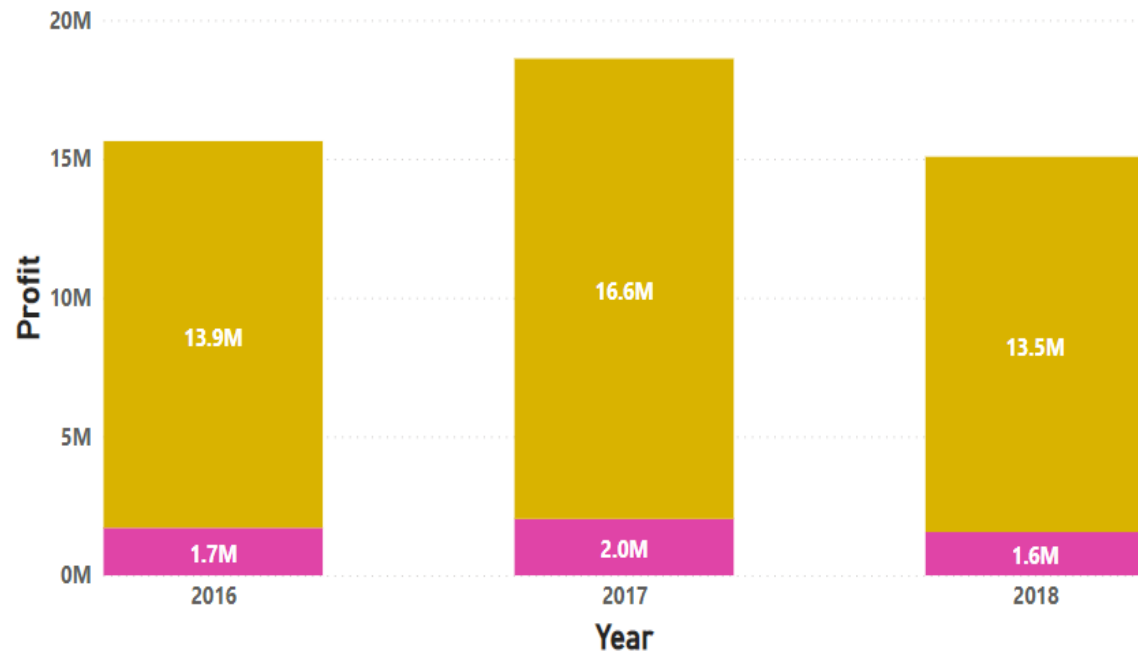


- December has the greatest number of trips for both cabs.
- February has the least.

