

UBER SUPPLY DEMAND GAP CASE STUDY

SUBMISSION

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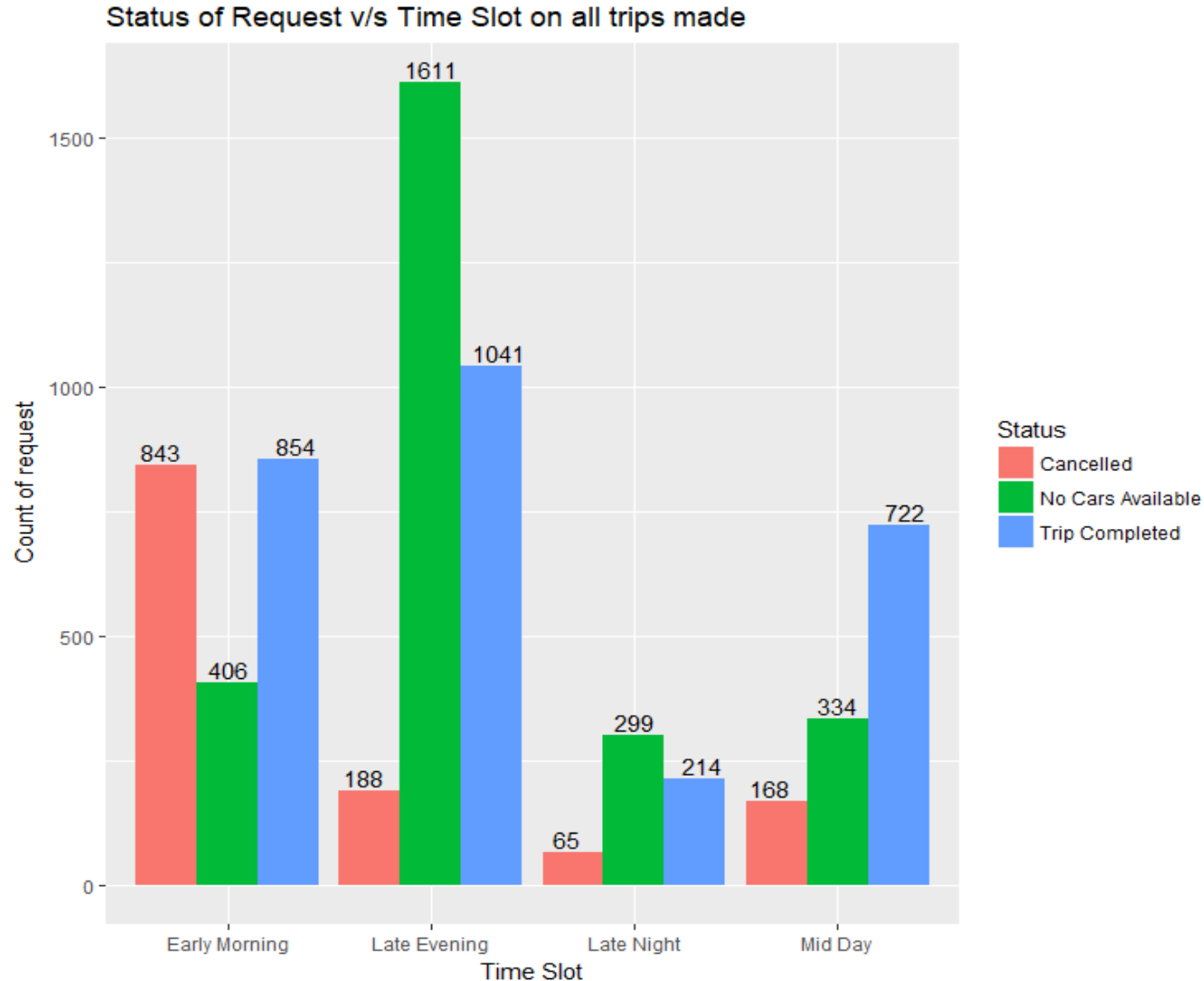
Abstract

Uber, a global cab company is facing some challenges regarding trips to and from airport. Users are complaining of cabs being not available and their requests getting cancelled. There by Uber loses out a significant part of revenue due to supply and demand not being met.

