INVESTMENT CASE STUDY – UBER SUPPLY-DEMAND GAP

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Problem solving methodology

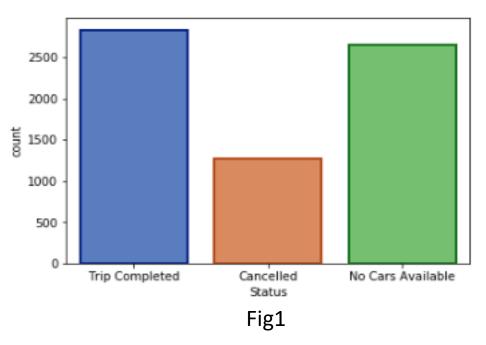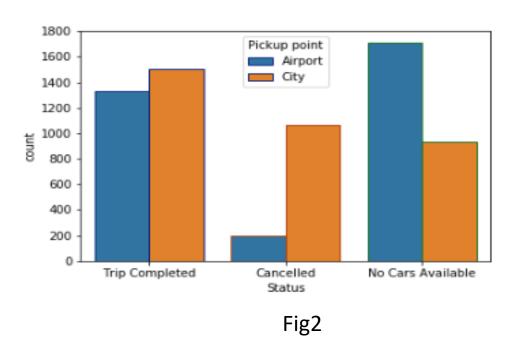1. The aim of analysis is to identify the root cause of cancellation and non-availability of cars.

2. Make the possible hypotheses for the problem.

Problem Understanding

Fig1

Fig2

1. From the above figure its very clear that the number of trip completed and the number of car not available is almost equal and which means a very huge revenue lost.
2. The number of car not available request is more in Airport compared to city and the trip cancelled is more in city.
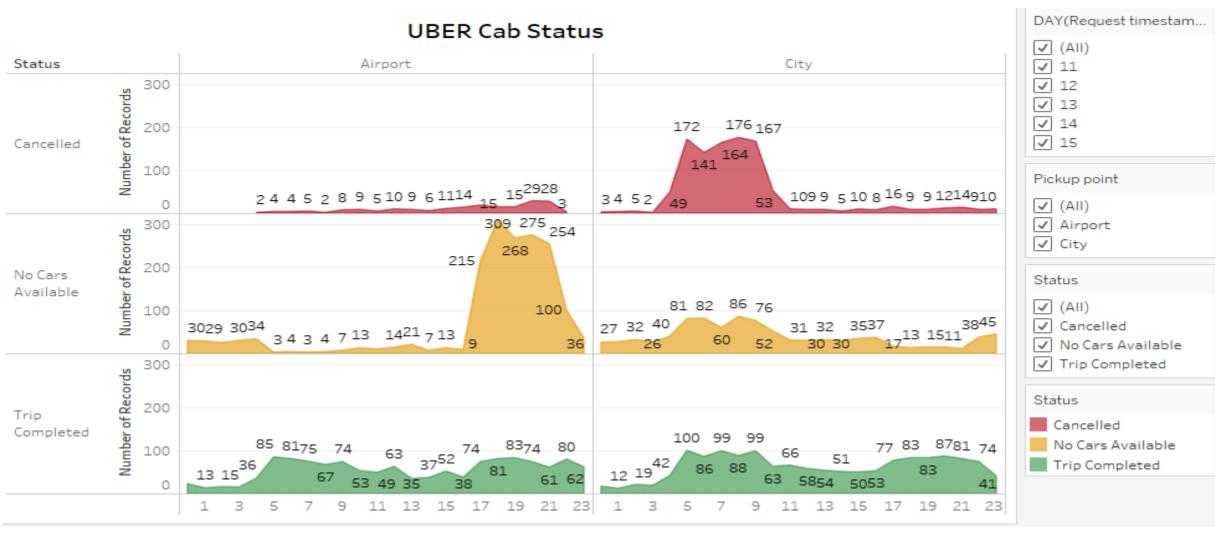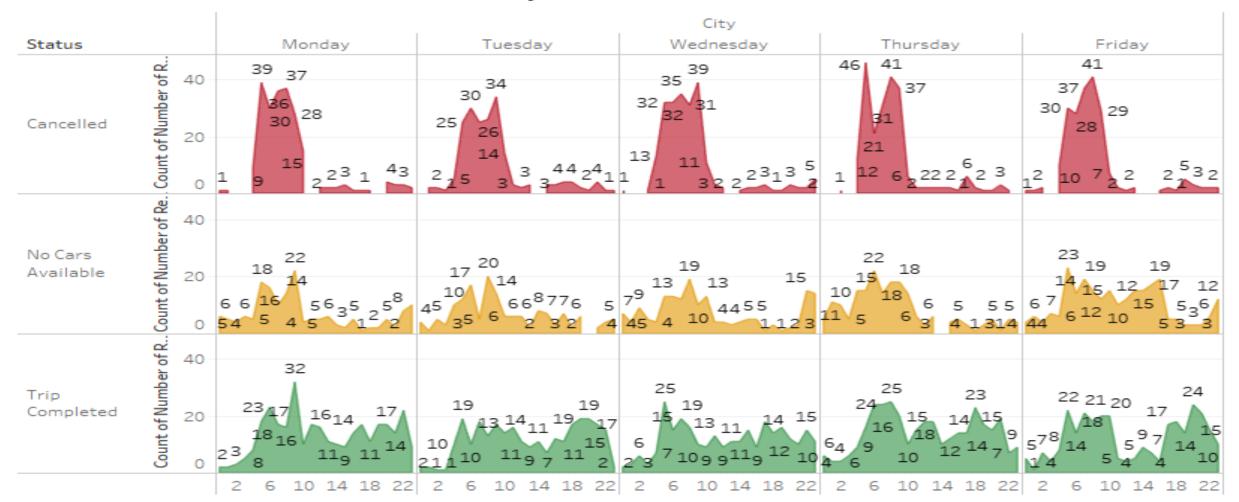
Analysis on Time

