UOA MS DS
Course 2 Data Mining and Discovery

Assignment – Uber Supply Demand Gap Analysis

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Date – 01st September 2022

Course – Master of Science in Data Science

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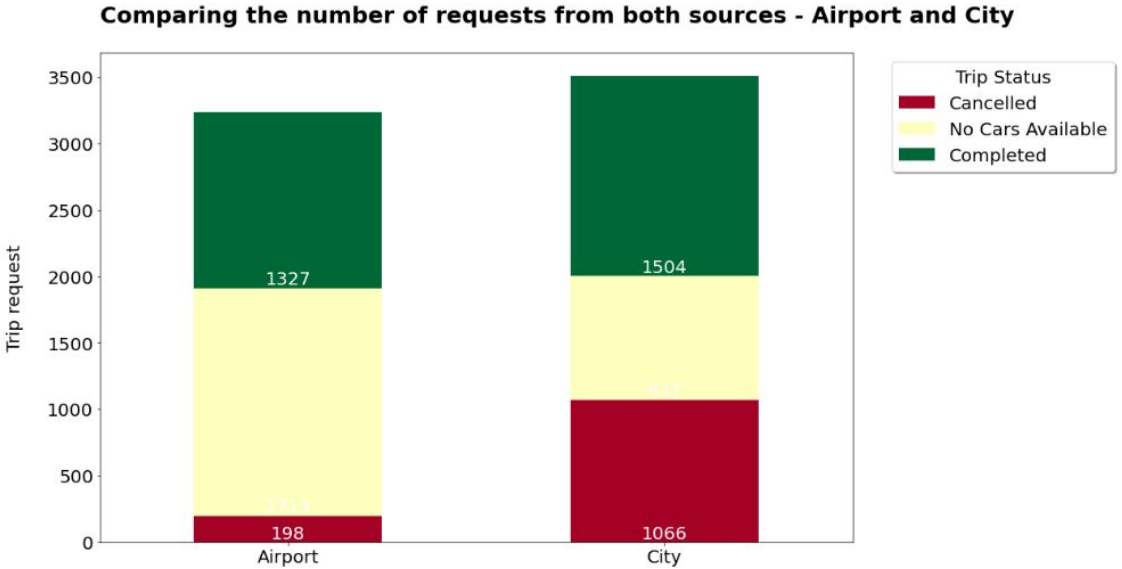
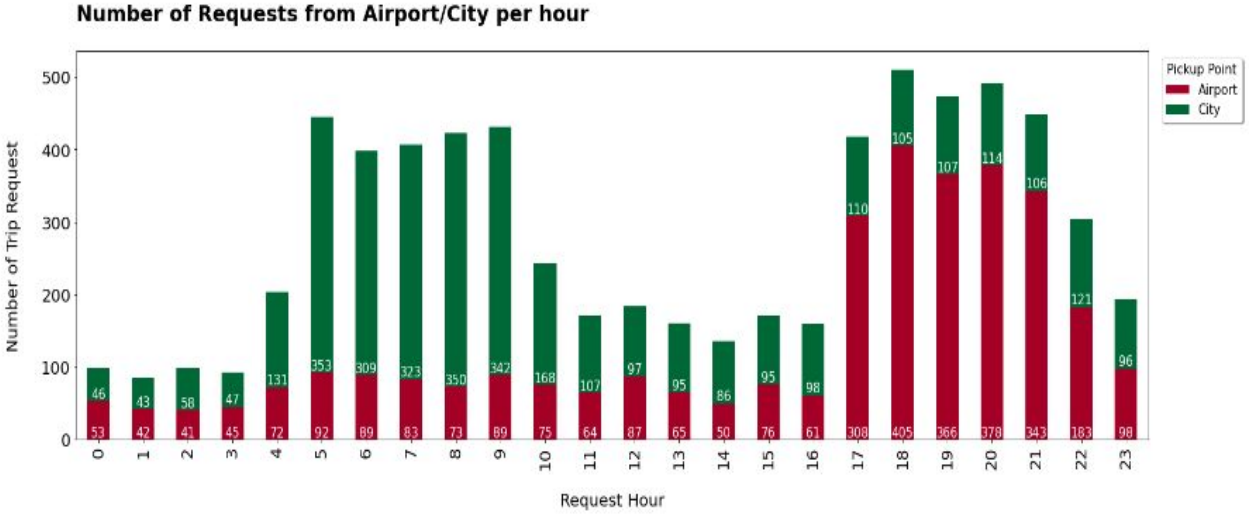
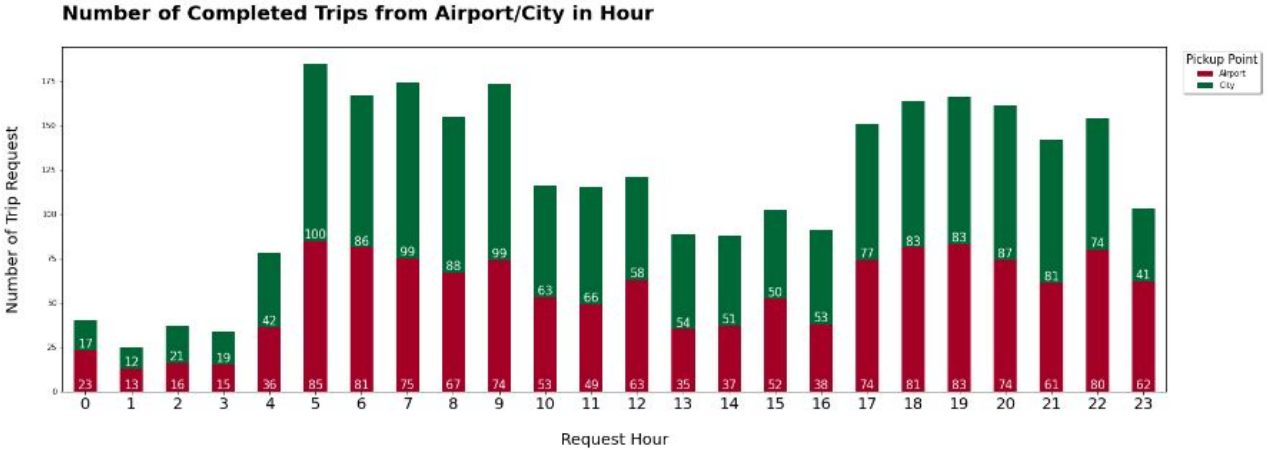
Comparison of the number of Requests from both sources