The primary objective is to identify the frequency of requests that gets cancelled or show 'No cars available' for different time slots in a day and to identify when the supply demand gap is at it's highest so that Uber can take necessary steps to meet the demand.

A dataset having all required fields is available for analysis for trips made to and from the airport.

Frequency of requests and the different status based on the time slots on all trips made



The time slots are defined as below:

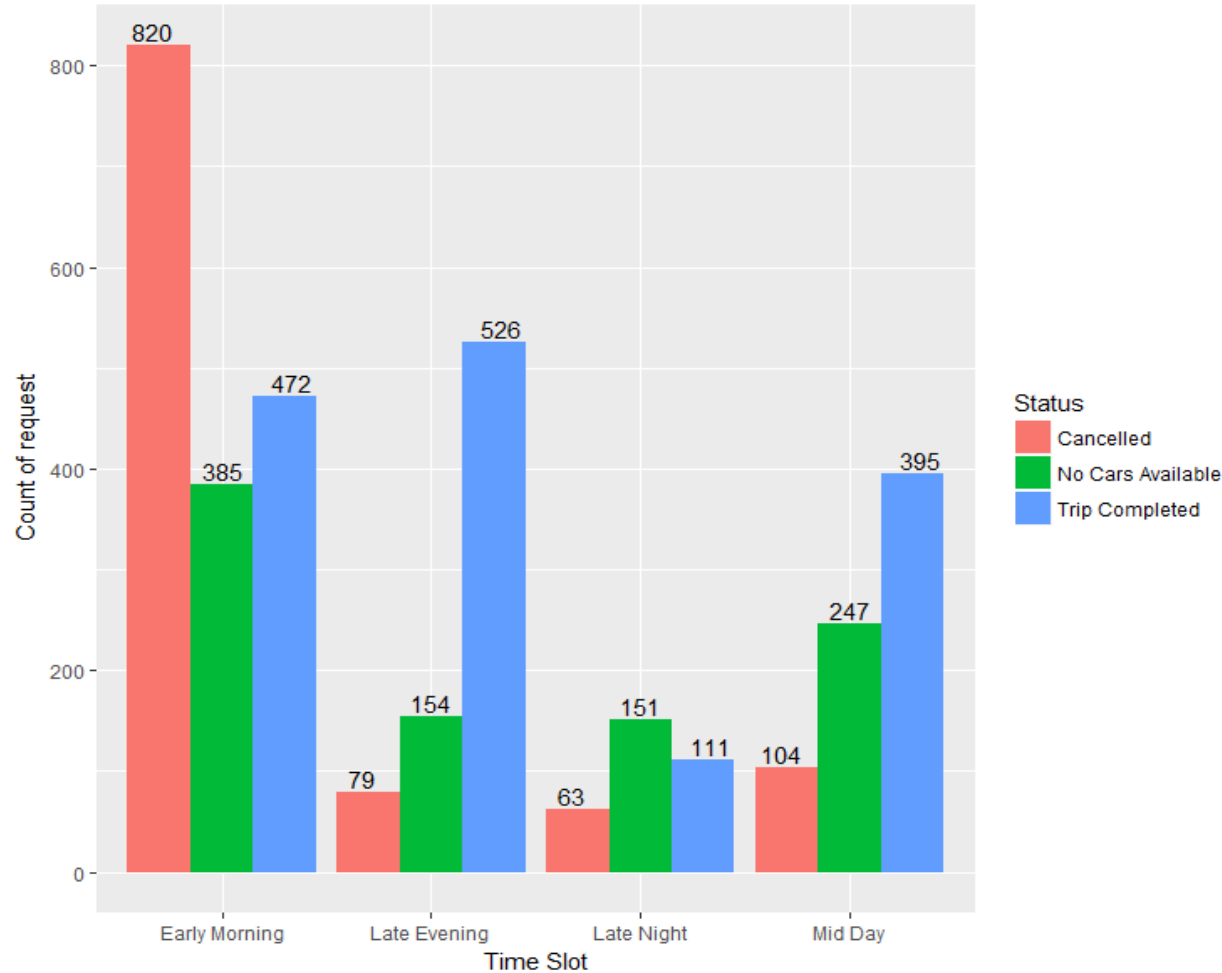
- 23:00-04:00 - Late Night
- 05:00-09:00 - Early Morning
- 10:00-16:00 - Mid Day
- 17:00-22:00 - Late Evening

This can be changed as per business request.