Profit Analysis

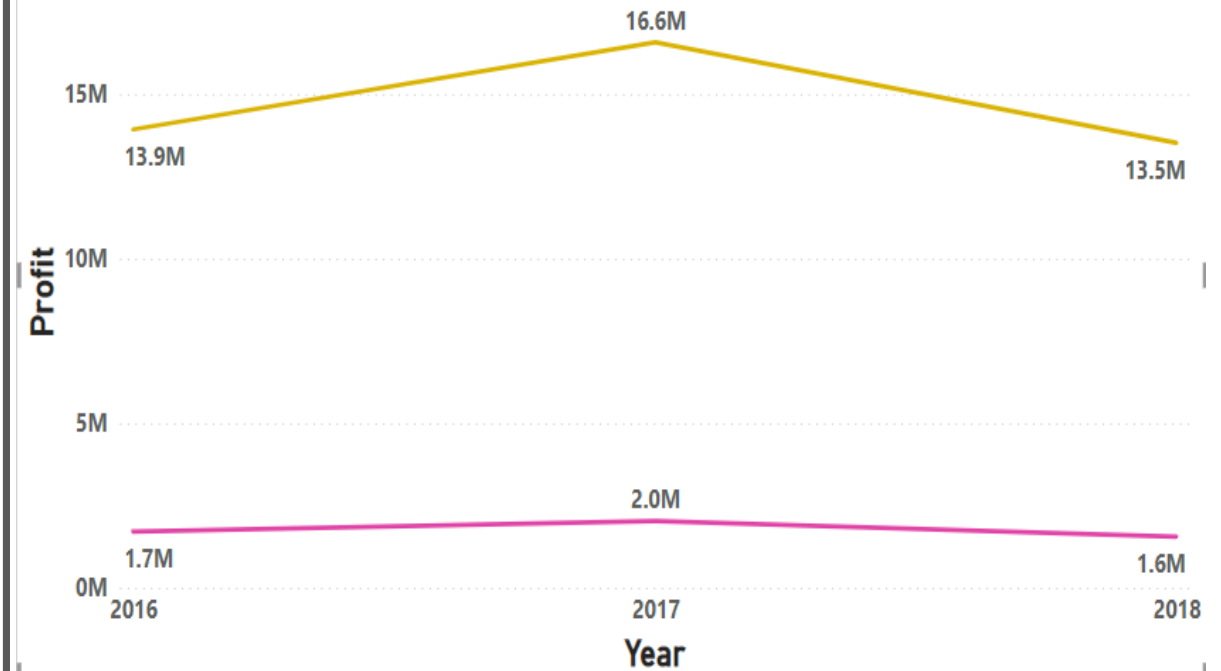
Profit by Year and Company

Company ● Pink Cab ● Yellow Cab



Profit by Year and Company

Company ● Pink Cab ● Yellow Cab

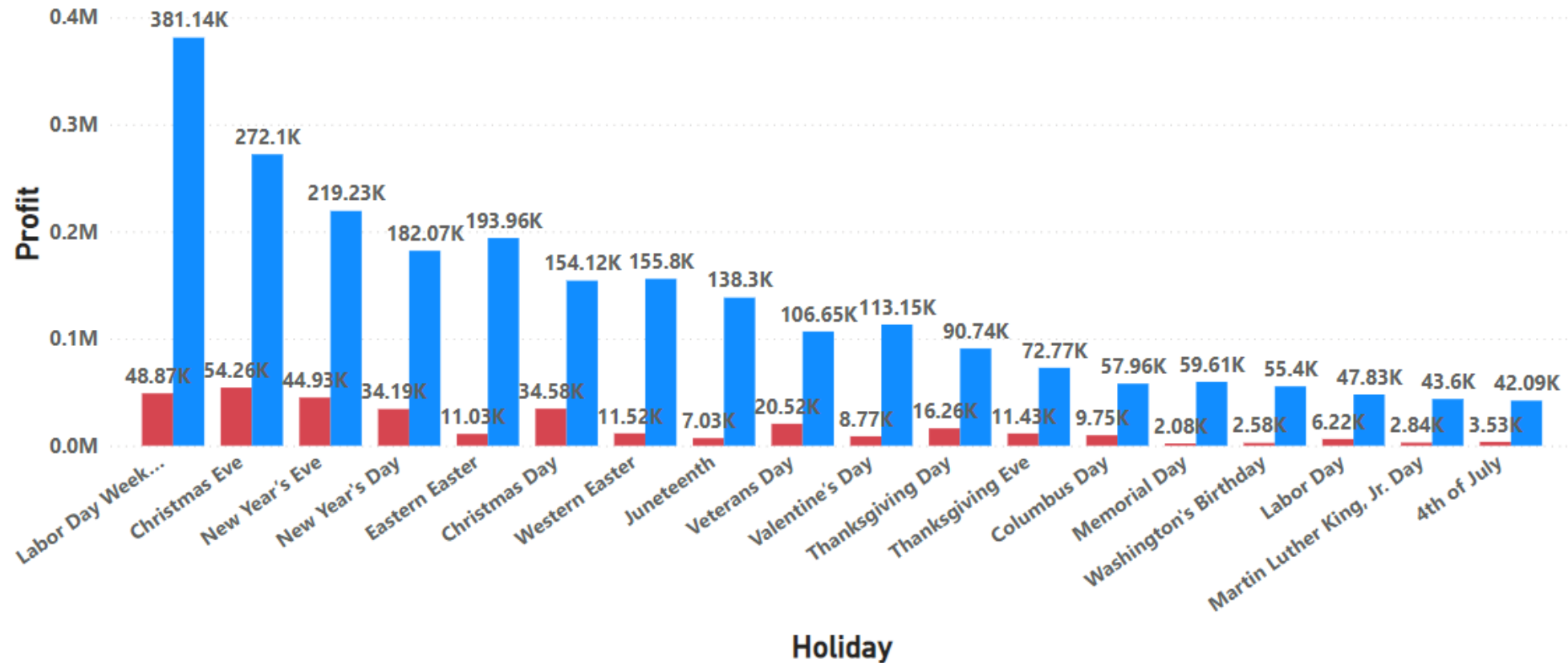


Yellow cab has more profit in all the given years than pink cab

