



Data Glacier

Your Deep Learning Partner

G2M Cab Industry Investment Analysis

Virtual Internship: LISUM38

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Project Preview

- **Client:** XYZ, a US-based private equity firm, aims to capitalize on the expanding cab industry by identifying the most profitable investment opportunity among key competitors. XYZ requires a data-driven analysis to guide their decision-making.
- **Objective:** Deliver comprehensive insights that will enable XYZ to assess market dynamics, evaluate company performance, and determine the best potential investment for long-term growth and profitability.
- **Overview:**



Analyze financial, operational, and market data from competing cab companies.



Evaluate key performance indicators such as revenue growth, profit margins, customer base, and geographical reach.



Provide strategic recommendations based on data trends and forecasts to support XYZ's investment decision.

Datasets, Sources, and Data Preparation

Datasets and Sources:

Cab_Data.csv:
Transaction details
for two cab
companies.

Customer_ID.csv:
Demographic
mapping of
customers.

Transaction_ID.csv:
Information on
payment modes and
transaction details.

City.csv: US cities
with population and
cab usage data.

Timeframe: January 31, 2016 – December 31, 2018.

Total data points :359,392

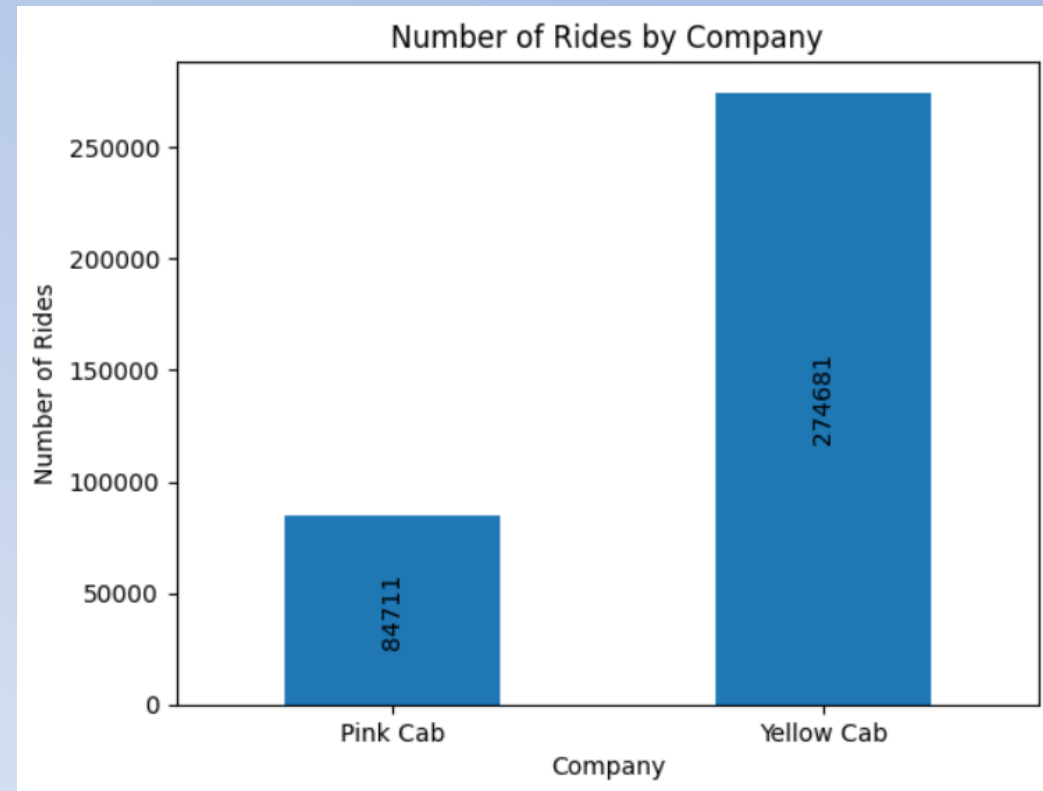
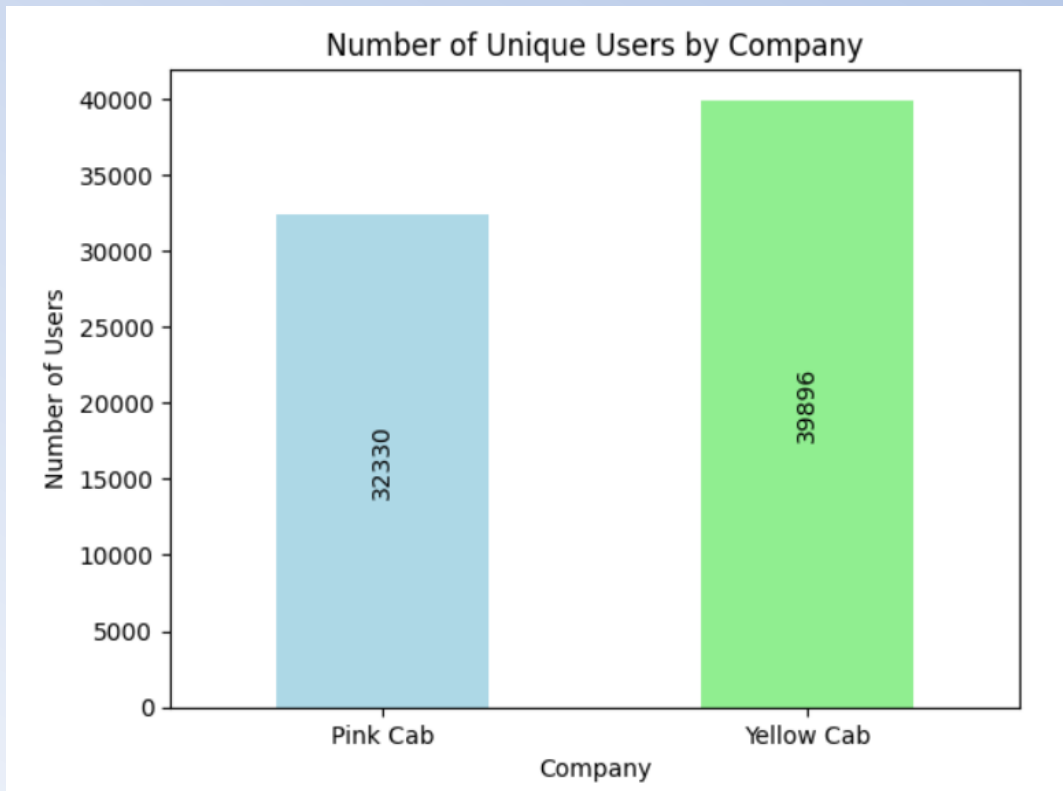
Assumption: City user counts represent all cab users.

