

# SUPPLY- DEMAND GAP

-Assignment Submission



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# **ABSTRACT : UBER Supply-Demand Gap**

## ➤ **Problem Statement**

Driver Cancellations and Non-Availability of cabs to and from Airport leading to loss of potential revenue.

## ➤ **Objective**

To identify the Supply-Demand gap in cabs from Airport to City and vice versa.

## ➤ **Research Questions**

1. Identify the most pressing problems for Uber.
2. What is the gap between supply and demand to and from Airport.
3. What might be the reason for this supply demand gap.
4. Frequency of rides from Airport to city or city to Airport w.r.t time of day.
5. Recommend some ways to improve the supply-demand gap.

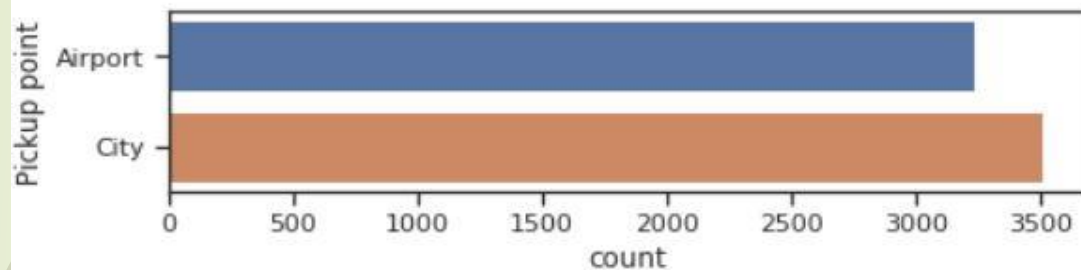
## ➤ **Data Used for Analysis**

- The data used is only to and from Airport.
- Analysis has been done on data of 5 days.