Profit Analysis by Holidays

Profit by Holiday and Company

Company ● Pink Cab ● Yellow Cab

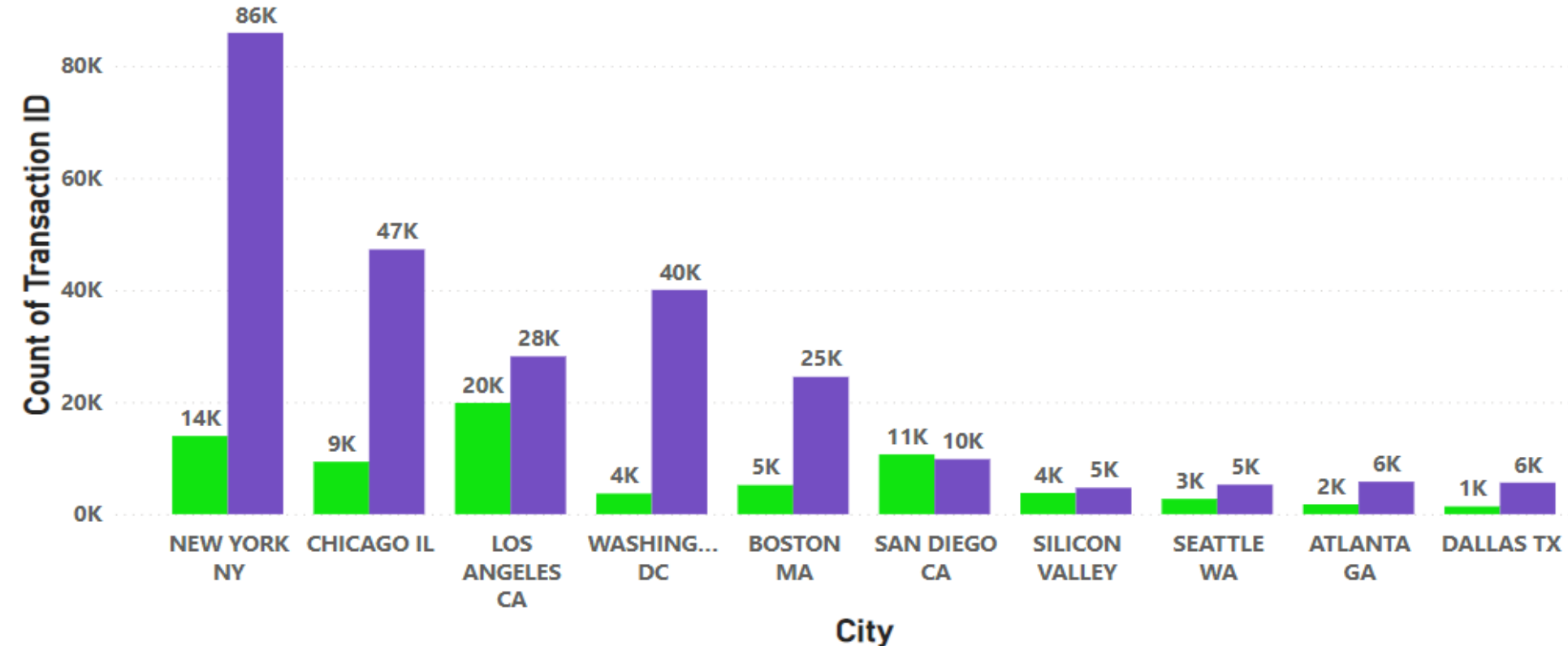


- Labor Day Weekend generated more profits for both cabs.
- Christmas Eve, New Year Eve, New Year Day and Christmas Day also generated higher profits