Data Preparation and Cleaning:

- Investigated and removed duplicate entries.
- Merged datasets based on **customer IDs** and **transaction IDs**.
- Created new features, such as **Profit** (Price_Charged – Cost_of_Trip).
- Identified outliers and missing values.

Note: Outliers in trip duration were not treated due to insufficient trip details.

User Base Comparison:



- **Yellow Cab** has a **larger user base**, with approximately **7,566** more users than Pink Cab.
- The graph emphasizes Yellow Cab's **broader reach** and **higher popularity** compared to Pink Cab.
- This user base difference could translate into higher market penetration and customer retention for **Yellow Cab**.

Average Spend by City

Average Price per City

New York, NY:

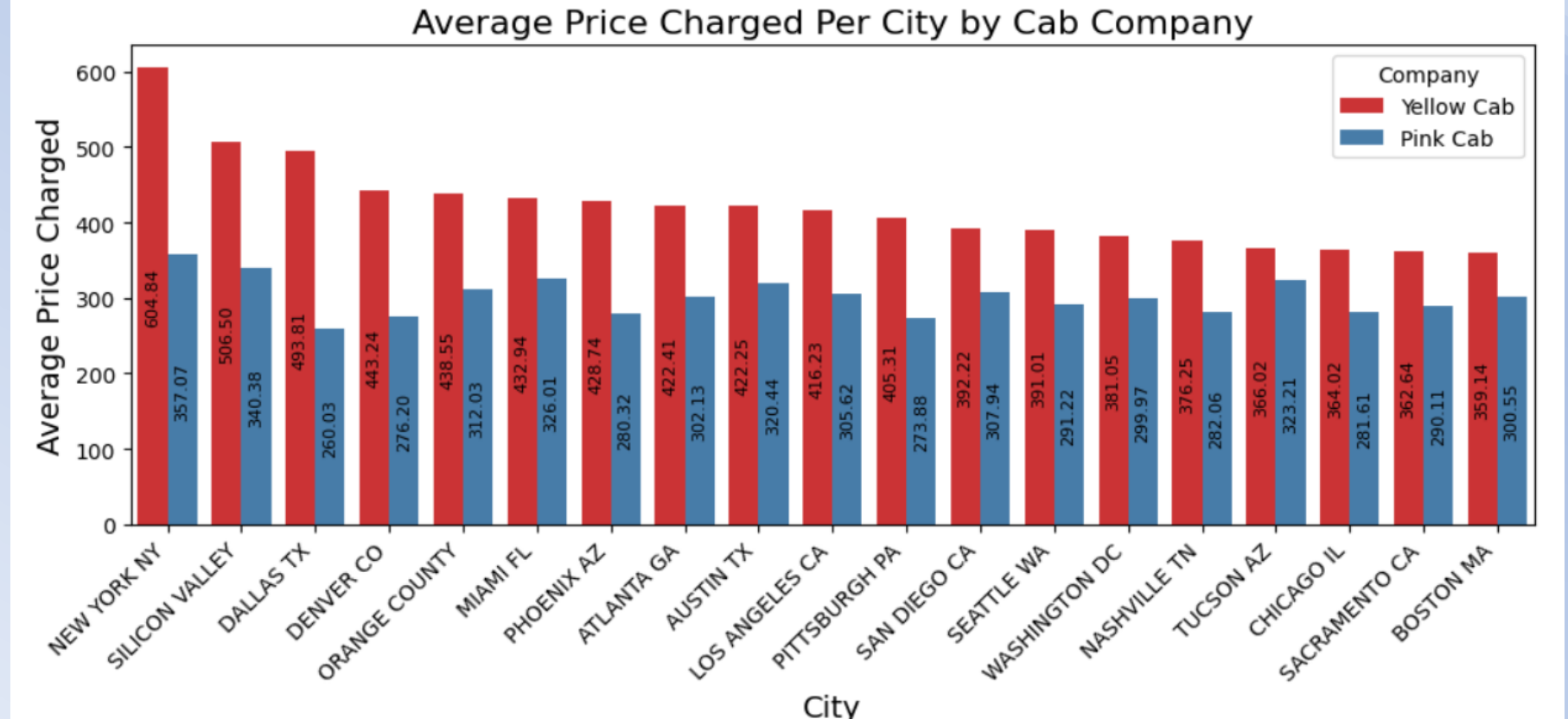
Yellow Cab: \$604.84

Pink Cab: \$357.07

Lowest Prices:

