

# Uber Assignment Submission



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# Uber Demand Supply Analysis

## Abstract:

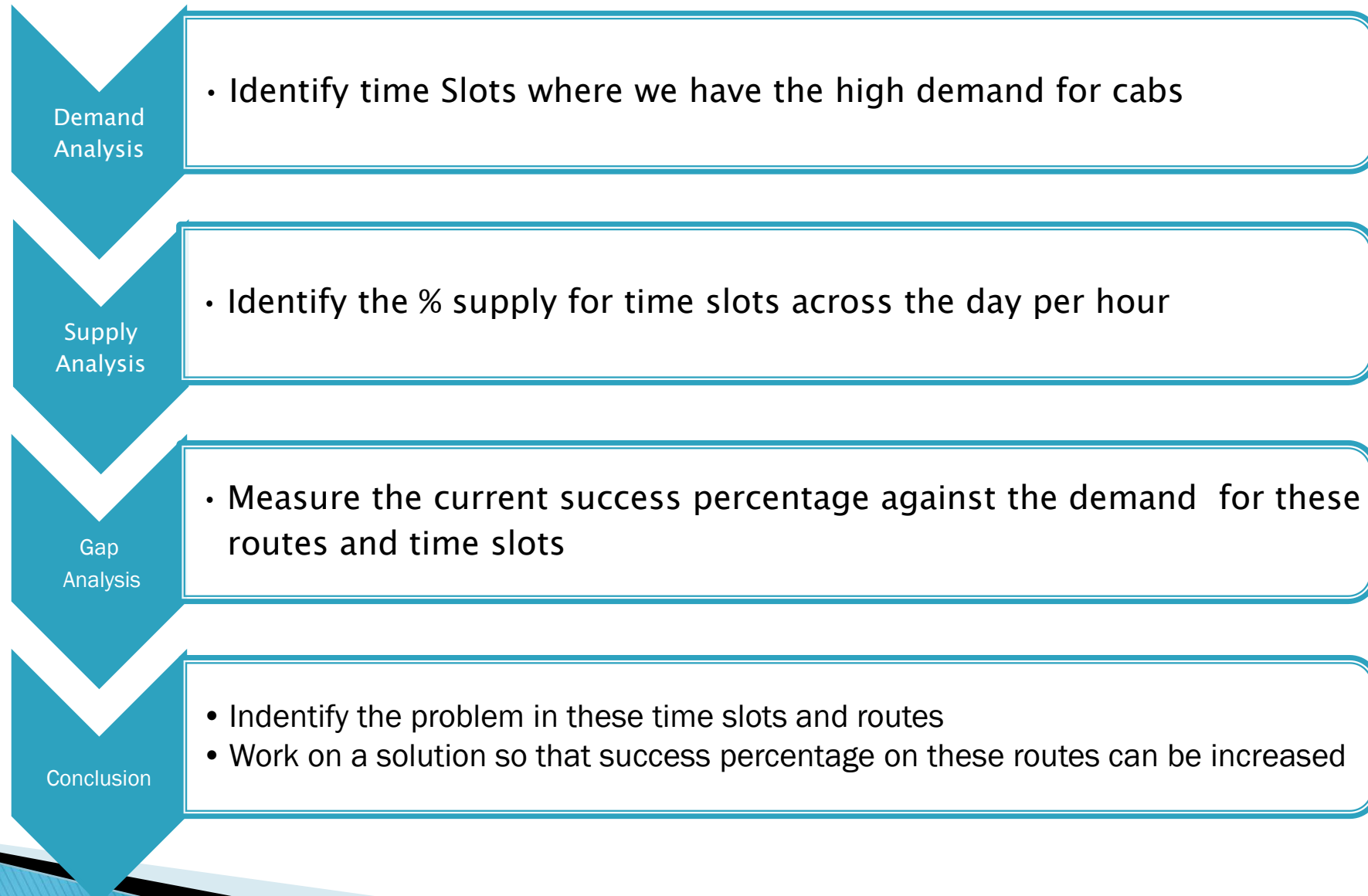
This study explored the pattern of demand and supply of cabs across weekdays of a week to find out the timeslots and routes where the gap exists to improve the success percentage of request placed for cabs. The study was conducted on historic data recorded for a week in month of July from specific drivers for the route from City to Airport and Airport to City. This data was then analyzed for gaining three kinds of information