Observations-

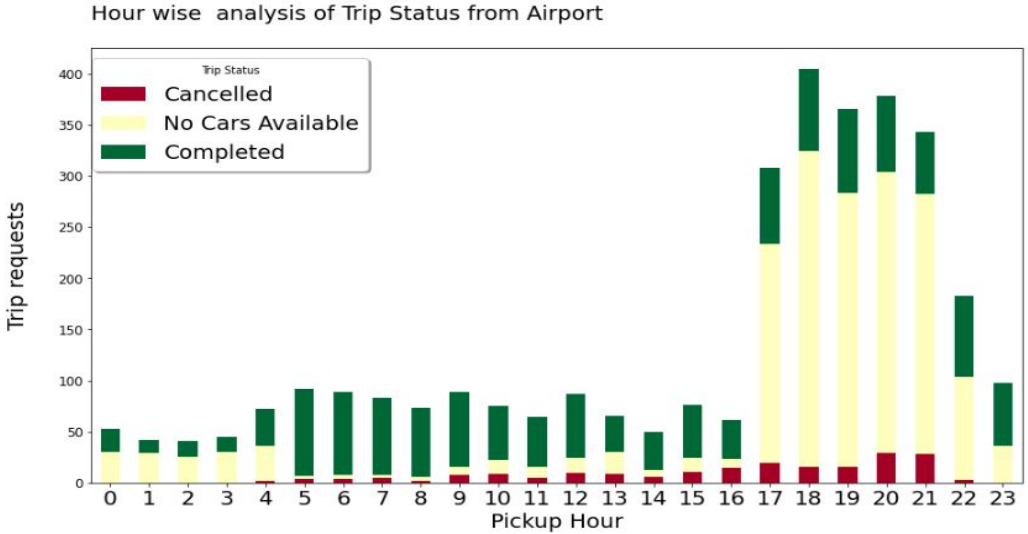
1. The requests from the City are showing high number of cancellations as compared to the those requests of Airport
2. No cars available from Airport is higher as compared to the City
3. Trip Requests from City has higher number of trip completed as compared to the Airport

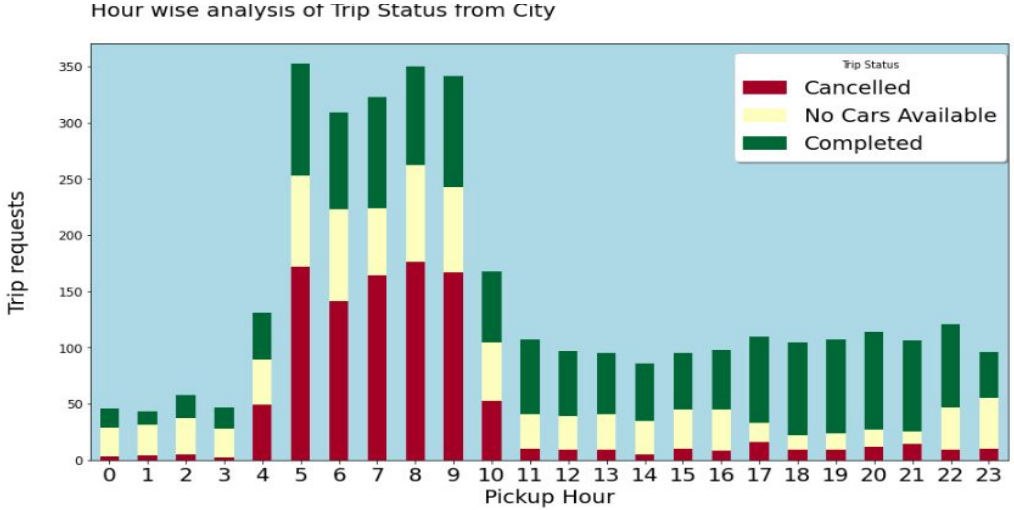




Observations:

1. As checked , in the early rise timings 4am to 7am , the trip requests are higher from Airport and same during the mornings(7am to 11am)
2. Also , during early sunset(5pm-6pm) the trip requests from Airport is higher and same in the Night(7pm-midnight)
3. As checked , from the above code , we have observed that the busiest load comes around 5am in the Early rise mornings which is around 185 which is count of the drivers but the count of drivers are 300.
4. This means that the drivers are not taking requests at this hour , they are either cancelling them or not taking due to some other reason

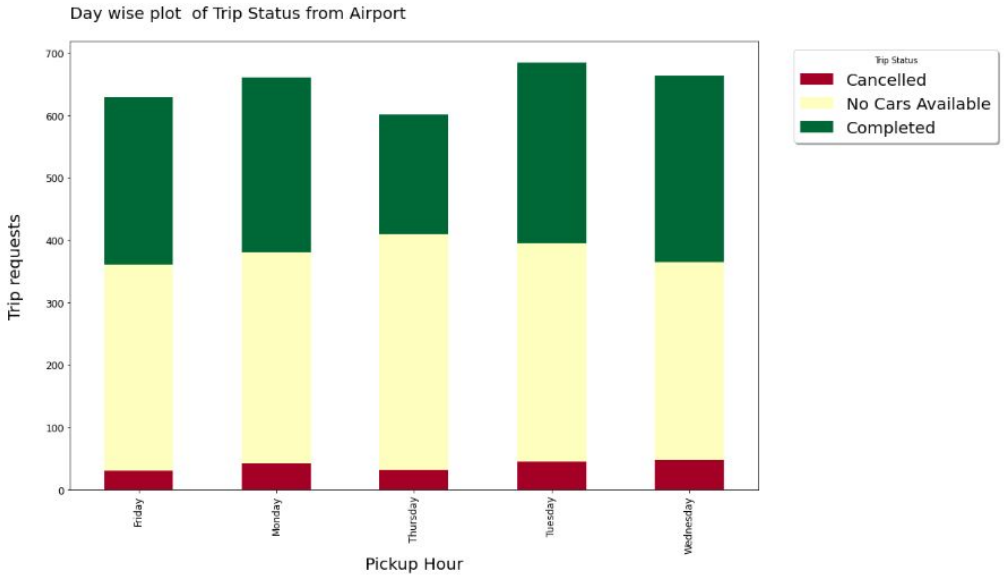


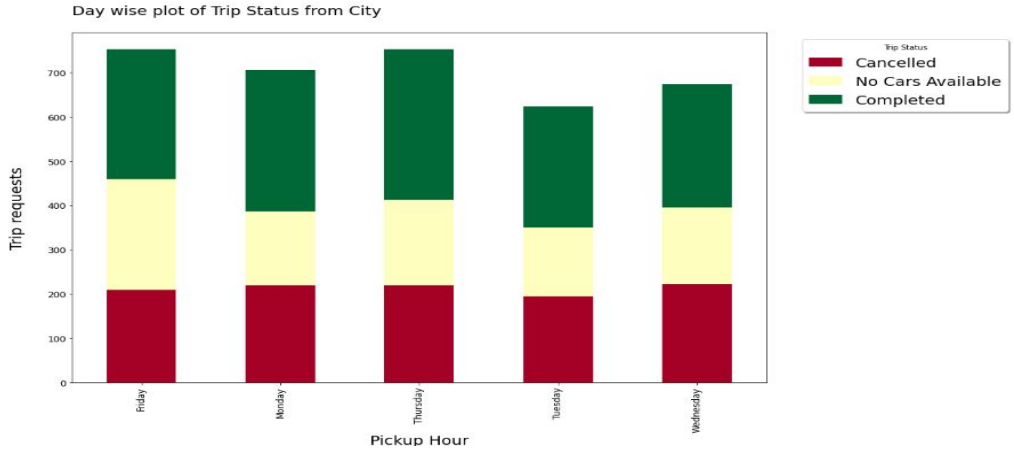


Observations:

1. Trip request are higher from the Airport and the requests get cancelled with “No cars available”. With this becoming the major issue , cancellations are less.