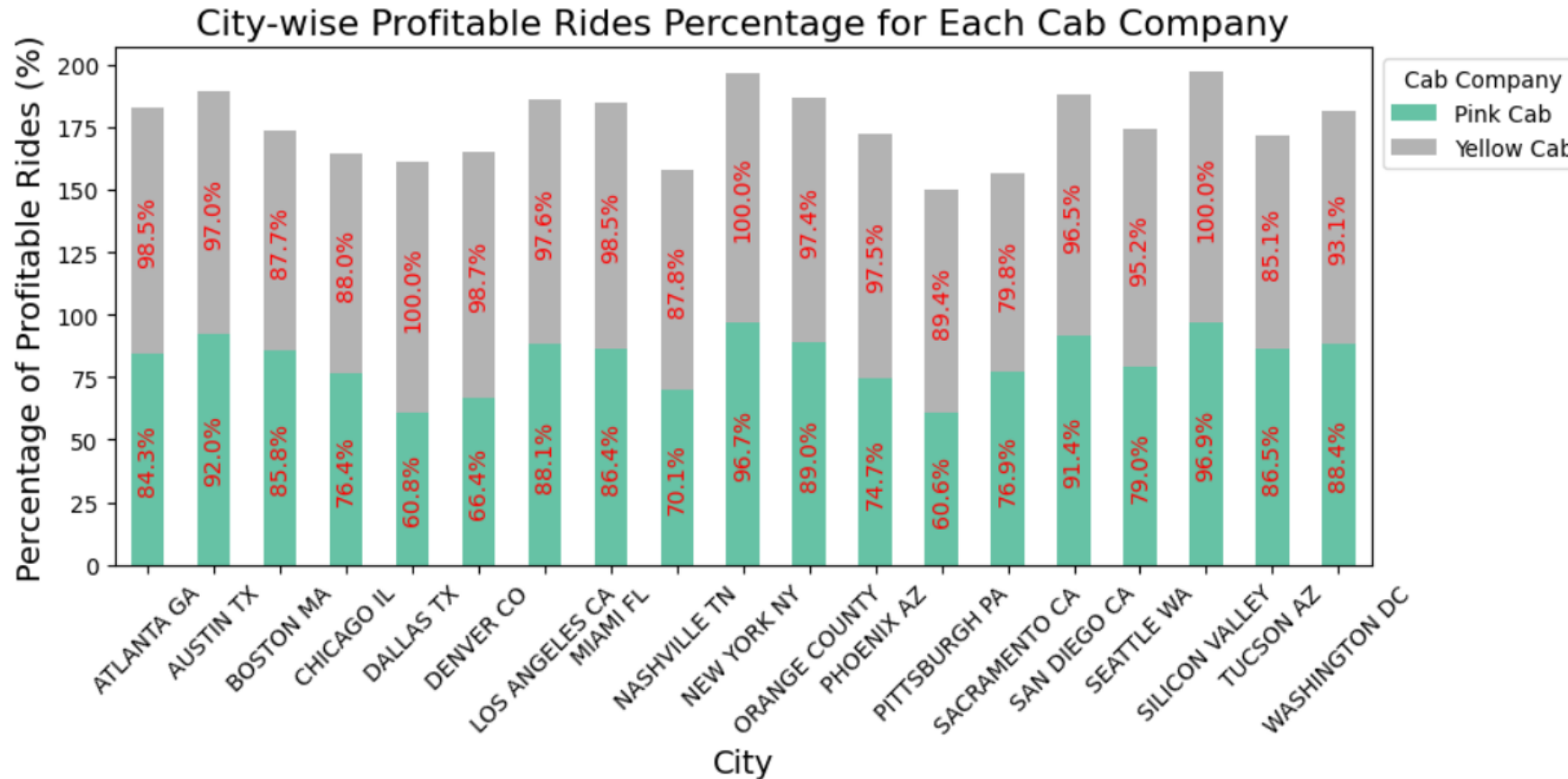
Dallas, TX: Lowest
for Pink Cab

Boston, MA: Lowest
for Yellow Cab



- **Yellow Cab** consistently charges **higher prices** than Pink Cab in most cities.
- The **largest price difference** is observed in **New York, NY**, where Yellow Cab charges **67% more** than Pink Cab.
- Both companies show their **lowest prices** in **different cities**: Dallas for Pink Cab and Boston for Yellow Cab, highlighting regional pricing strategies.

Comparison of Profitability Across Cities



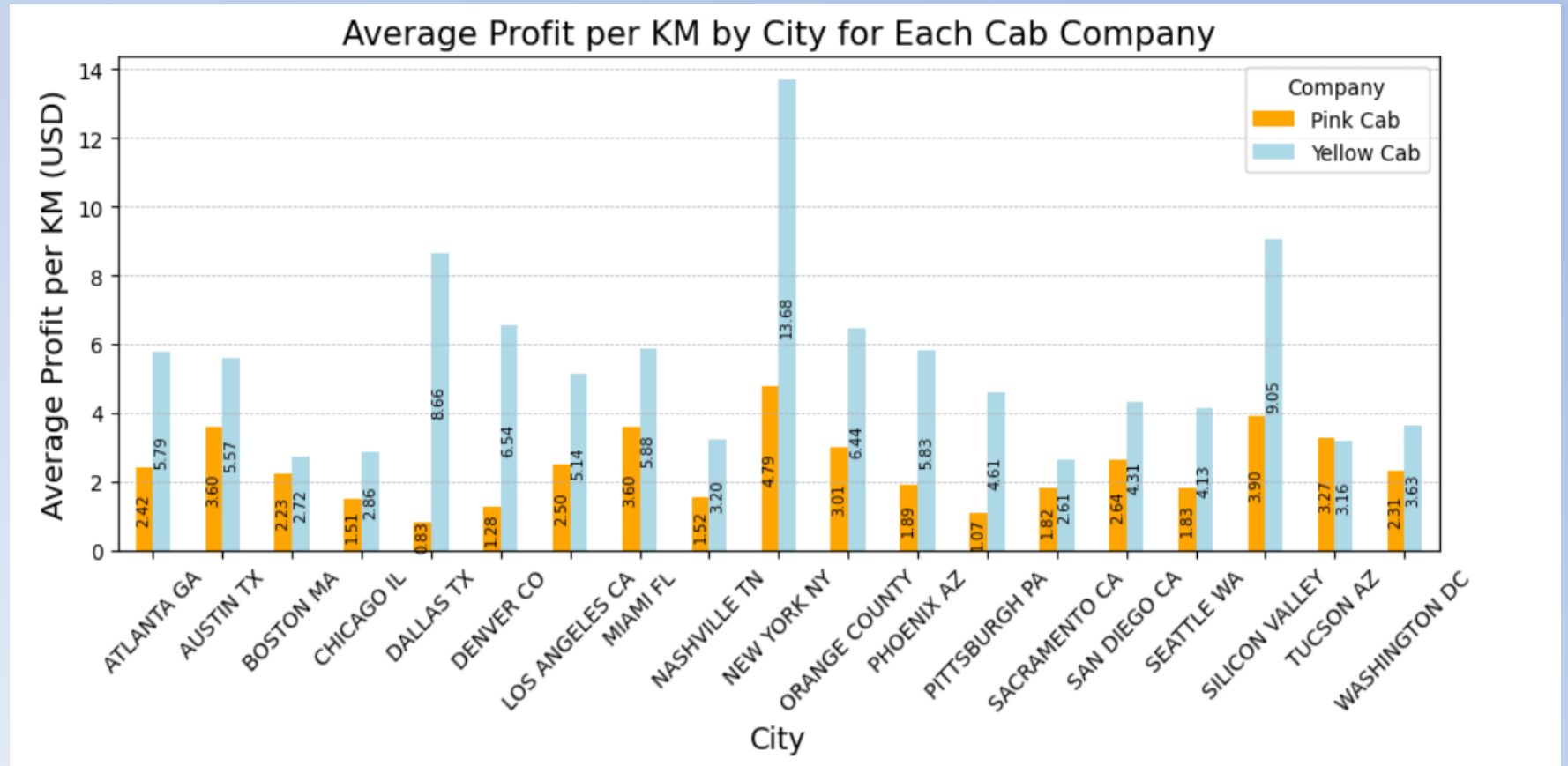
Profitable Ride Percentages:

- **DALLAS, TX:**
 - Pink Cab: 60.8%
 - Yellow Cab: 100%
- **NEW YORK, NY:**
 - Pink Cab: 96.7%
 - Yellow Cab: 100%
- **SILICON VALLEY:**
 - Pink Cab: 96.9%
 - Yellow Cab: 100%

- **Yellow Cab consistently outperforms Pink Cab** in terms of profitable rides across various cities.
- Cities like **DALLAS TX** and **NEW YORK NY** show **100% profitability** for **Yellow Cab**, significantly higher than **Pink Cab**.
- **Potential for Improvement:** Pink Cab may need to analyze its operations in cities where Yellow Cab demonstrates a clear **competitive edge**.

Average Profit per KM

- **Yellow Cab** consistently has **higher average profits per KM** than Pink Cab across most cities.
- **Notable profit differences** in cities like **New York, NY** and **Silicon Valley**, favoring Yellow Cab.
- In cities like **Boston, MA** and **Tucson, AZ**, the profit gap is narrower but still leans towards Yellow Cab.



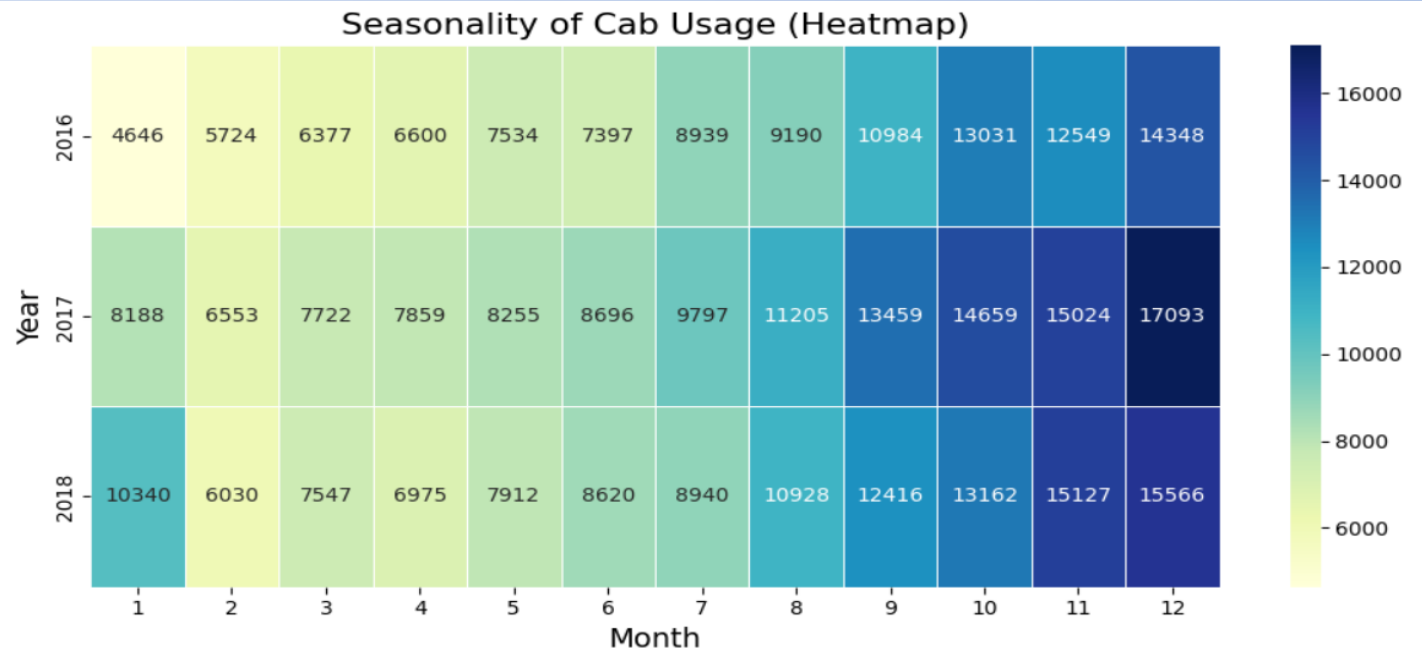
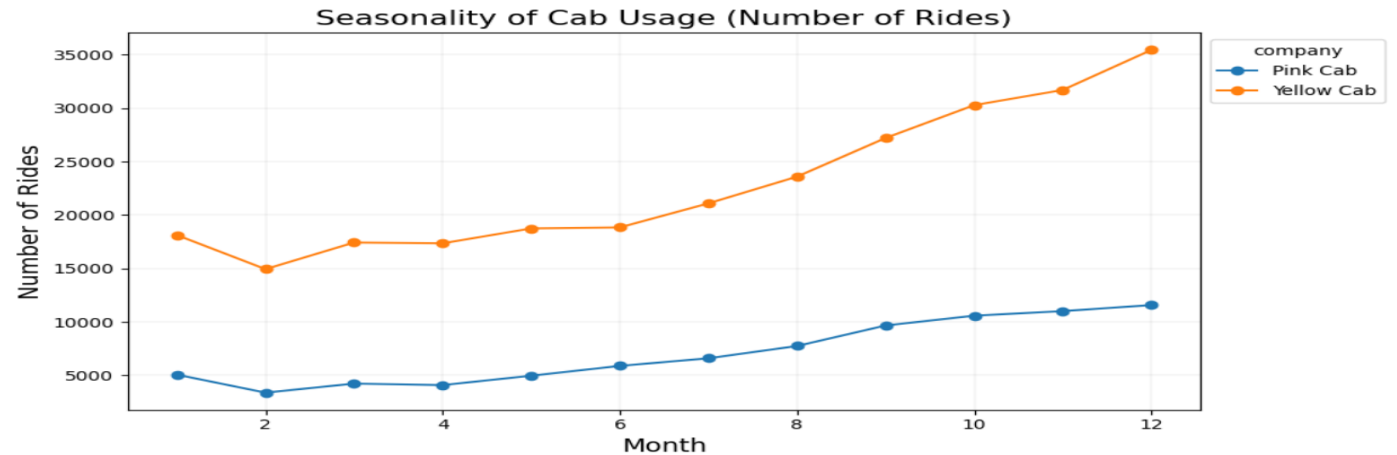
Monthly and Seasonal Cab Usage Trends