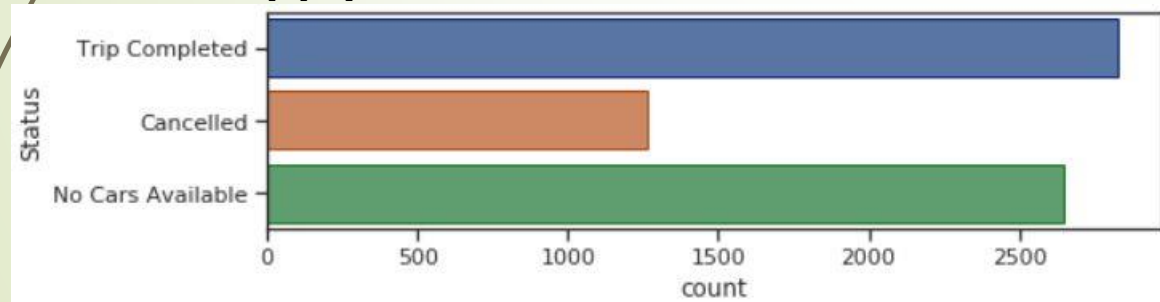


# The Problem

## Overall Demand from Airport and City



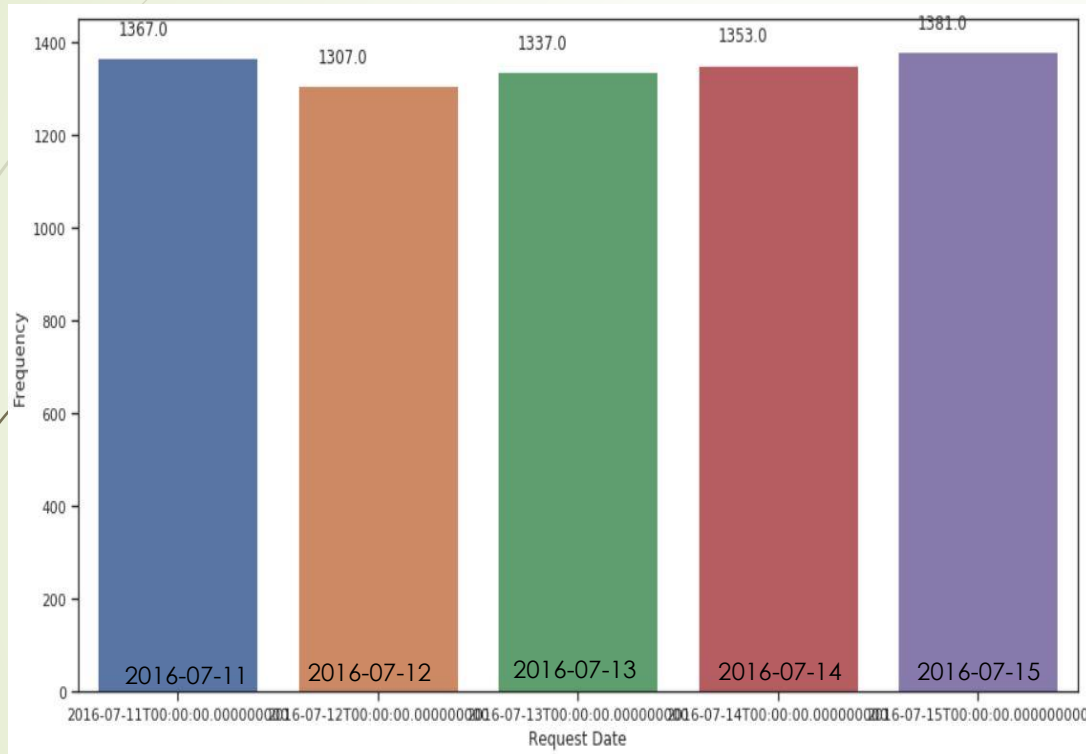
## Overall Supply to Demand



- ❑ The **Demand** for cabs is almost equivalent in Airport and Cities.
- ❑ There is a huge gap in **Supply** and the trips completed as can be seen.
- ❑ More than 50% of the trips are not completed due to **Cancellation** by the Cab Driver or **Unavailability** of Cabs.



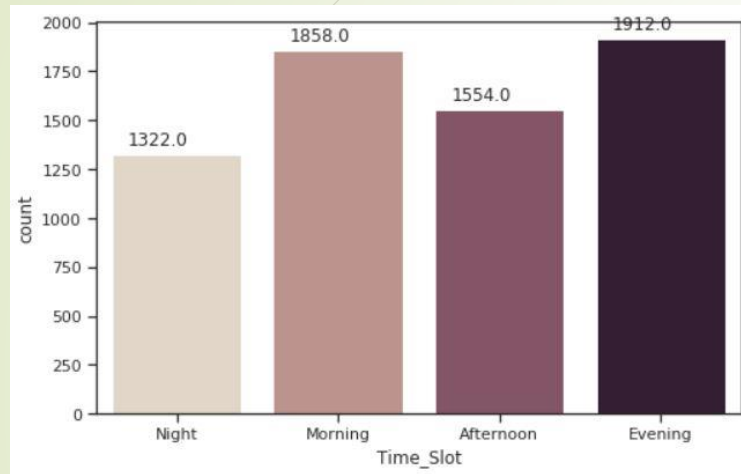
## Overall Demand based on Date



- ❑ The **Demand** for cabs is almost same Irrespective of the day and date.
- ❑ The demand is highest on **2016-07-15** which is approximately **1381**.
- ❑ The demand varies from 1307 to 1381 In the given week.

