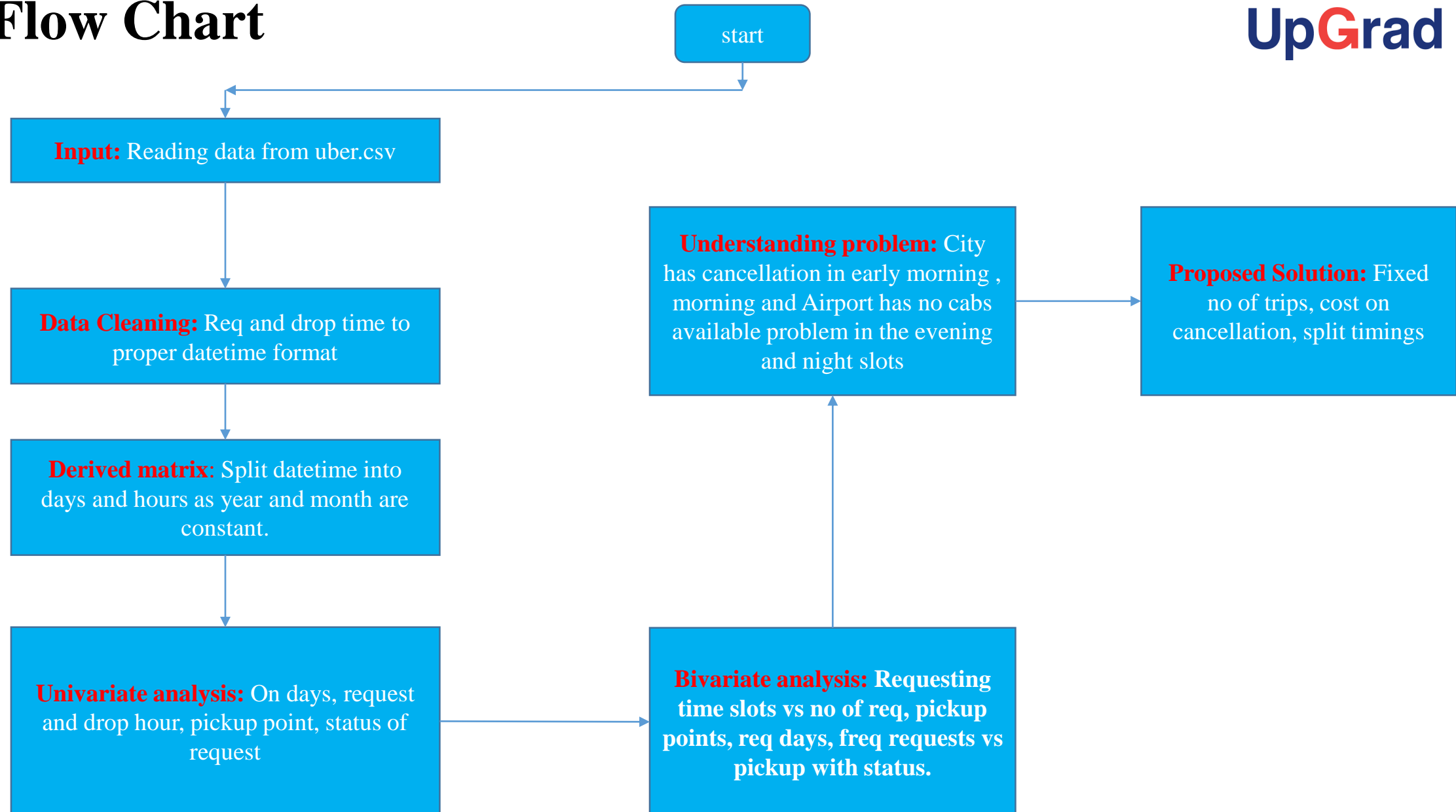


Uber Demand and Supply Case Study

By:

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In this case study, we are trying to improve the revenue of uber. If drivers cancel the request of riders or if cars are unavailable, Uber loses out on its revenue. So we are going to know why there is supply demand gap of cabs from uber between the route airport to city and vice versa. The aim of analysis is to identify the root cause of the problem (i.e. cancellation and non-availability of cars) and recommend ways to improve the situation.