- ▶ Most problematic time slots where the maximum cancellation happens.
- ▶ The most problematic routes where the booking success percentage is low
- ▶ The routes and times where there is maximum supply and demand gap

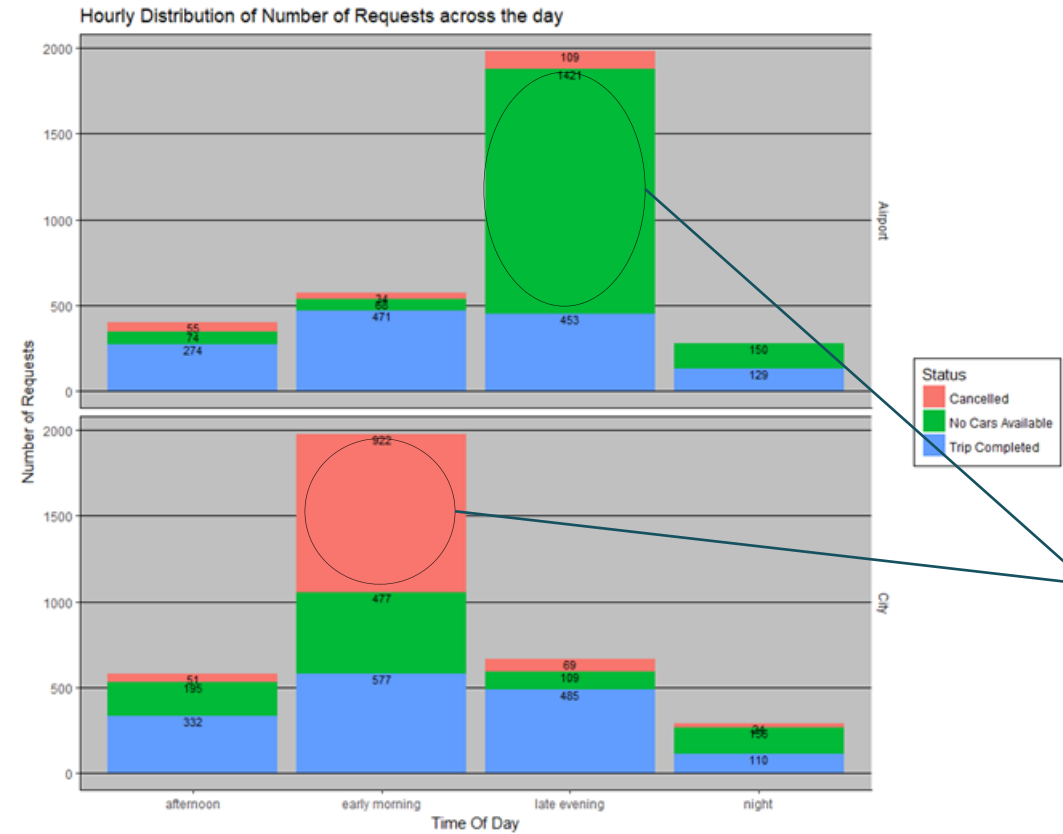
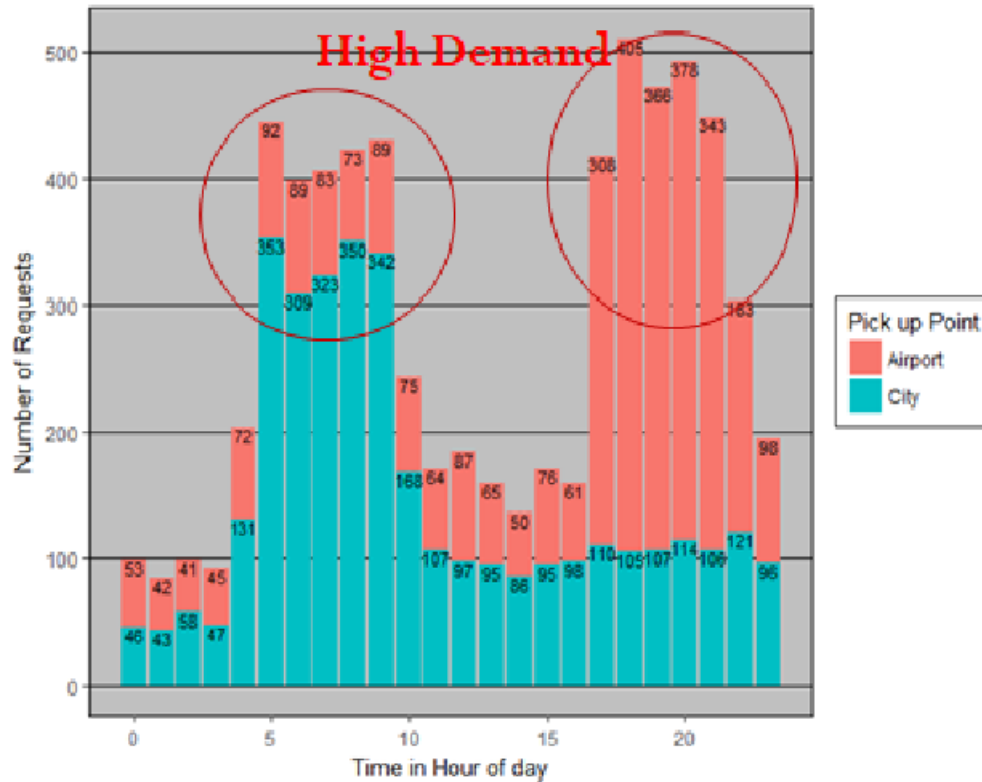
## Analysis :

