

UBER SUPPLY-DEMAND GAP ANALYSIS

Presented by –
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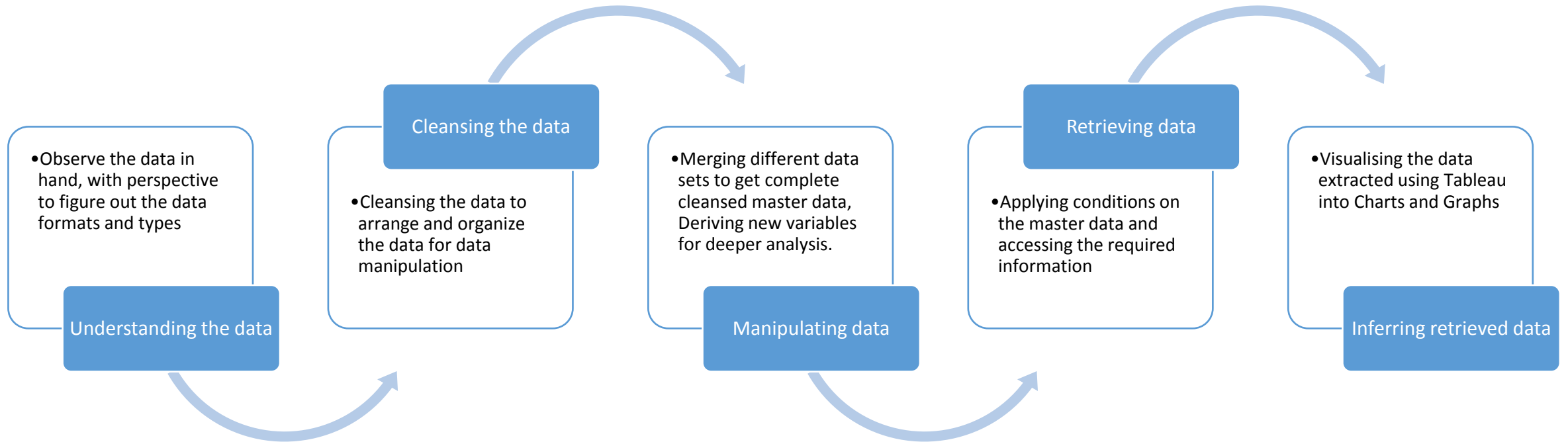
Abstract

Understanding the Uber Cabs supply-demand trends to infer the solutions to reduce the supply-demand gaps.

The Analysis is only based on the following points -

1. The data given is of a week of July.
2. The analysis is only done with requests for Airport and from Airport.
3. We have considered different time slots, e.g., Early Morning, Morning, Afternoon, Evening etc.