City Analysis

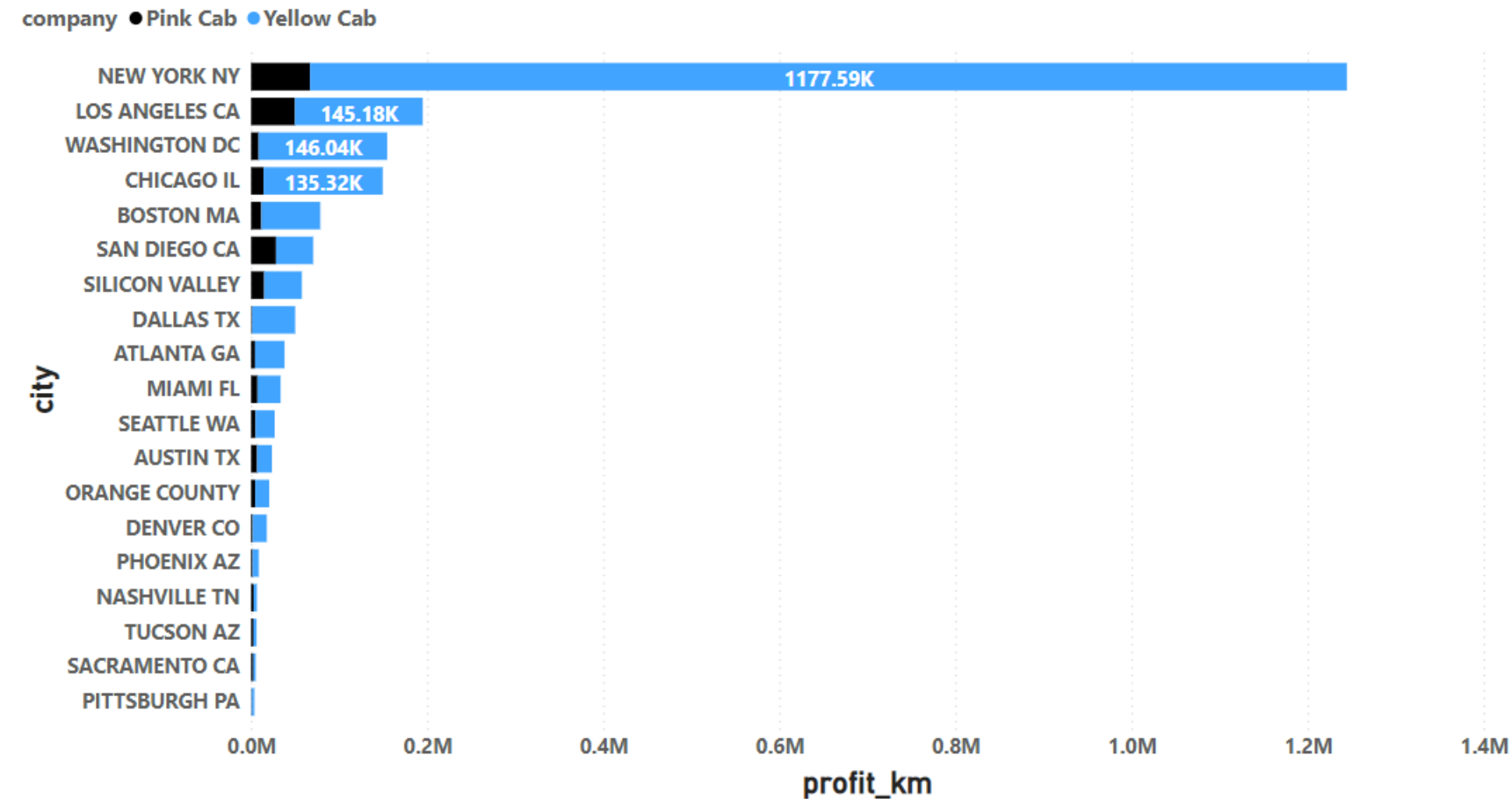
Top 10 Cities

Company ● Pink Cab ● Yellow Cab



- New York has more transactions.
- In New York, Yellow Cab is more popular.