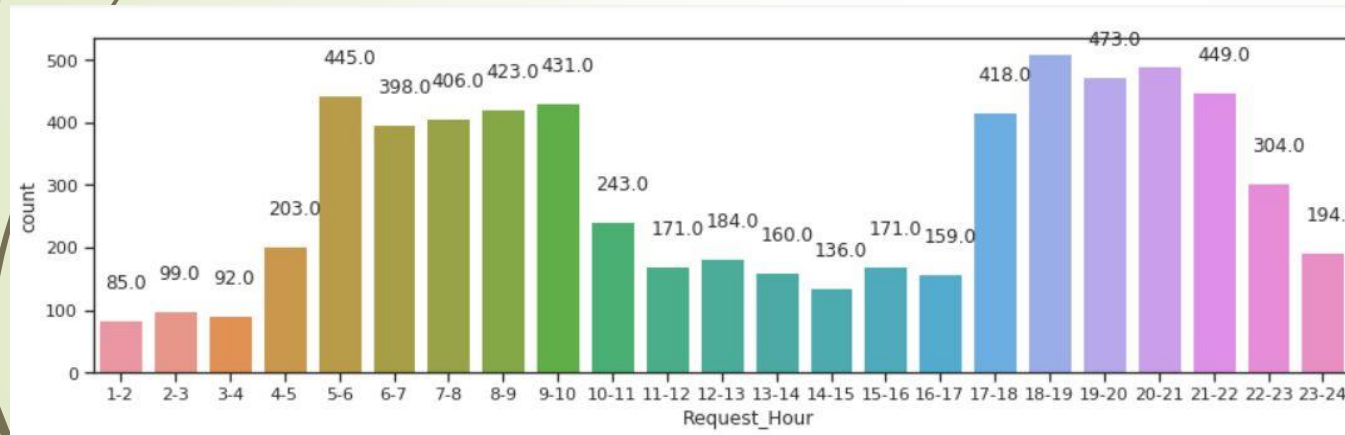


# Overall Demand based on Time



❑ The demand is high mainly in the **Evening** time that is from 6 pm to 12 am.

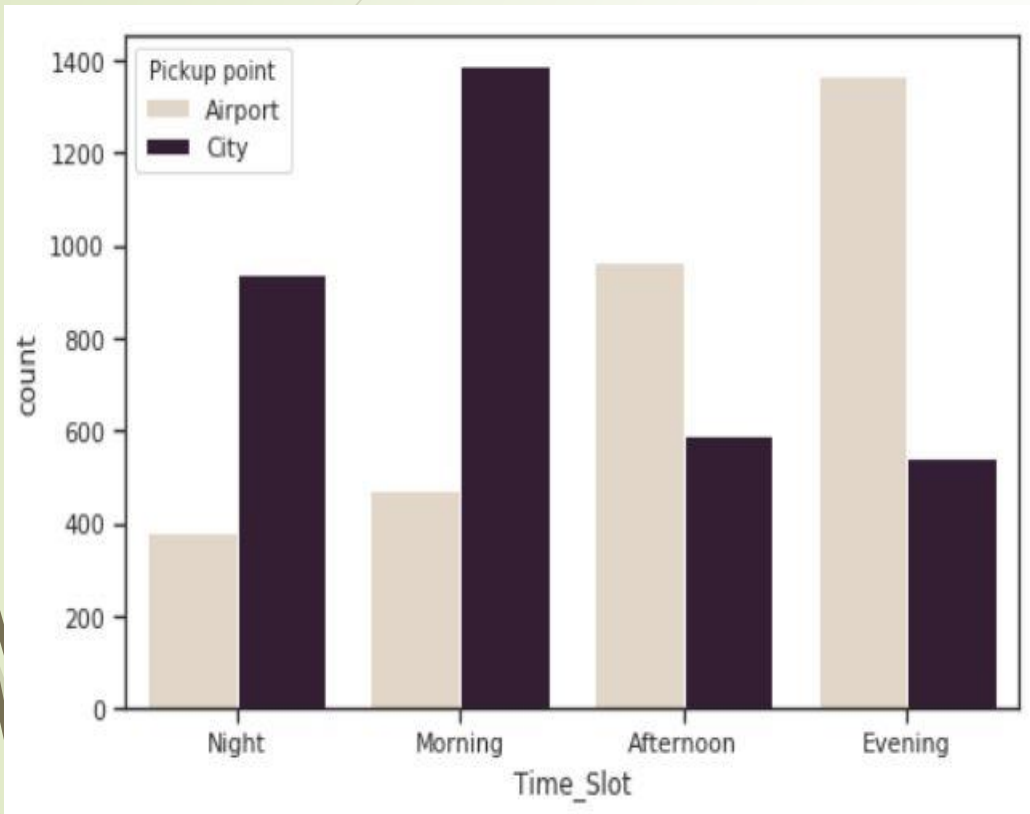
❑ The demand is lowest in **Night** that is between 12am to 6am due to lower amount of lights at that time.



❑ The demand is **maximum** from 6 pm to 7 pm due to large number of flights Landing in the provided hour while **minimum** in 2 pm to 3 pm due to lack of flight timings in that duration.