Ride Trends Over the Year :

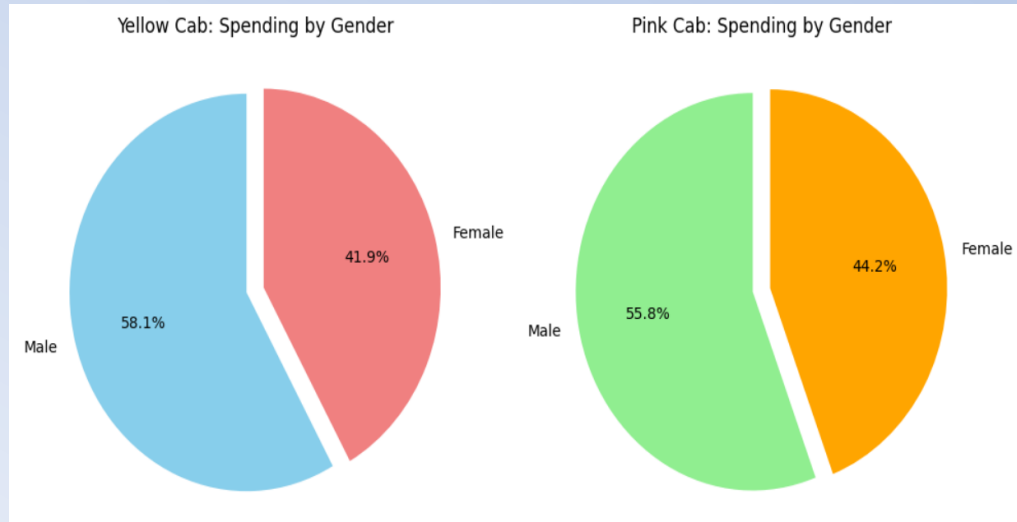
- **Yellow Cab** consistently outperforms **Pink Cab** in terms of the number of rides each month.
- **Peak rides** occur in the **12th month**, suggesting increased cab usage during this period.

Seasonal Cab Usage :

- **Heatmap** showcases cab usage across three years: 2016, 2017, and 2018.
- **Months (x-axis)** and **Years (y-axis)** display ride frequency, with darker shades indicating higher usage.
- Higher demand towards the **end of the year**, with the **dark blue** shades representing peak usage.



Transaction Volumes and Spending by Customer Demographics

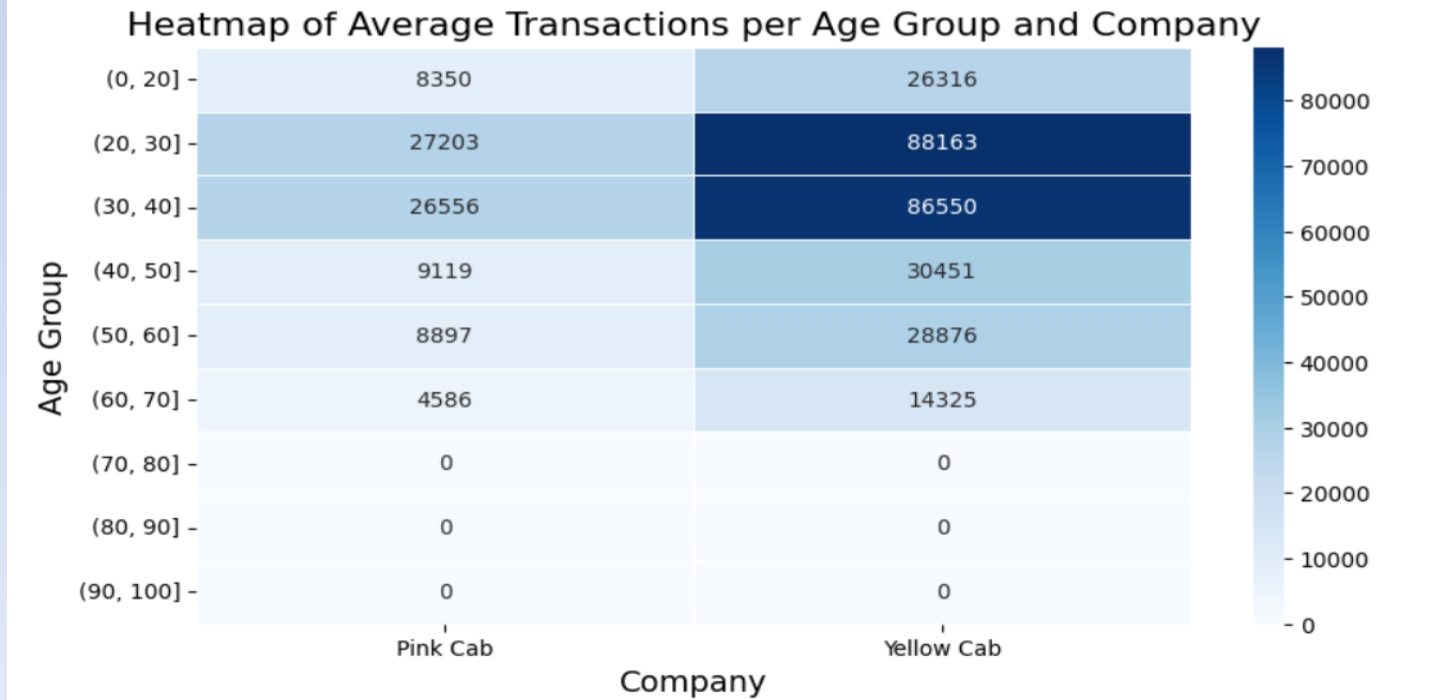


Gender-wise Spending Insights:

- **Males** contribute a **higher percentage** of spending than females for both companies.
- **Yellow Cab** exhibits a **larger gender gap** compared to Pink Cab, indicating a slightly higher male spending dominance.

Key Insights on Age Group Transaction Volumes:

- **Yellow Cab** has **higher transaction volumes** across all age groups compared to Pink Cab.
- The **highest concentration** of transactions for both companies falls within the **'20-30'** and **'30-40'** age brackets.
- The **visual representation** uses **darker shades** to indicate higher transaction volumes, with **Yellow Cab** showing significantly more activity overall.

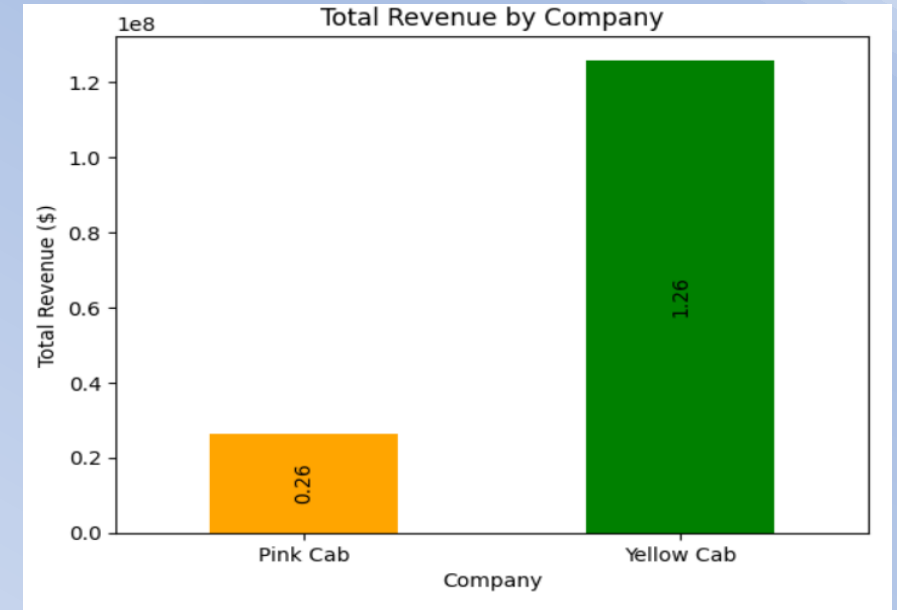
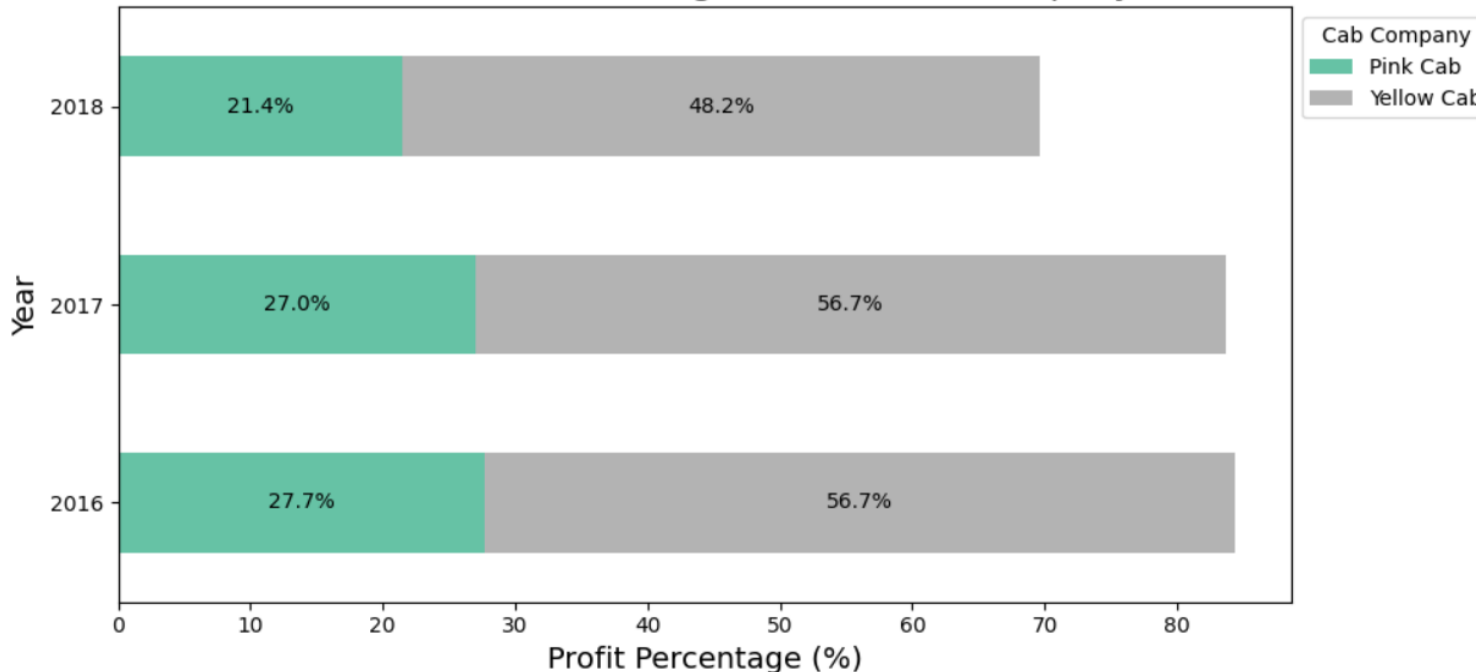


Revenue and Profit Trends

Profit Percentage Trends (2016-2018):

- **Yellow Cab** consistently outperformed Pink Cab in **profit percentage** across all three years.
- In **2017**, Yellow Cab had a profit percentage of **56.7%**, which decreased to **48.2%** in 2018.
- **Pink Cab's** profit percentage remained relatively **stable** around **27%** throughout the years, with a **slight decrease** in 2018 to **21.4%**.