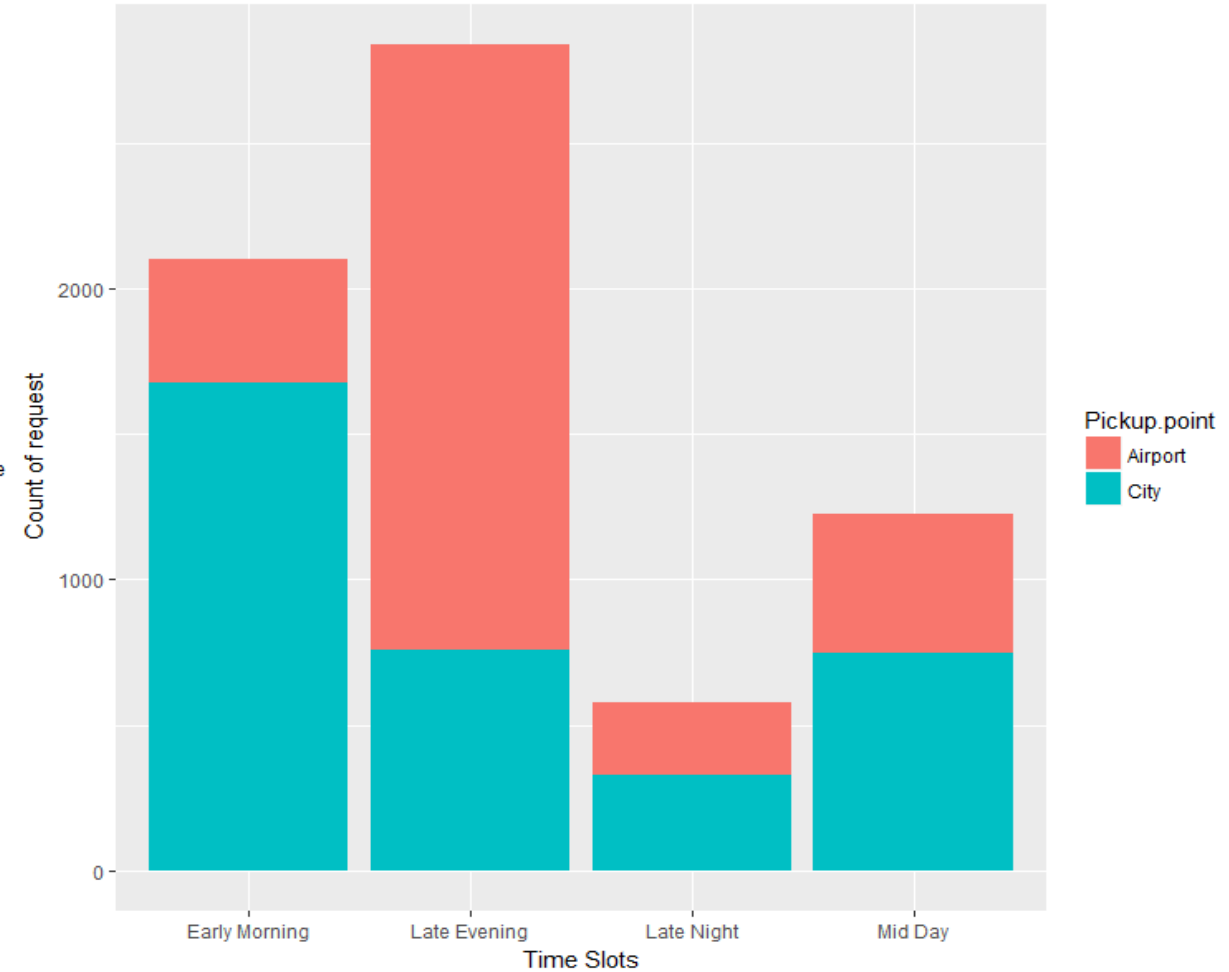
Visualizing the frequency of request and the different status based on the time slots derived on the entire dataset we can infer the below :