- From the image 1, number of requests during 11,12,13,14 and 15 are very close.
- From image 2, the number of requests are highest during 4-11 and 16-23.
- The number of requests during other hours are very less.

Sheet 5

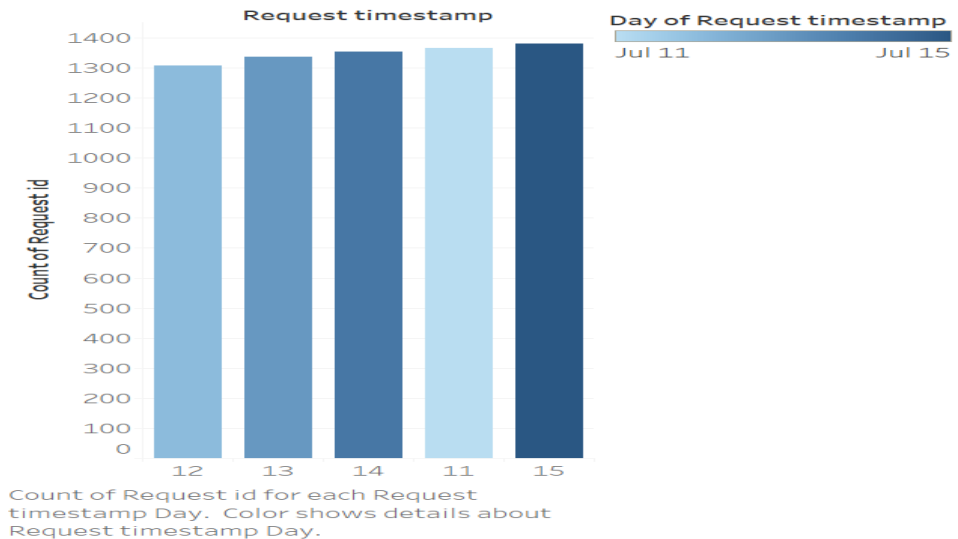


Image 1:Req Day with count

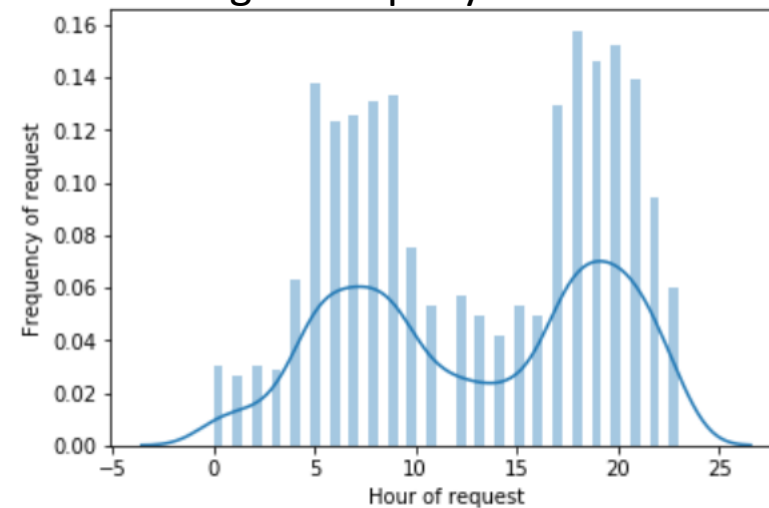


Image 2:Hours of day

- From image 3, maximum number of requests are from city compared to Airport
- From image 4, No cabs available is more problematic compared to cancellation of cabs by drivers.