Analysis on Time

1. The non availability of the car in Airport is more in night hours and interestingly at the same time number of trip completed is high in city.

2. The trip completed in both in city and in air port follows a same pattern from 5 to 24 hours

3. The number of request cancelled in city is more in morning hours and its can be noticed that the number of non availability of the car and trip completed is high in city in the same morning hours.

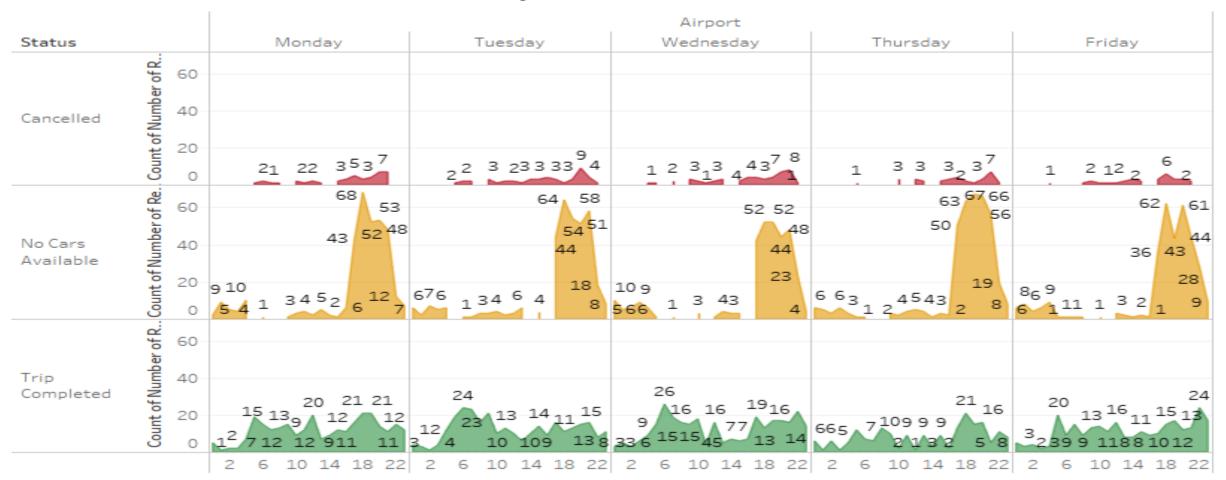4. It has to be noted that the trip completed is going down to very low in 13 and 14 hours.