2. Trips status from City shows that cancelled status is higher as compared to the rest labels.

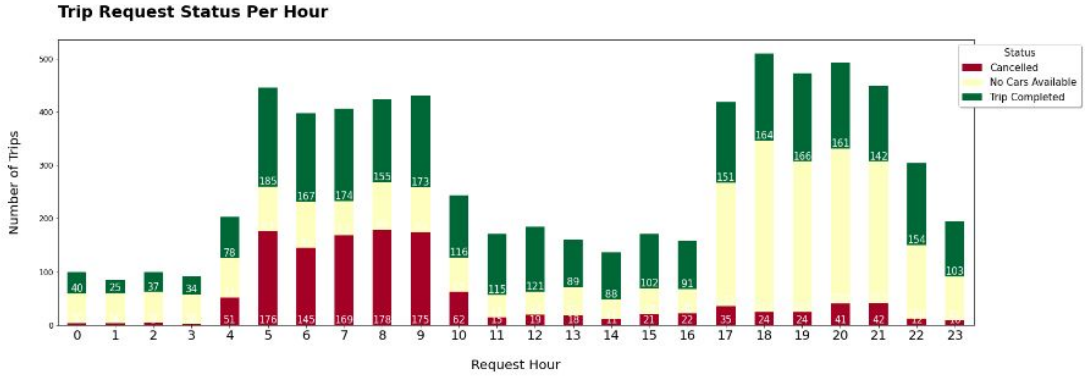


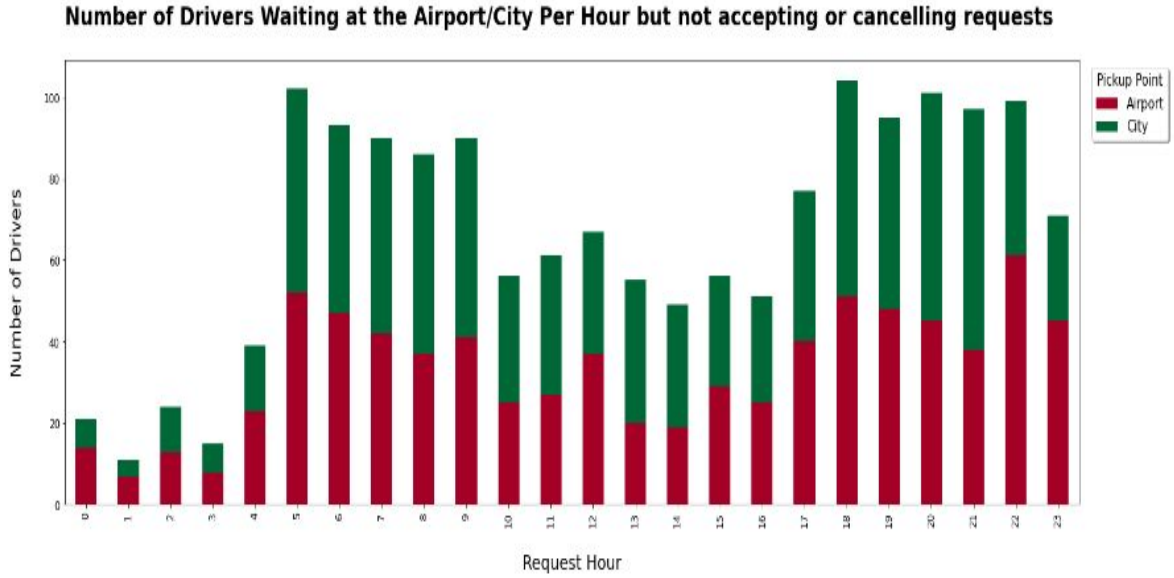


Observations:

1. The cancellation status and Cars availability is same across the bars with Day wise plot of Trip status from Airport

2. The cancellation and Cars Availability is also same across the bars with day wise of Trip status from City





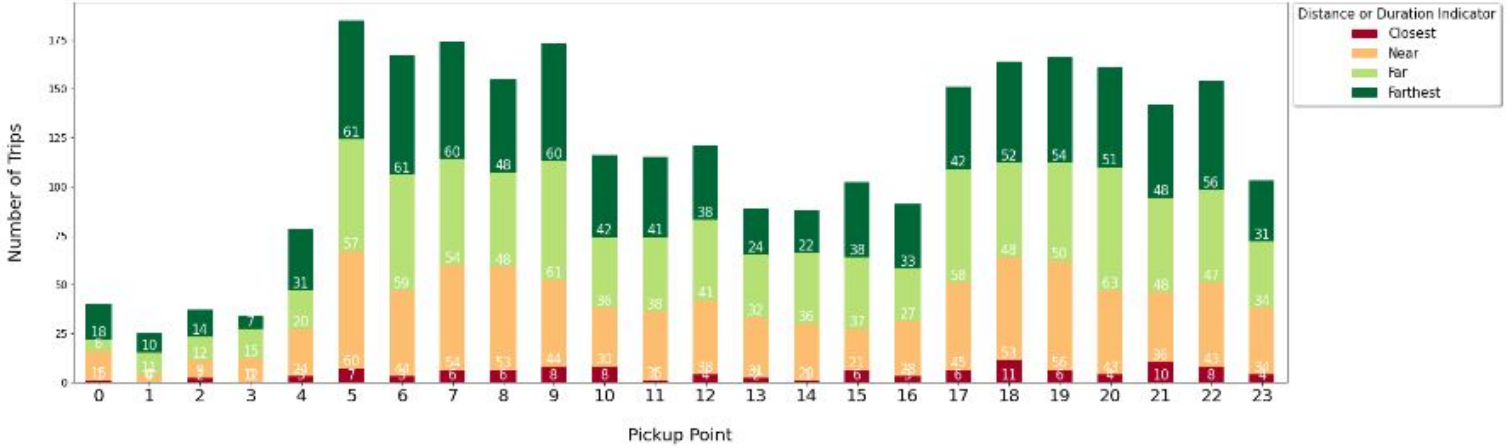
Observations:

1. There were around 346 failed trips during the 6pm evening. Also , during this time 104 drivers waiting for the next trip but they are cancelling the trip requests.