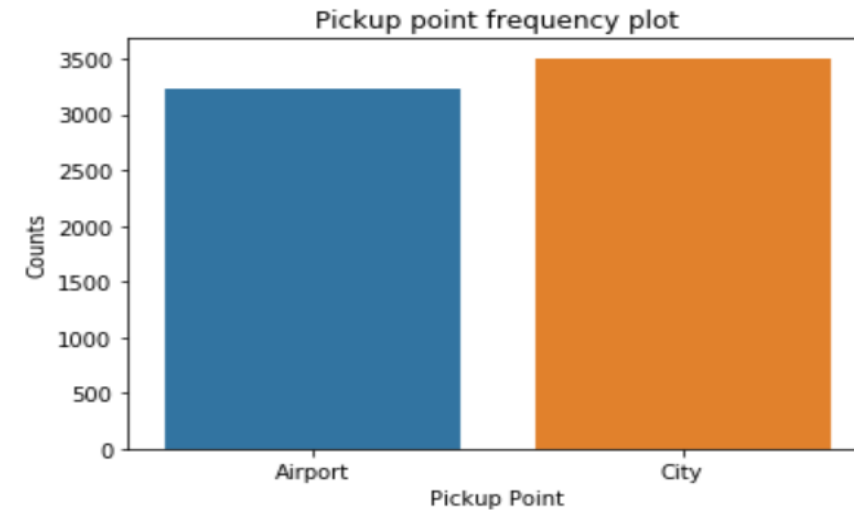


Image 3: Pickup points

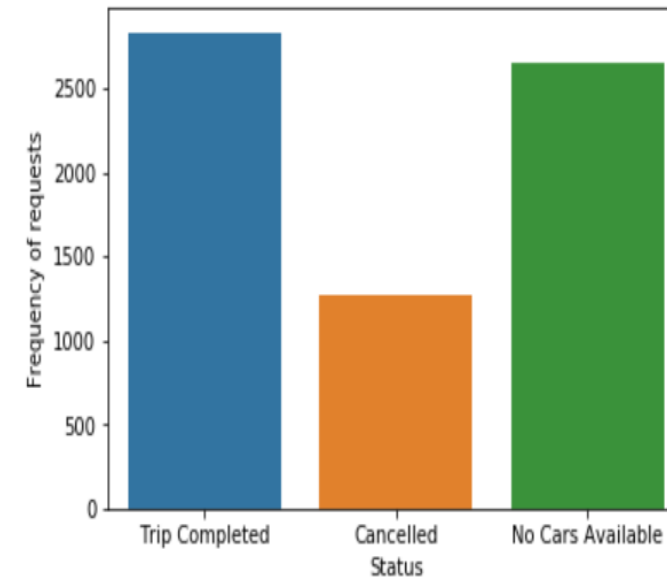


Image 4: Trip status

- ✓ From the below images we can see that maximum no of requests from city come in the early morning(4am-8am) and morning slots(8am-12pm).
- ✓ The trips getting cancelled in these slots are highest. 59% requests get cancelled during these timings.