## Overall Demand based on Time and Location.



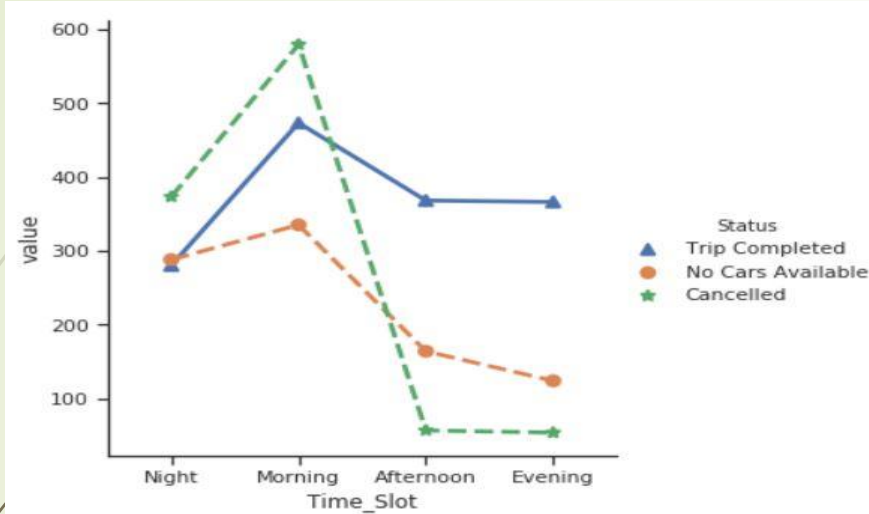
- ❑ There is a high demand of cabs from Airport to City in **Evening** time due to more international flights arriving at the airport from 6 pm to 12 am. Hence **more** customers coming to City and **less** going at that time.
- ❑ There is high demand of cabs from City to Airport in the **Morning** time due to more flights boarding from 6 am to 12 pm .Hence **more** customers coming to Airport in the morning while **less** leaving it .





# Supply Based on Location & Time

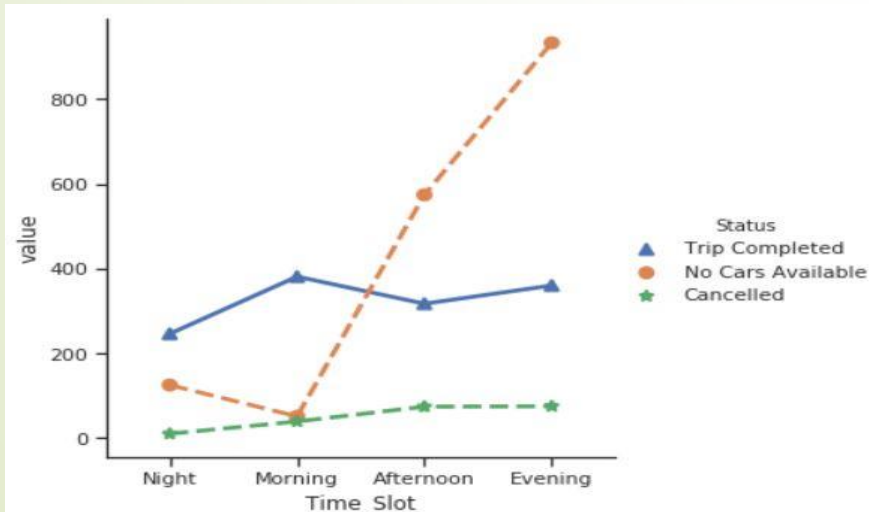
From Airport to City



❖ From Airport to City :

- There is a **shortage** of supply of cabs in Night and Morning time i.e. from 12 am to 12 pm.
- Large numbers of cabs are **cancelled** in morning.
- Almost everyday 150-350 times per day cabs are not available.

From City to Airport



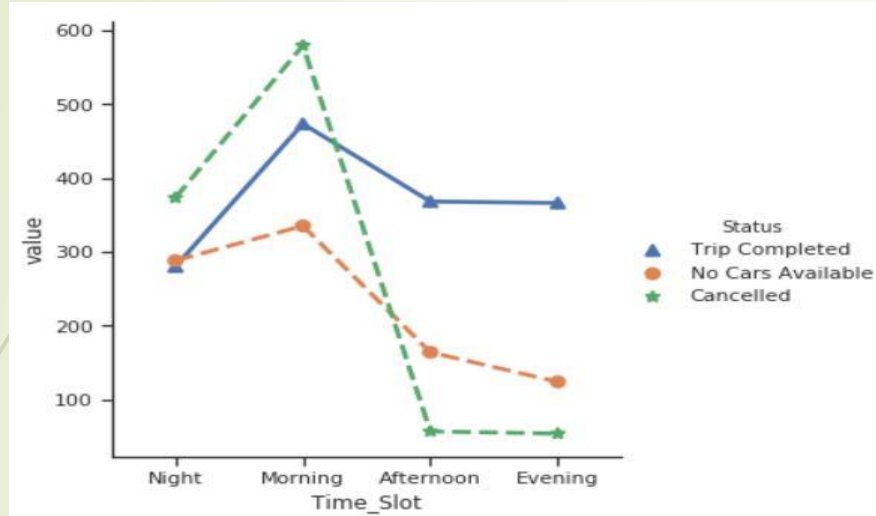
❖ From City to Airport :