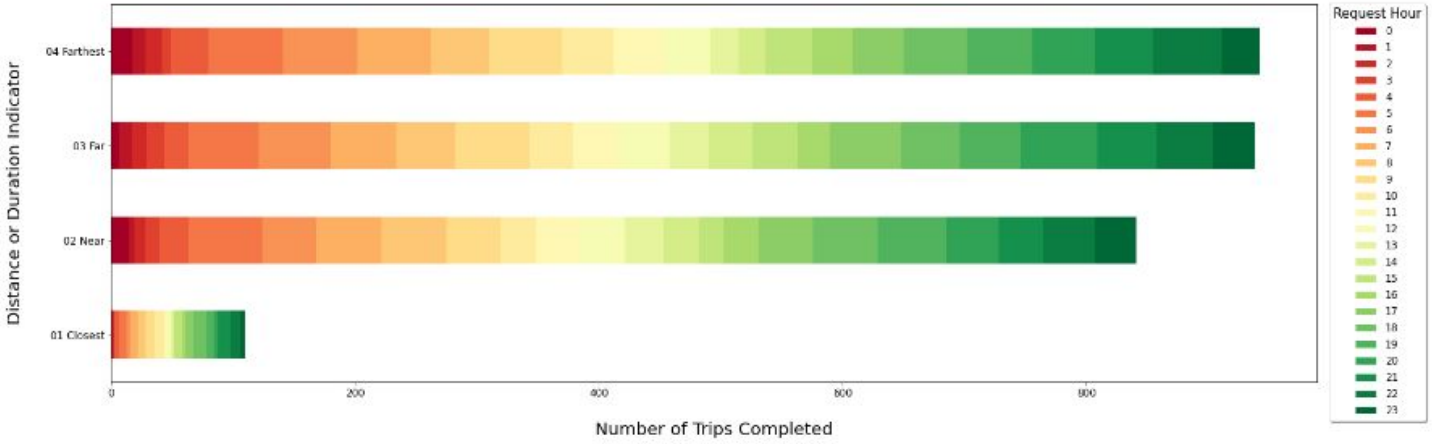
2. So if we expect that those 104 idle drivers even attempt to accept the trip requests , this will reduce the demand.

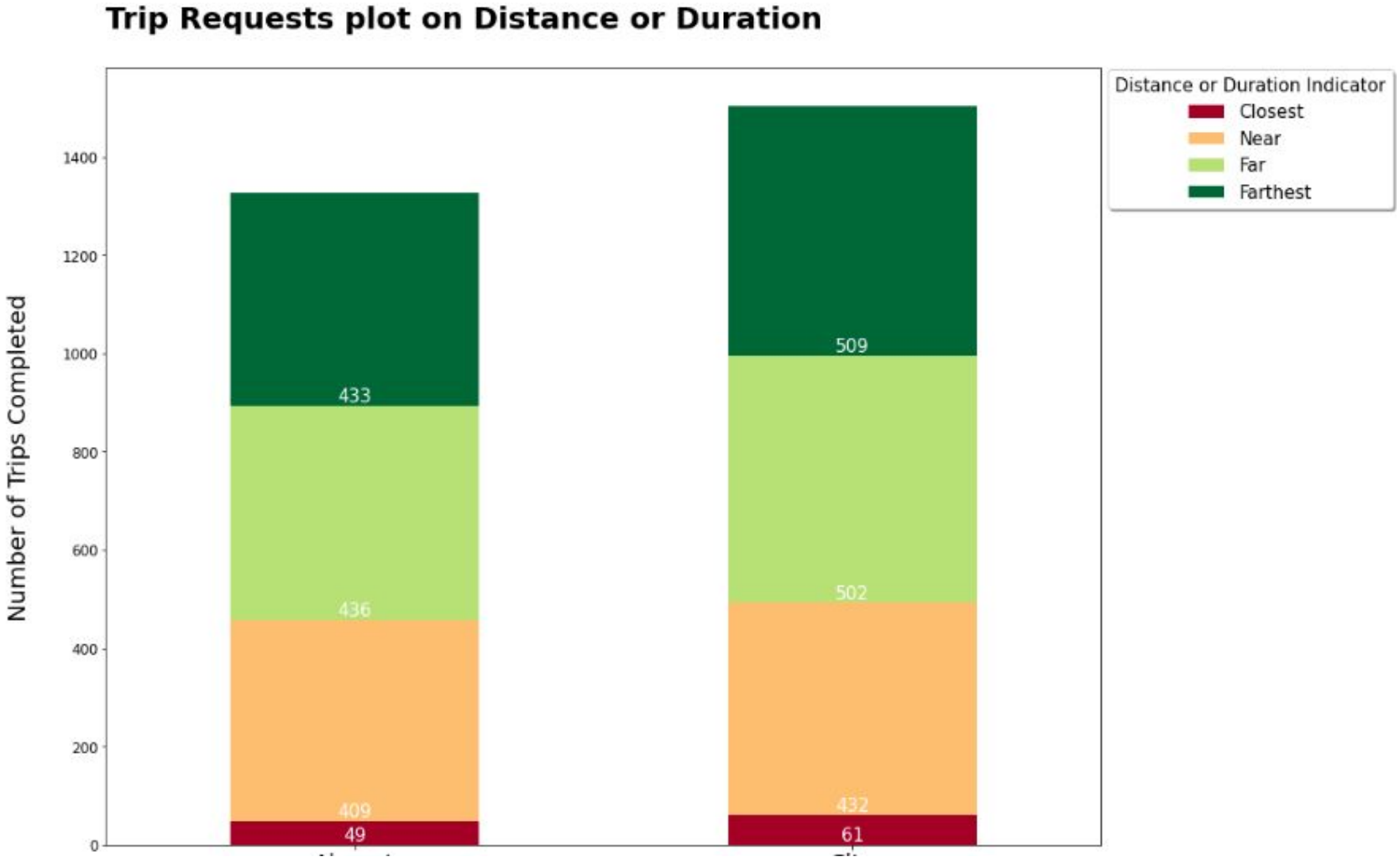
To solve this issue , Uber needs to register more drivers and some benefits to be given to drivers.