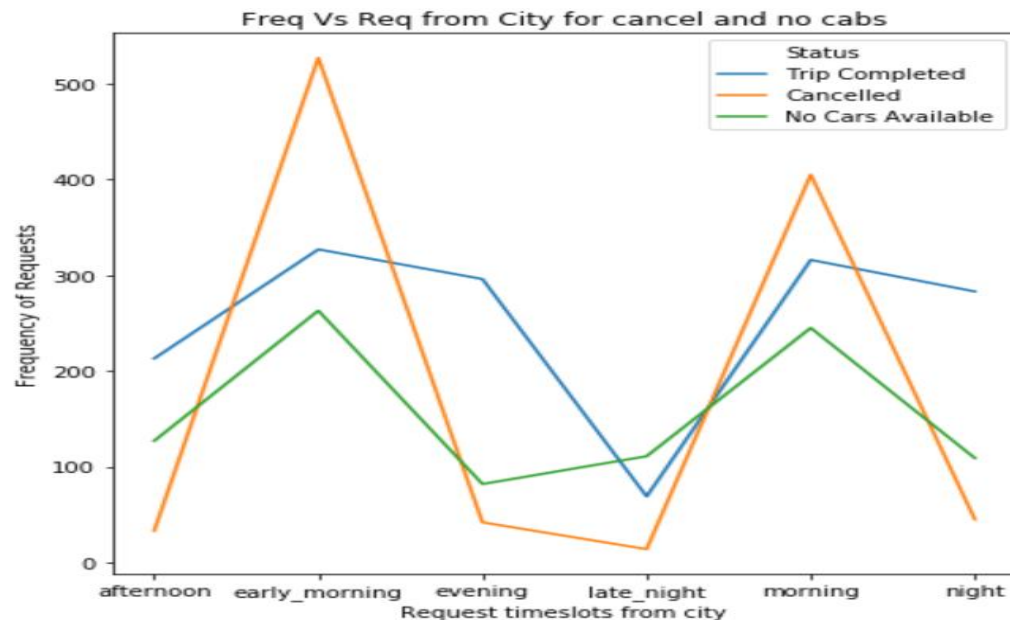


Image 5:from city with various time

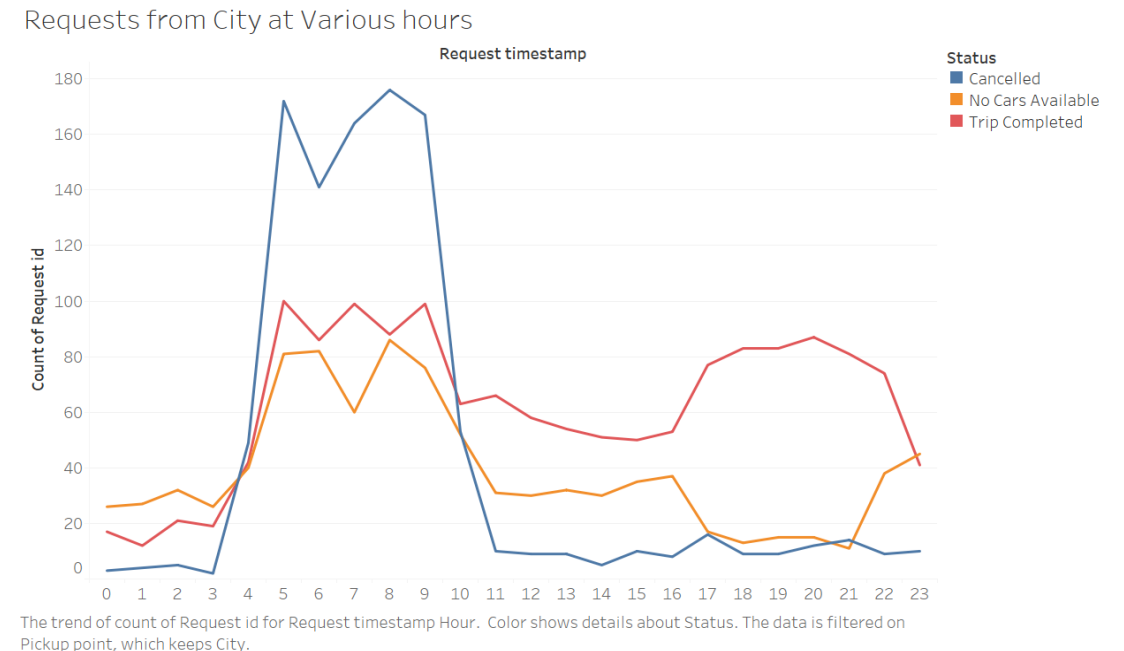


Image 6:From city

- ✓ From the below images we can see that the maximum no of requests from Airport come in the evening and night slots.
- ✓ 68.5% requests do not get cabs in the evening and night from airport.