Year-wise Profit Percentage for Each Cab Company

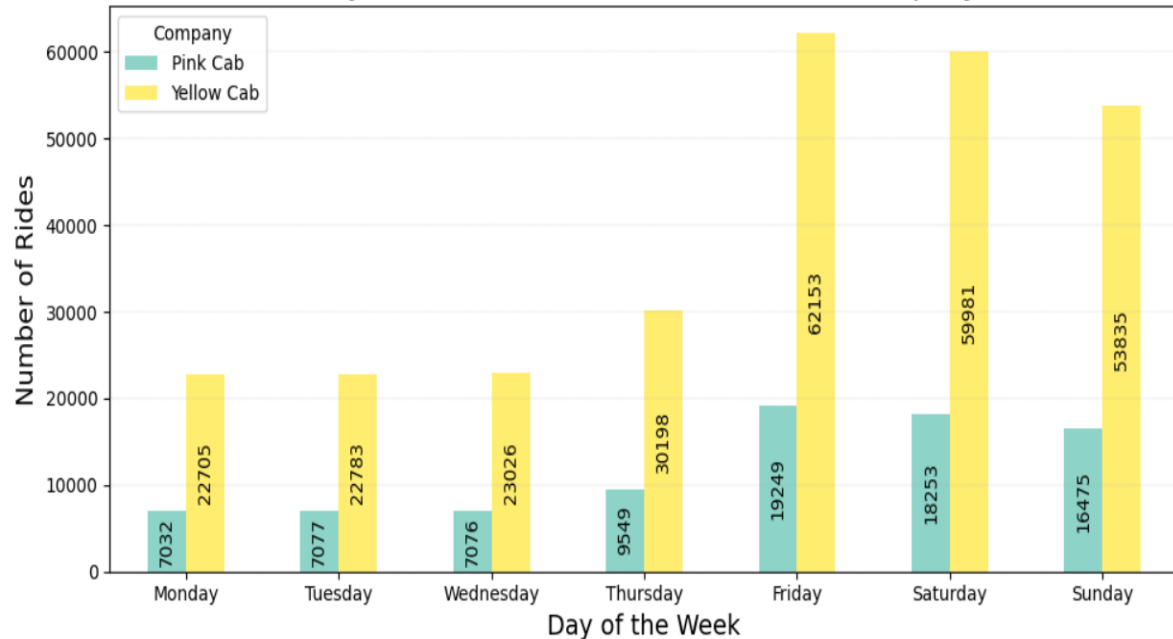


Total Revenue Comparison:

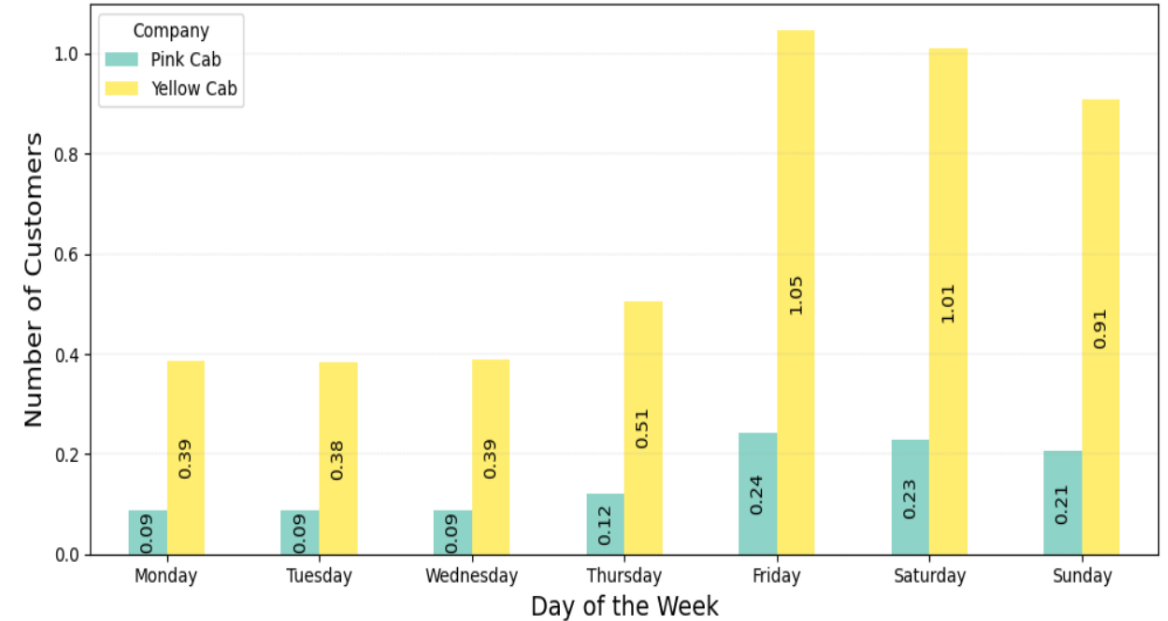
- **Yellow Cab** has significantly higher total revenue at **\$1.26 million** compared to Pink Cab's **\$0.26 million**.
- The **chart visually highlights** the substantial revenue gap between the two companies, indicating Yellow Cab's **stronger financial performance**.