Problem solving methodology



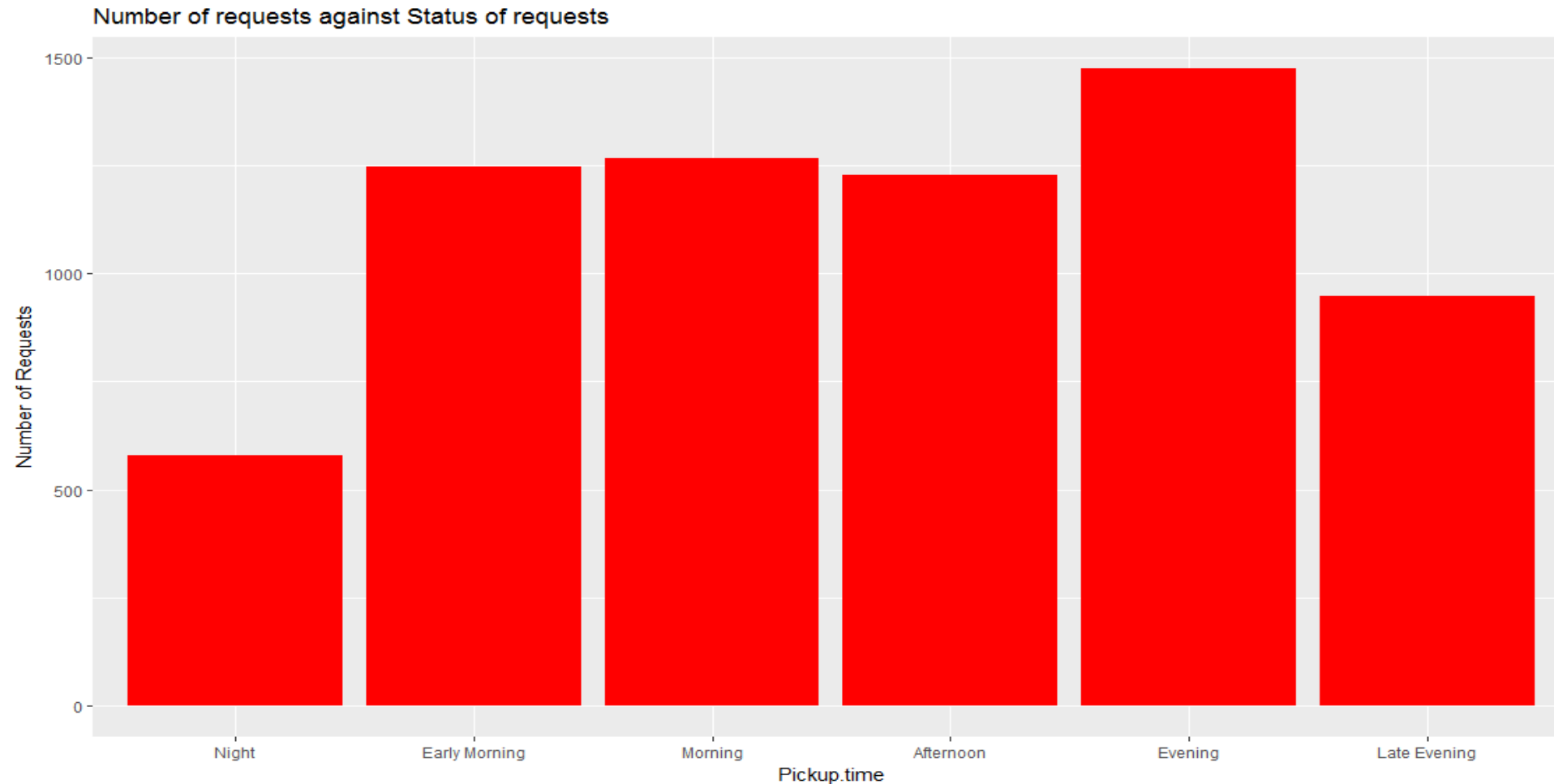
Time Slots -

We have divided the Hours of a day in various Time Slots as given below –

Time Slots		
S.no	Range	Slot
1	5:00 – 8:59	Early Morning
2	9:00 – 11:59	Morning
3	12:00 – 17:59	Afternoon
4	18:00 - 20:59	Evening
5	21:00 – 11:59	Late Evening
6	00:00 – 4:59	Night

Uni-variate Analysis – Time Slots

By looking at the graph, we can say that more number of requests are made during Evening time slot.