Trips done Based on Distance or Duration Per Hour

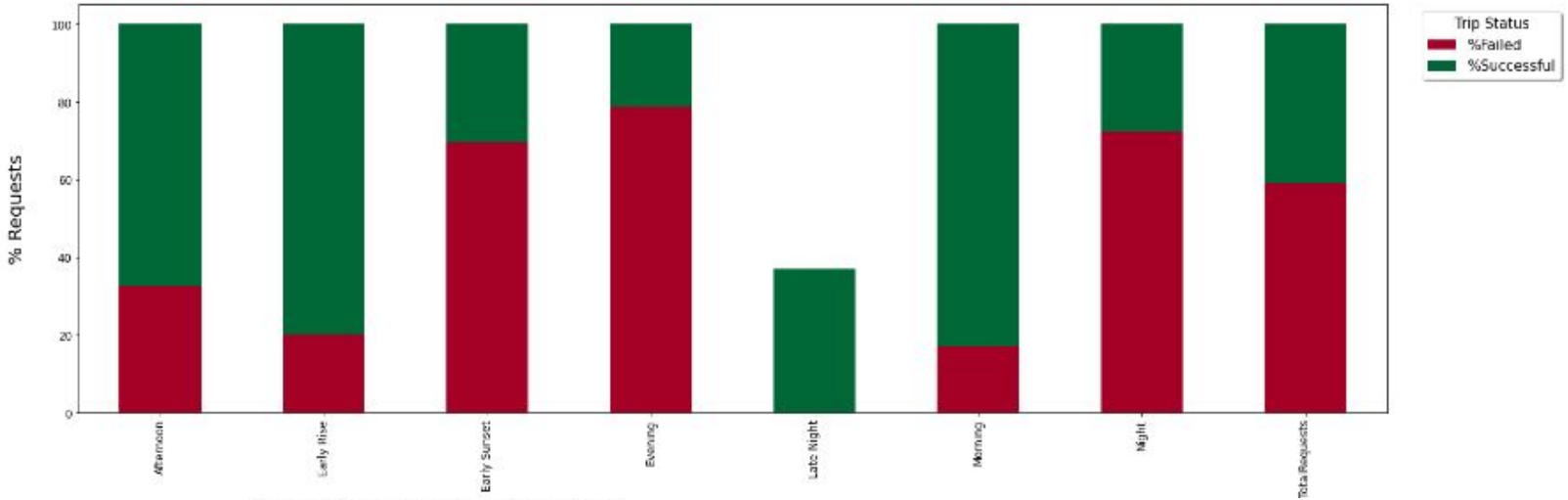


Trips done based on Distance or Duration Per Hour

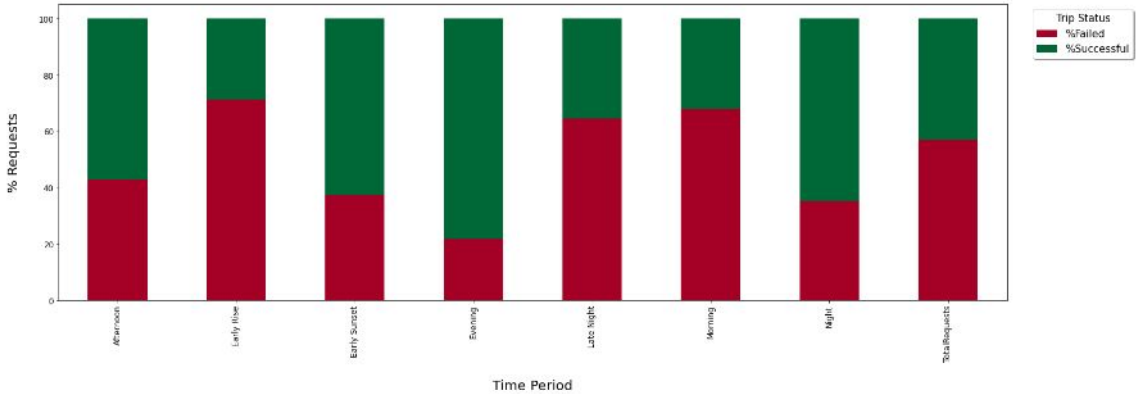


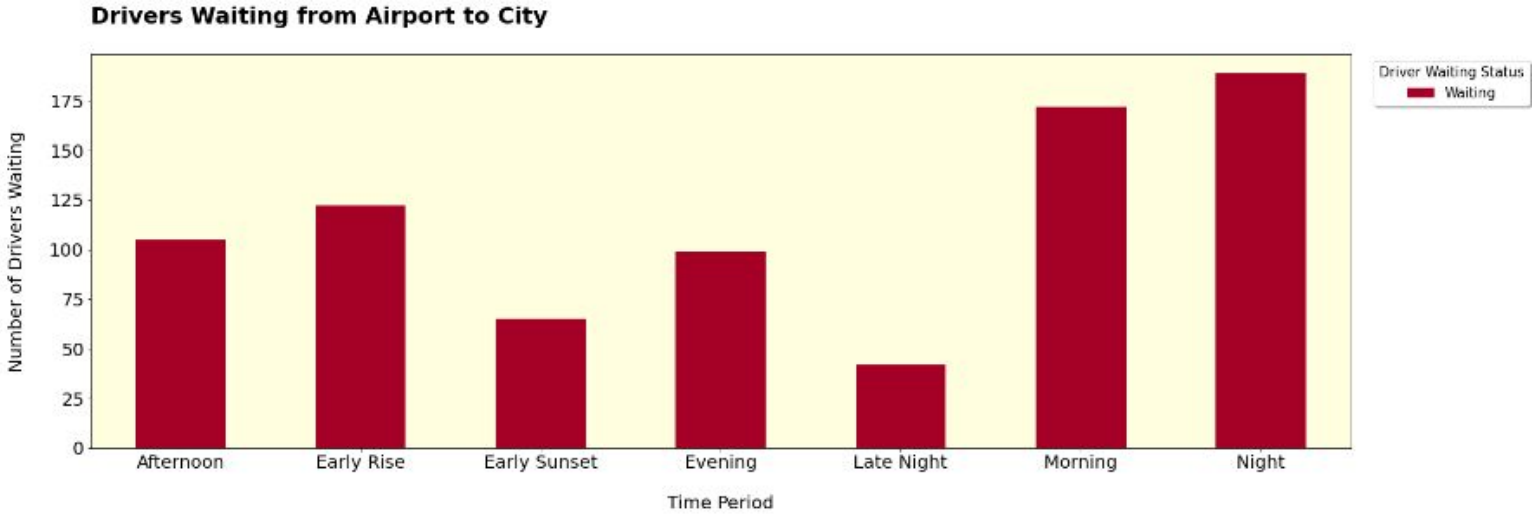

Trip Requests plot on Distance or Duration
Number of Trips Completed
0
200
400
600
800
1000
1200
1400
433
436
409
49
509
502
432
61
Distance or Duration Indicator
Closest
Near
Far
Farthest