Based on the study, 4am–10am is the most problematic route (City to Airport) with large gap in supply and demand where the success percentage is less than 40% and 5pm–10pm is the most problematic (Airport to City) route where the success percentage is less than 30%.

The findings suggest that there should be some incentive given to drivers who accept the requests in these times so that the success percentage of the booking can be increased and improving the reliability of Uber.



Hourly Distribution of Pick up Requests To and From the City



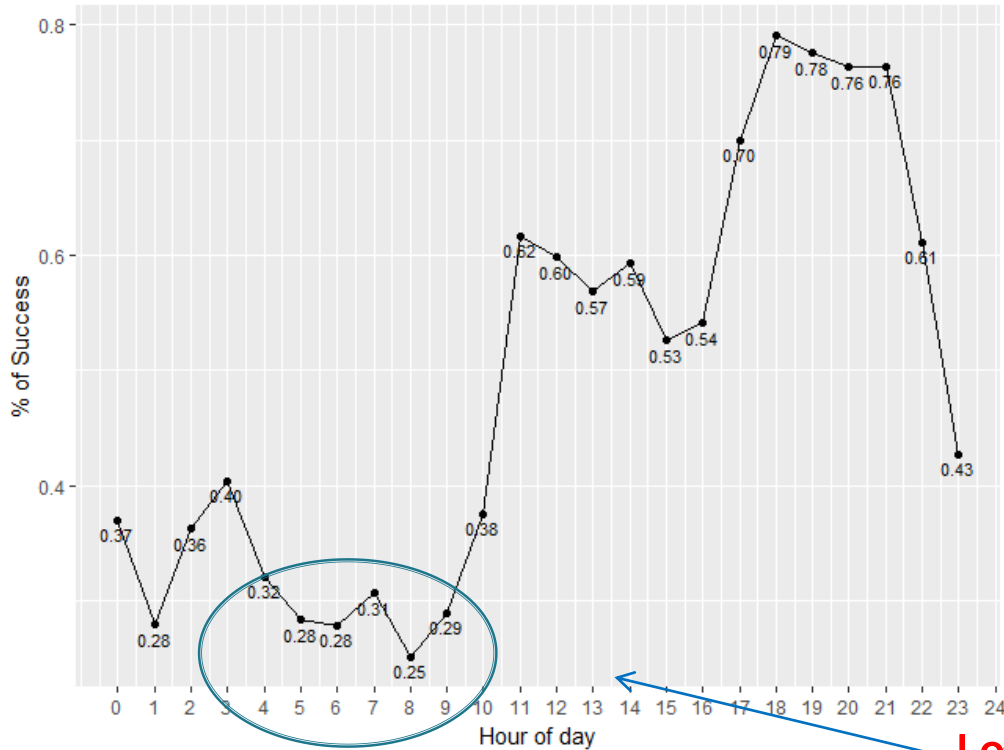
Analysis :