Bivariate Analysis – Time Slots & Status

The time slots when the highest supply-demand gap exists -

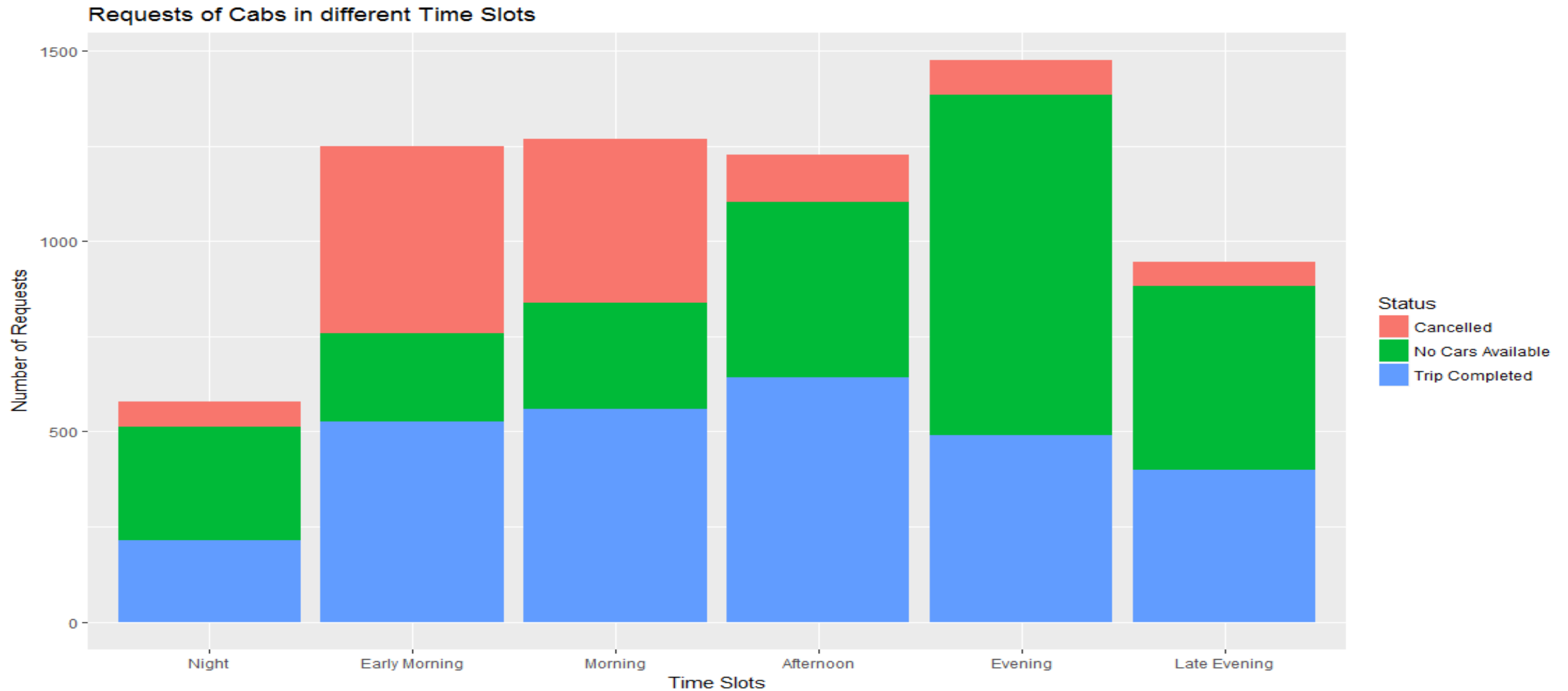
Highest Time slot for
Cab request Cancelled