- There is a **shortage** of supply of cabs in the Afternoon and Evening time i.e. from 12 pm to 12 am.
- There is a huge number of **unavailability** of cabs in the Afternoon and Evening time .
- **Cancellation** of cabs is very less when the customers travel from City to Airport.



# SUPPLY-DEMAND GAP

From Airport to City



## ❖ From Airport to City :

➤ During Night and Morning(12 am to 12 pm)

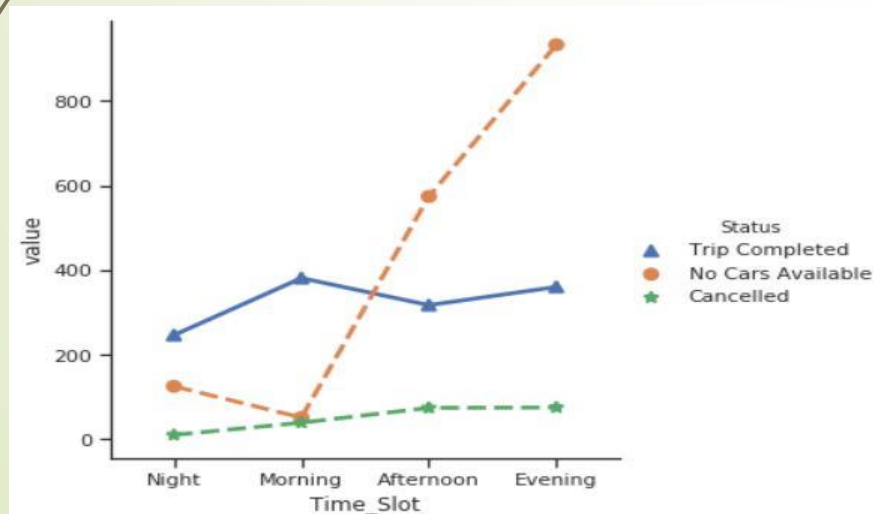
❑ High Demand

❑ Low Supply

✓ More landing flights and less boarding flights.

✓ Shortage of cabs.

From City to Airport



## ❖ From City to Airport :

➤ During Afternoon and Evening(12 pm to 12 am)

❑ High Demand

❑ Low Supply

✓ Shortage of cabs available is the biggest reason.





# Possible Solutions and Recommendations

- It was found that there was higher demand of cabs during particular periods of time but the cabs leaving the airport were much more than the cabs entering it.
  - ✓ More wages to be given to the drivers who work during this time .
  - ✓ Customers can be charged much more during the rush hour for trips to and from Airport.
  
- The distance from airport to city is very large as well as the average time it takes to move between the two places is around 52 minutes. So going from city to Airport and coming back without a ride doesn't makes much sense. As a result the cab drivers have to wait a lot for the next customer. Consequently , many of the drivers cancel the ride .
  - ✓ Drivers with good rating should be provided with equally good incentives that will encourage the drivers more to not cancel the cabs as cancelling would result in lower ratings.
  - ✓ Customers booking cabs in advance such as 4-5 hours before or before boarding the flights should be given discounts. As a result Uber will have advanced information of bookings so that it can manage the timings for the cabs to travel from city to airport and come back to City in the least time possible.
  
- There was a shortage of cabs in general .
  - ✓ More cabs to be provided in the cities.
  - ✓ Special Airport cabs to made for the Late Nights that can charge more than ordinary cabs but to eventually decrease the non-availability.
  
- Educating drivers about these supply-demand gaps.



***THANK YOU***