High demand areas : 5am –10 am → Pick up City

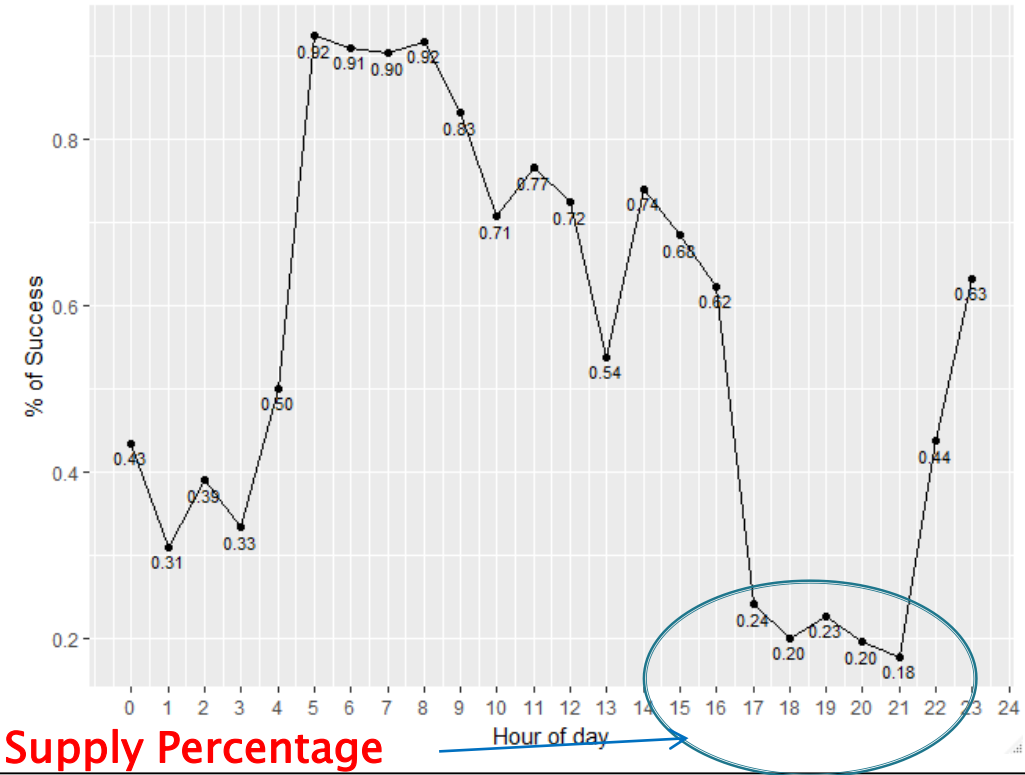
5pm – 10 pm → Pick up Airport

Problem : High Demand –Low Supply in the timeslots

% success for Trips from City to Airport through the day



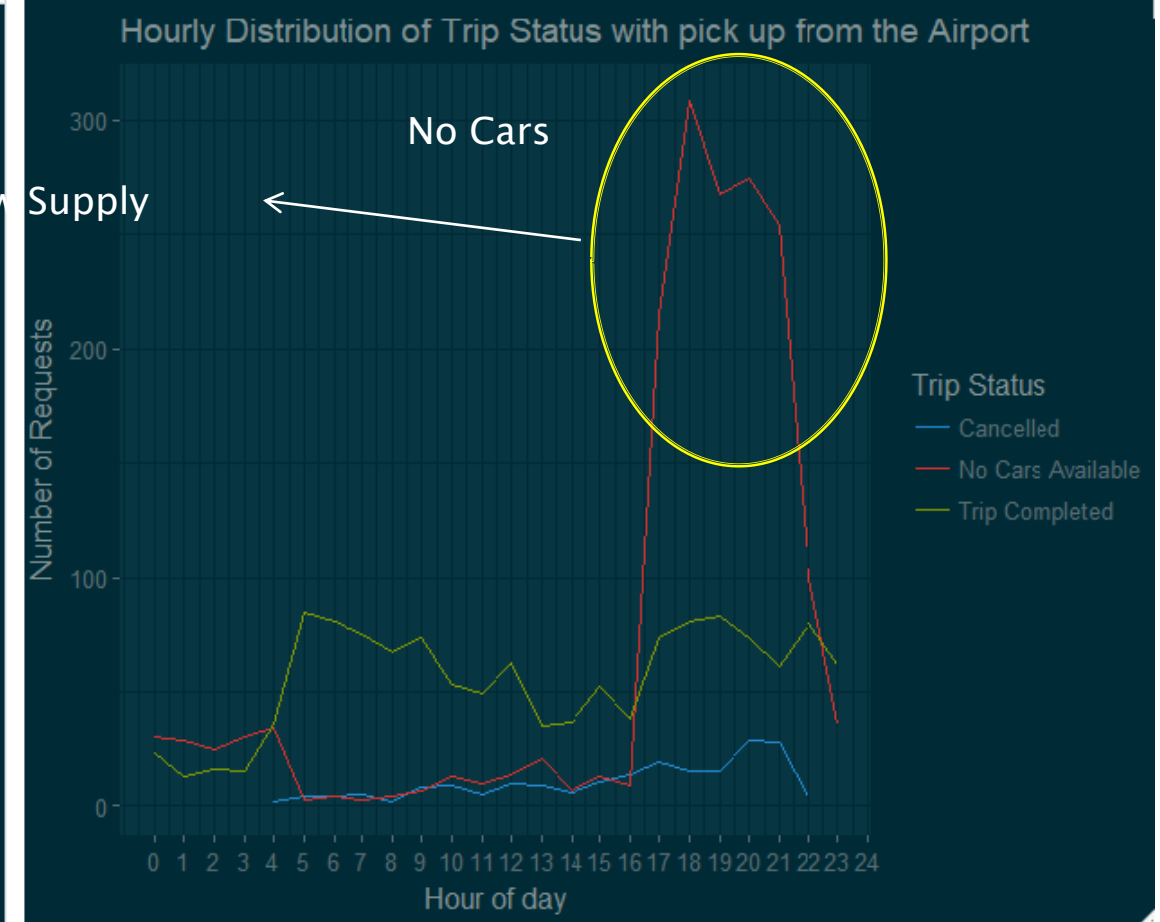
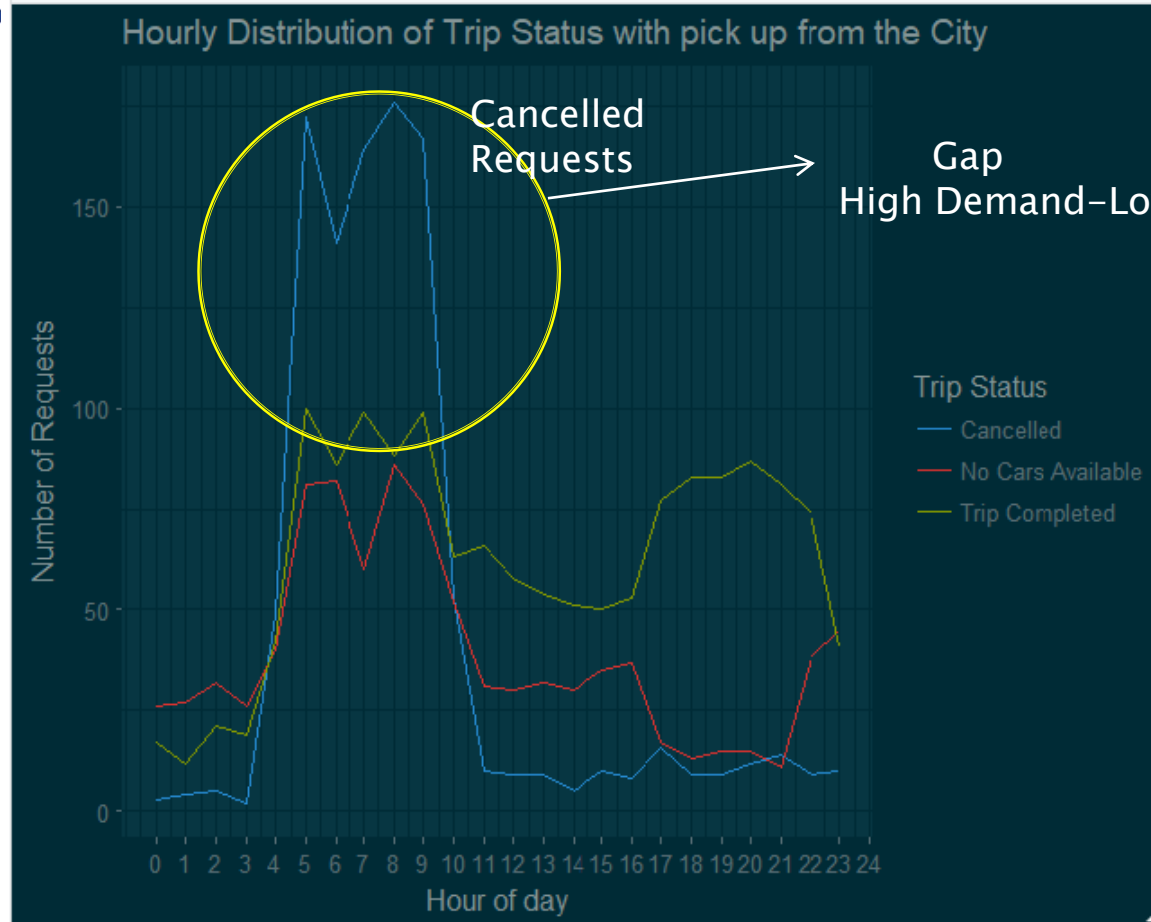
% success for Trips from Airport to City through the day



Low Supply Percentage

## Analysis

- high demand and low supply time slots has high overlap ie , 5-10am and 5-10 pm
- City to Airport <- Supply below 30%
- Airport to City <- Supply less than 25%
- Low Supply
- The problems in these timeslots for trip routes need to be solved.



## Analysis :

- Max Cancellation 5-10 am
- Max No Cars 4pm-10 m
- Problem 2: High Cancellation for Route :City to Airport
- Problem 3: No Cars in the evening from Airport



## **Problem 1: High Demand Time Slots**

Maximum demand for trips to airport only in 4am–10 am and from airport in 5pm–10pm post which the demand largely subsides.

### **Our Solution : Peak time Incentive**

Increase the incentive for airport trips in these time slots

## **Problem 2: High Cancellation from City to Airport**

Maximum Cancellations are from City to Airport and majorly in the high demand time slot

### **Our Solution : No Cancellation Bonus**

Provide bonus for drivers who do not cancel any trips in the day ,so that any of the routes from and to City from airport

## **Problem 3: No Cars in the evening from Airport to City**

There are no cars available in the evening ,which causes decrease in the reliability

### **Our Solution : Off –Time incentive**

Provide special incentives to drivers who accept requests in the evenings and non–working hours