1. Early Morning - 490
2. Morning - 430
3. Afternoon - 126
4. Evening - 89
5. Night - 65
6. Late Evening - 64

Highest Time slot for
No Cars Available

1. Evening - 895
2. Late Evening - 484
3. Afternoon - 460
4. Night - 299
5. Morning - 279
6. Early Morning - 233

Bivariate Analysis – Time Slots & Status



Pickup Location Analysis

The highest supply – demand gap for Early Morning and Evening time slots -

Pickup location for Cancelled Requests

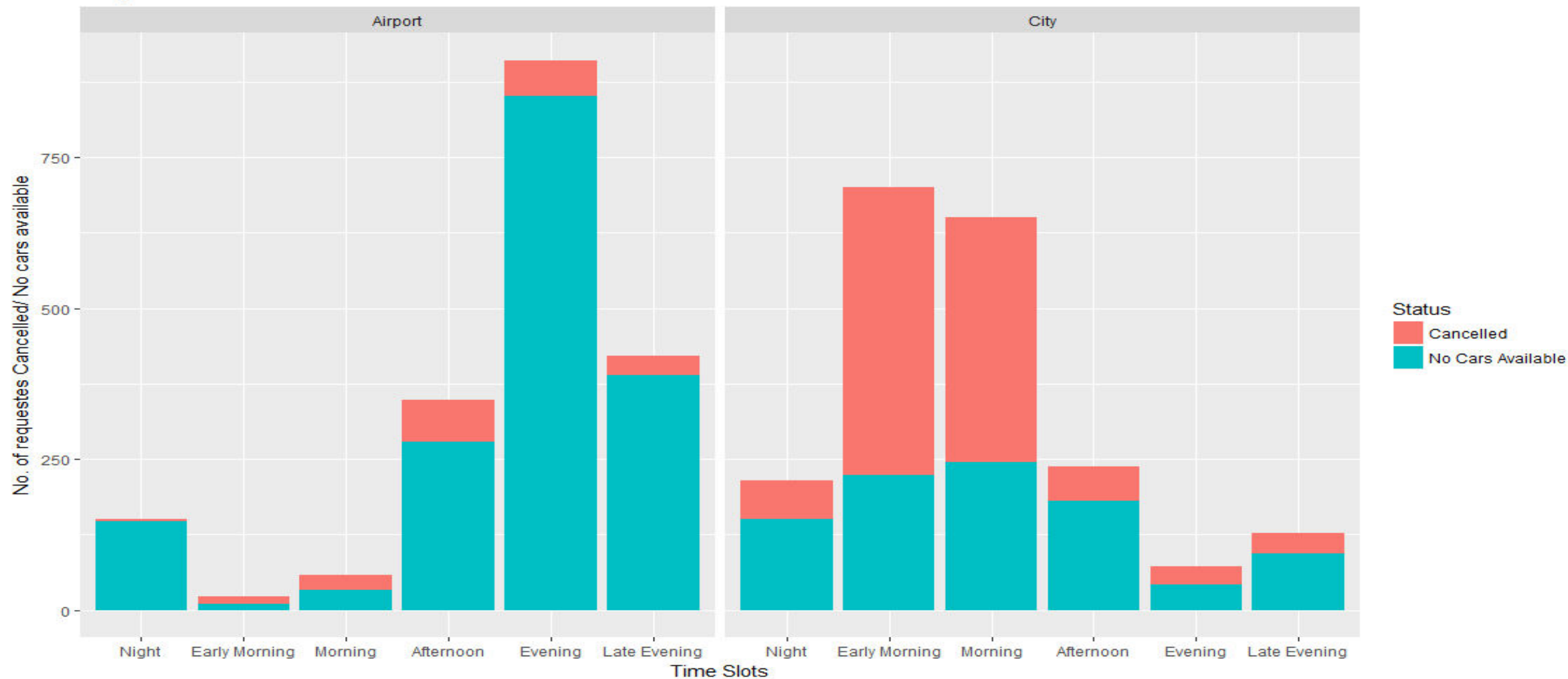
Pickup Location	Slot	No. Of Request
Airport	Early Morning	13
City	Early Morning	477
Airport	Evening	59
City	Evening	30

Pickup location for Requests with No Cars Available

Pickup Location	Slot	No. Of Request
Airport	Early Morning	10
City	Early Morning	223
Airport	Evening	852
City	Evening	43

Supply – Demand Gap Analysis

Requests of Cabs not fulfilled in different slots and location



Inference of Gaps

➤ Problem 1 –

- A large number of Requests got cancel during Early morning from City to Airport

➤ What may be the Reasons ?

- A large number of flights leave the airport during Early morning time slot. There are very less incoming flights at that time. The driver who reaches airport during that time has to spend idle time to pick a customer back to the city. The driver could utilize this idle time for other trips if he chooses not to go to the airport. Otherwise he has to return back empty seated which is a waste of gas mileage for him. Due to this a large number of service requests were cancelled in early morning resulting in huge supply demand gap.

Inference of Gaps

➤ Problem 2 –

- Cabs are not available for a large number of requests during the Evening time slot from Airport .

➤ What may be the Reasons ?

- In the evening, there are more number of flights arriving as compared to departure flights, As the outgoing flights are less, the cabs coming to the airport are also very less. This is reducing the availability of cabs drastically near airport in the evening. So, more number of passengers are not getting sufficient cabs to leave the airport in the evening. This leads to a huge supply demand gap at the airport in evening rush time slot.

Recommendations -

- Give more share to the drivers for airport trips than usual trips.
- Rewarding the drivers with most number of trips to and from airport.
- Only pooling can be made available , instead of personal cabs with extra charges to customers in the evening slot for airport to city.
- Share the problem with drivers and customers for suggestions.