City –Day and Hour Vise Analysis

Day and Hour Vise

AirPort –Day and Hour Vise Analysis

Day and Hour Vise

Day and Hour Base Analysis

1. The pattern for cab not available ,trip completed and cancelled trips is almost same in all the days.
2. Day and Hour Analysis on City

Status	Timing
Trip Cancellation	High in morning hours and its very low in night hours.
Trip Completed	Follows almost same pattern in all hours
Car not Available	High in morning hours.

3. Day and Hour Analysis on AirPort

Status	Timing
Trip Cancellation	Follows almost same pattern in all hours except mid day time its very low
Trip Completed	There is no such significant cancellation
Car not Available	Huge number of car not available request in night hours

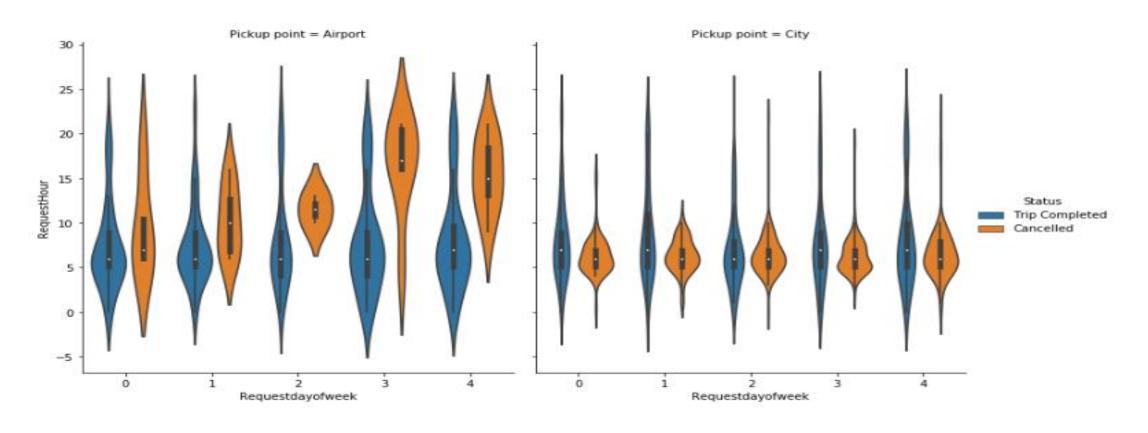## Driver Timings

Driver Count-First Request time plot

Driver Count-Last Request time plot

1. Most of the drivers are in morning shift or we can say that 4 am to 8 am is their starting time.
2. Most of the drivers will wind up their duty 9 pm to 10 pm

Driver Timing Login Location

Driver Count-First Request Location

1. From the plot its clear that almost equal number of drivers are login in from the city and air port ,but most of the login are in early morning.
2. Whoever login from city they are trying to cancel their first trip itself

Status	City				AirPort			
	5 am to 10 am	10 am to 4 pm	4 pm to 11 pm	11 pm to 5 am	5 am to 10 am	10 am to 4 pm	4 pm to 11 pm	11 pm to 5 am
Trip Completed	High	Moderate	High	Low	High	Moderate	High	Low
Trip Cancelled	High	Low	Low	Low	Low	Low	Moderate	Low
No Cars Available	High	Low	Low	Low	Low	Low	High	Low
Driver First Trip (Login)	High	Low	Low	Low	High	Low	Low	Low
Driver last Trips(Log out)	low	low	High	Low	Low	Low	High	Low

1. In morning time, driver login's are very high and the trip completed are high in both the locations, interestingly no car available request is high in city so drivers may be hesitant to go to airport where non availability of car is moderate(yellow marks).
2. Most of the drivers first request in the day is in morning (Day shift) so he will be done with work time in the evening time or he may have achieved his target and logged out(Marked Red).

1. Most of the drivers first request in the day is in morning (Day shift) so he will be done with work time in the evening time or he may be achieved his target and that make him to logout.
2. The Shift timings has to be changed in a way the most of the drivers should be available in the timings 5 am to 10 am and 4 pm to 11 pm.
3. **The drivers who are located near Airport(Identified based on their first trip) has to change their shift timings.** Currently most of them login in the morning. If they log in at evening time and log out in the morning, the non availability of the cars in airport at evening time will get sorted out as well as the trip cancellation in the morning time in the city(since the drivers have to comeback to home near the airport, so they will not cancel the trip request to Airport at the log out timings).