Requests from Airport at Various hours

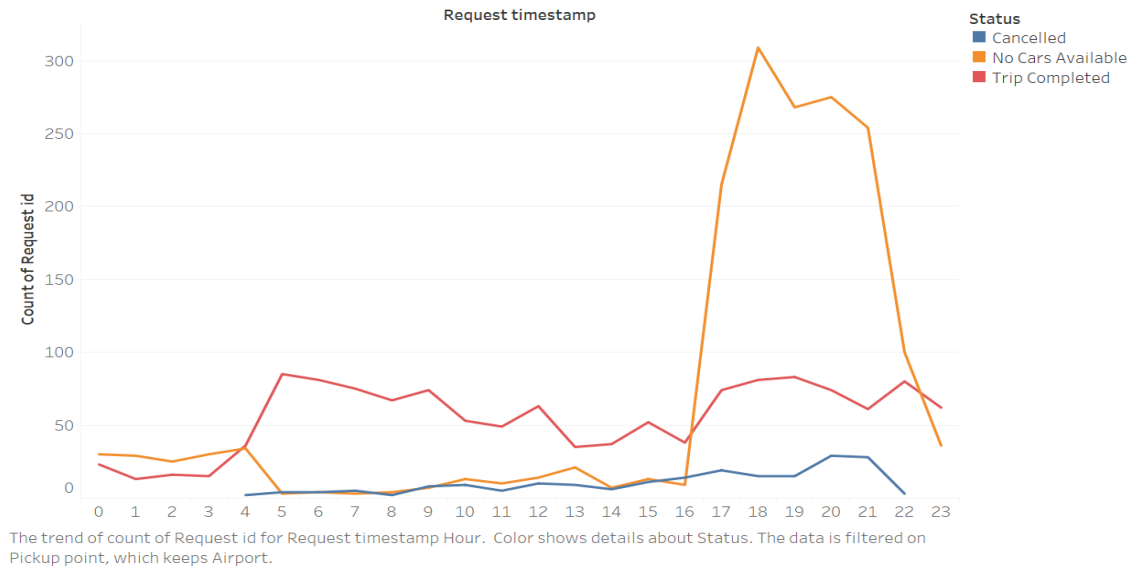


Image 8:from Airport

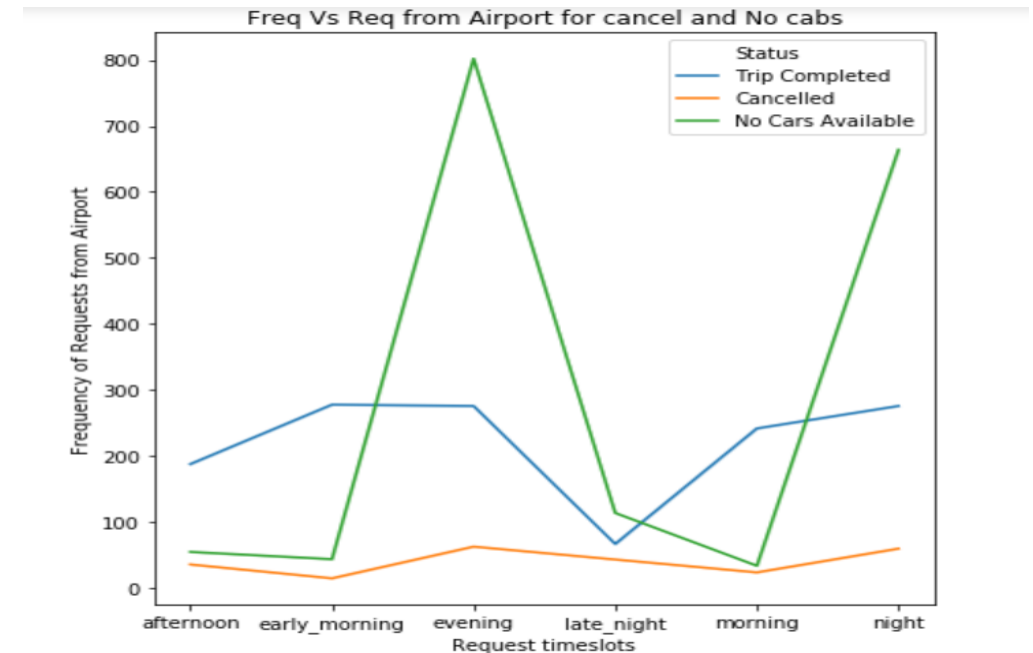
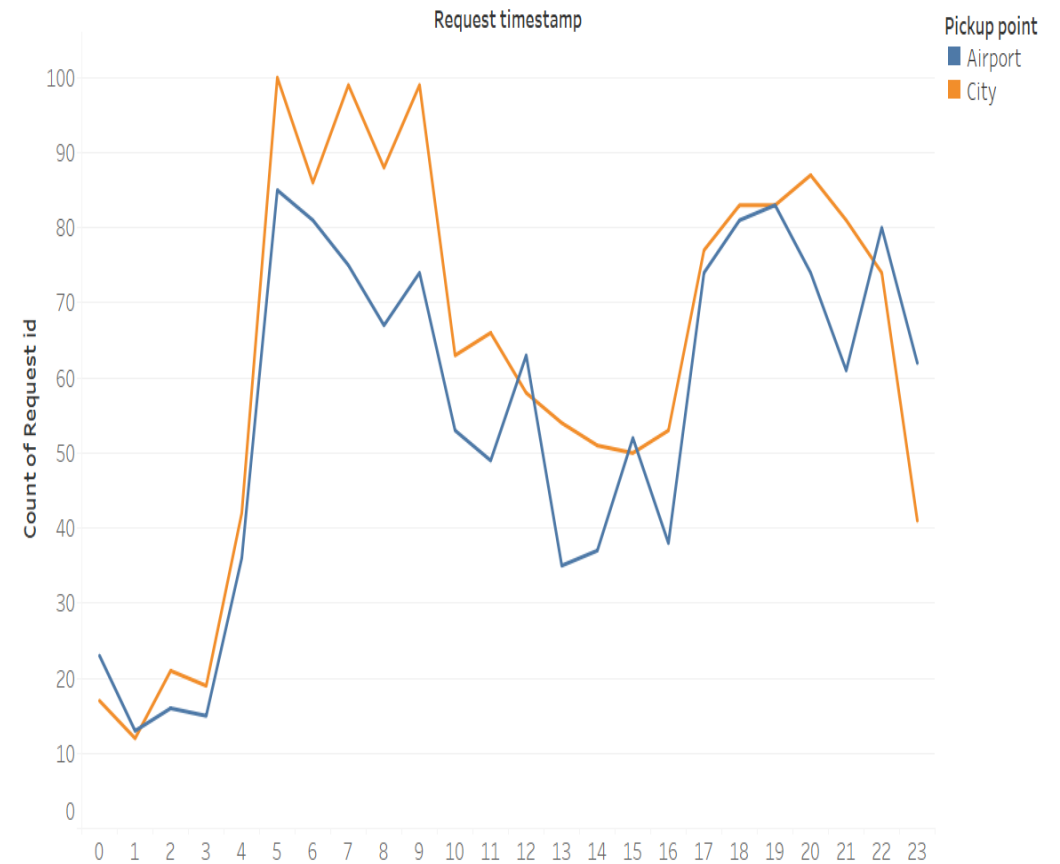