Profit/km Analysis by Cities

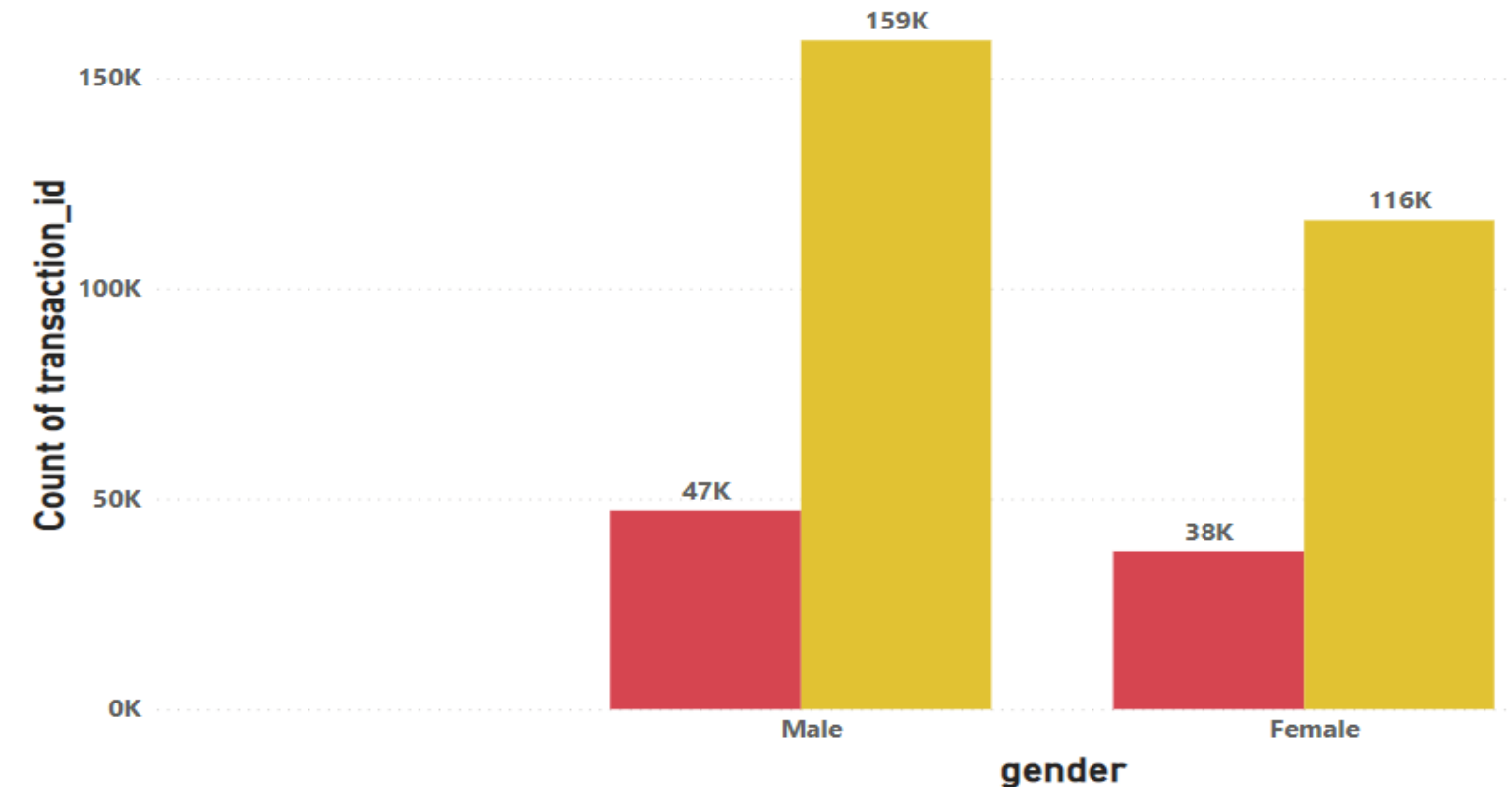


- New York city gives more profit per kilometers for both cabs.
- Yellow cab provides comparatively more profit/km.

Transaction Analysis by Gender

Transaction Analysis by Gender

company ● Pink Cab ● Yellow Cab

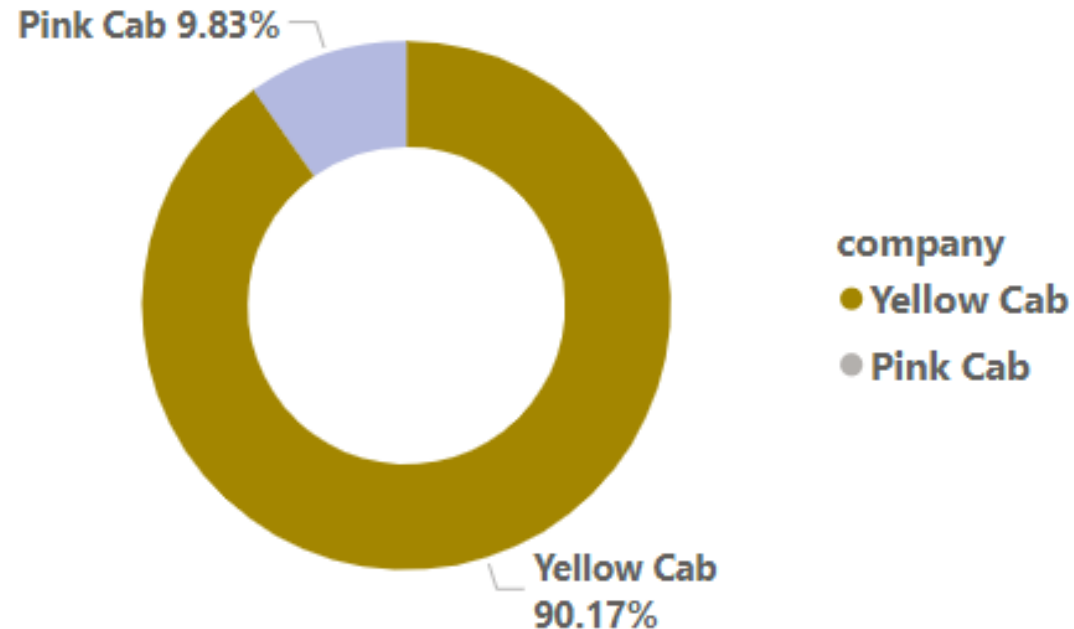


- Yellow Cab gets more rides irrespective of gender.

Profit % Analysis

Profit% by company

- Yellow Cab has 90.17% when profit percentage is considered.



EDA Summary

1. Seasonality:

Cab services have direct influence from dates of travel

1. Influence of Geography / cities
2. Profit Analysis
3. Holiday Analysis
4. Age, gender, income analysis

Recommendations

- Yellow Cab is the best choice for investment.
 1. It has more customers, more trips, in the analysis if daily, monthly and yearly basis.
 2. The general trend is towards yellow cab in all the cities.
 3. Profit generated by yellow cab is more than pink.
 4. Irrespective of holidays, gender or age, customers prefer yellow cab, hence it will be the better decision.

Thank You