Daily Ride and Customer Trends

Day-wise Number of Rides for Each Cab Company

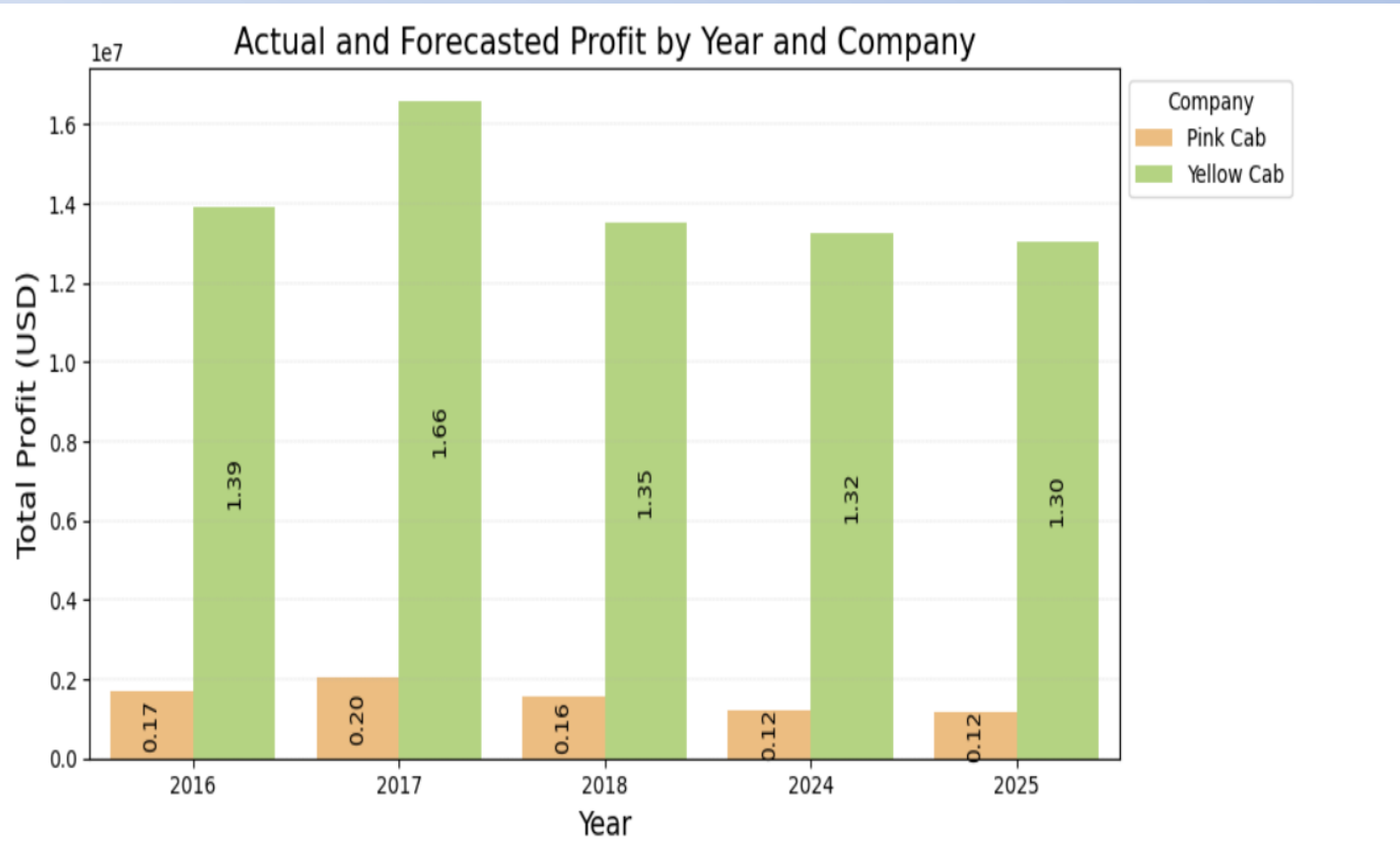


Day-wise Number of Customers for Each Cab Company



- **Yellow Cab** consistently outperforms **Pink Cab** in both the **number of rides** and **number of customers** across all days of the week.
- **Peak Days:** Both companies experience the **highest activity** on **Fridays, Saturdays and Sunday** with **Yellow Cab** having a significantly higher number of rides and customers on these peak days, indicating its **greater popularity** during weekends.
- **Low Days:** The **lowest activity** for both companies occurs on **Tuesdays**, but **Yellow Cab** still maintains a larger customer base and more rides compared to **Pink Cab**.
- **General Trend:** The data highlights that **Yellow Cab** is the **more popular choice** overall, consistently showing higher numbers in both rides and customers on **every day of the week**.

Profit Forecast Analysis



- The bar chart shows the actual and forecasted profits for both **Pink Cab** and **Yellow Cab** from 2016 to 2025.
- **Yellow Cab** has consistently **higher profits** compared to **Pink Cab**, with significant gains in 2016 and 2017.
- **Pink Cab's profits** are considerably lower across all years, highlighting the **competitive gap** between the two companies.
- Both companies are projected to experience a **slight decline in profits** in the upcoming years (2024 and 2025).
- Despite the projected decrease, **Yellow Cab** will maintain a much stronger financial position than **Pink Cab**.

This forecast reflects **Yellow Cab's dominance** in profitability and suggests both companies may face challenges in maintaining current profit levels in the future.

Conclusion and Recommendations

Conclusions:

- **Profitability:** Yellow Cab consistently outperforms Pink Cab in profits and operational efficiency.
- **Customer Base:** Yellow Cab has a larger and more active customer base, especially on weekends.
- **Growth Trends:** Yellow Cab exhibits potential for rapid growth, while Pink Cab shows stable but slower trends.
- **Market Performance:** Yellow Cab holds a competitive edge across key metrics.

Recommendations:

- **Investment Opportunity:** Prioritize investment in Yellow Cab for better returns.
- **Pink Cab Strategies:** Focus on targeted marketing, improved service, and customer loyalty to boost market share.
- **Market Monitoring:** Utilize data analytics for ongoing trend assessment and strategy adaptation.
- **Innovation:** Invest in technology to enhance customer experience and operational efficiency.
- **Sustainability:** Explore eco-friendly initiatives to attract environmentally conscious customers.

Thank You!



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