Image 7:from Airport with various time



- From Image 9, we see that number of trips that are completed from city and airport are highest in the early morning, morning, evening and night i.e 4-12 and 16-23.

Trips completed at various timings



The trend of count of Request id for Request timestamp Hour. Color shows details about Pickup point. The data is filtered on Status, which keeps Trip Completed.

Image 9:Completed trips from airport and city

- On an average, number of trips completed by a driver is 2.
- 68.5% requests do not get any cabs in the evening and night timeslots due to shortage of cabs from Airport to City.
- Despite the availability of cabs, 59% requests get cancelled in the morning and early morning slots from City to Airport.
- Number of requests are highest in the morning from City and get highest trip cancellations from driver.
- There are high number of requests in the evening and night from Airport (27% more compared to morning and afternoon) which do not get served due to shortage of cabs.



Proposed Solutions

- ✓ Fix number of trips each driver has to complete, lets say 5 or 6.
- ✓ If there are more than 2 hours of waiting time then his target will be reduced by 1.
- ✓ If driver cancels more than 2 trips then his target will increase by 1.
- ✓ As we have 300 cabs, divide them and give the time slots for some drivers as early morning to afternoon and for other afternoon to late night.
- ✓ Change the time slots alternatively , so the drivers do not get bored. This can be done weekly or every 15 days.

- Maximum number of trips are cancelled by drivers for the journey from city to airport in the early morning and morning slots (59% of the trips to be precise).
- For the journey from airport to city in the evening and night, 68.5% of the requests do not get any cabs due to the shortage.
- On an average a driver is completing 2 trips per day.
- We have proposed solutions to overcome above problems.