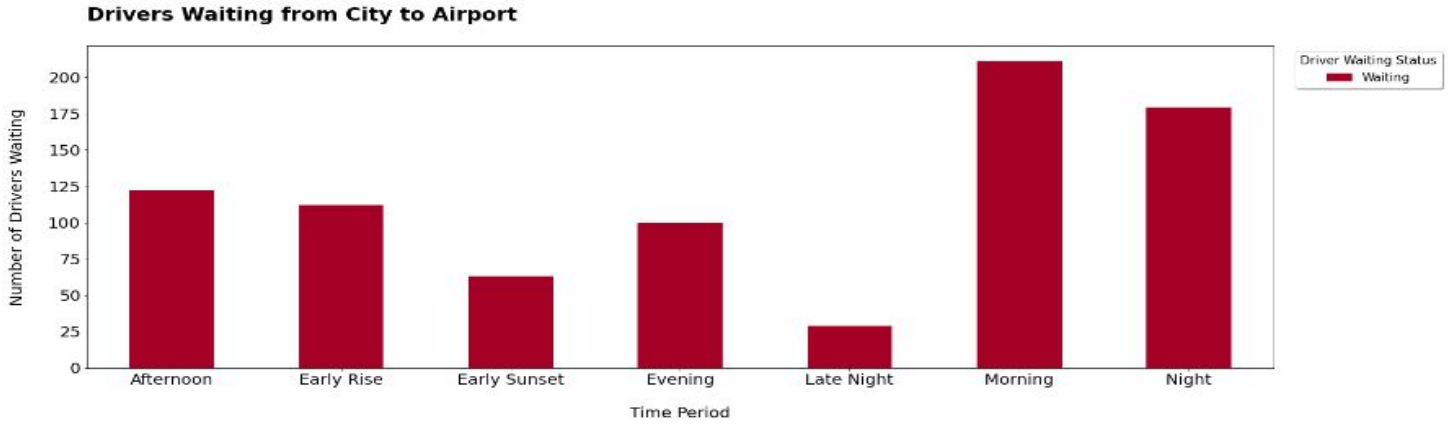
Supply Demand Gap from Airport to City



Supply Demand Gap from City to Airport

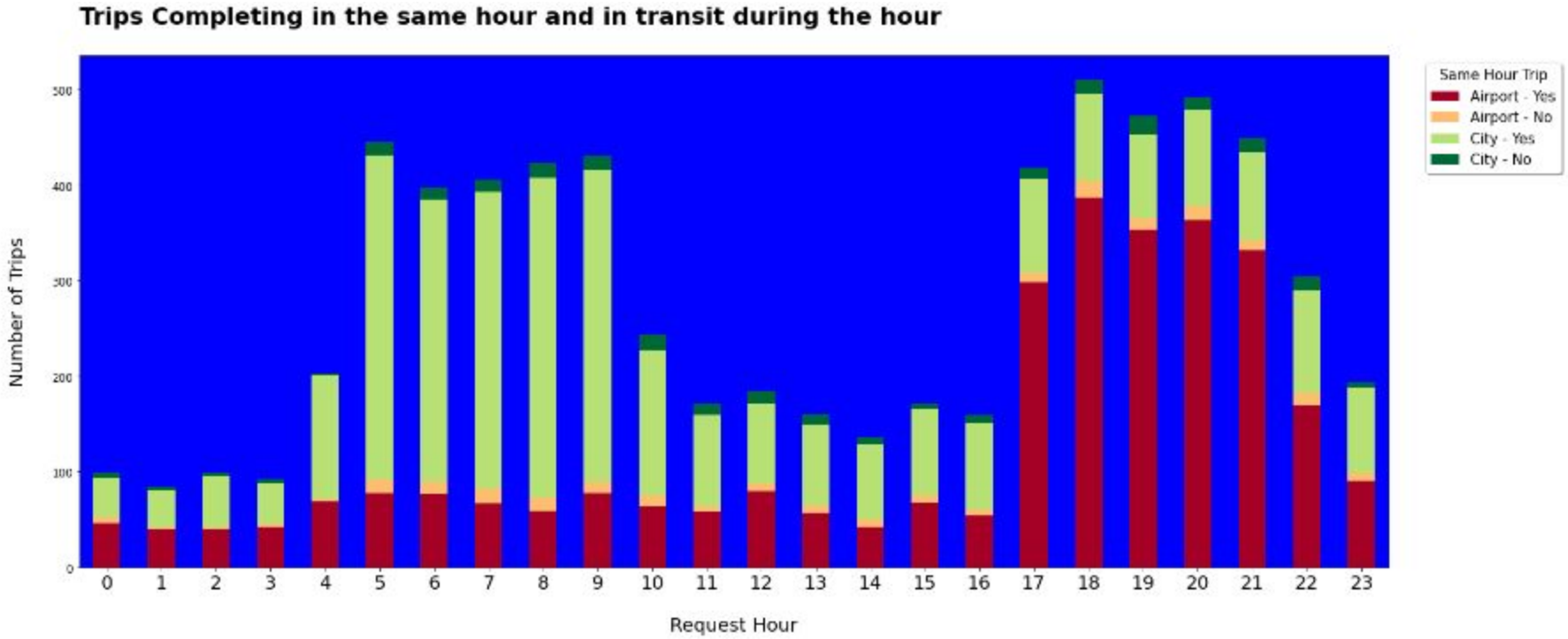






Observations:

1. Some of the services can be increased from the failed requests from these drivers.



Observation:

Most of the trips get completed in the same hour which requested by the customer.

SUGGESTIONS TO IMPROVE THE UBER SERVICES:

1. To Improve the service of Uber , we need to provide some benefits of the drivers in addition so that this will help in helping the drivers to accept the trip requests no matter the distance they are from the location

2. As we have seen in the above plots , we have noticed that there are many status with “No cars available” at either airport or city and same with “cancellation” status. To improve this things , we need to provide the customer to make a choice any of the drivers in their own area .

   Either of making the drivers to accept the request , we can make the customers to choose any of the drivers on fixed basis. This can help somehow in accepting the requests.

3. One more suggestion , mostly we see for any route , it is observed that some of the drivers are detected in that location nearby , so we can develop a automation bot in the chat services to make the drivers accept the trips when they are declining. With cancellation , it develops a trigger to their rejection limit , once crossed , the automation service will ping them to accept the next trip making it compulsory.

So, these are the suggestions from my end to help the Uber Services!!.

THE END OF THE PRESENTATION

THANK YOU