- In time slot most users gets status **Late Evening** as "No cars available"
- In **Early Morning** time slot a good percentages of trips gets "Cancelled"

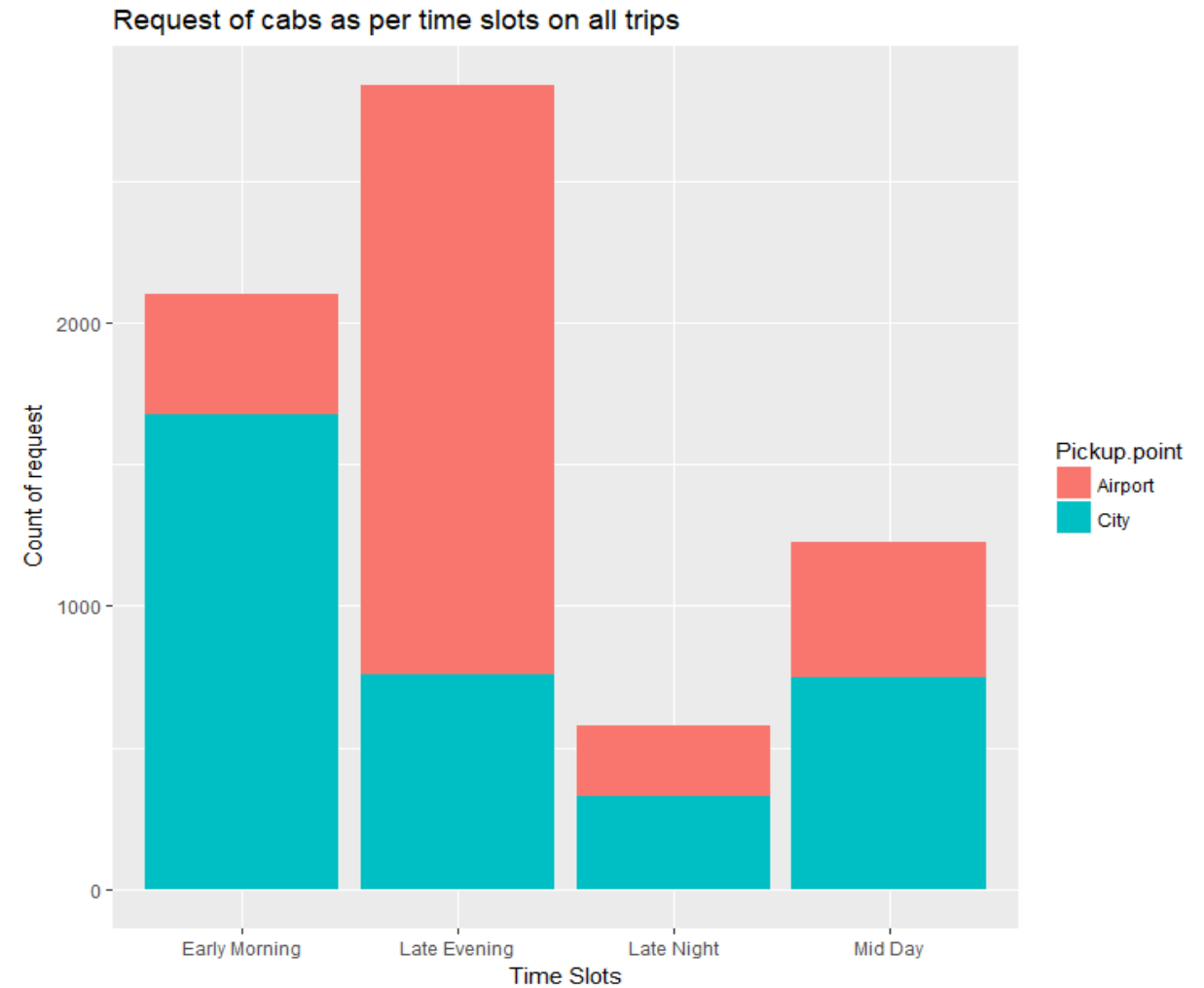
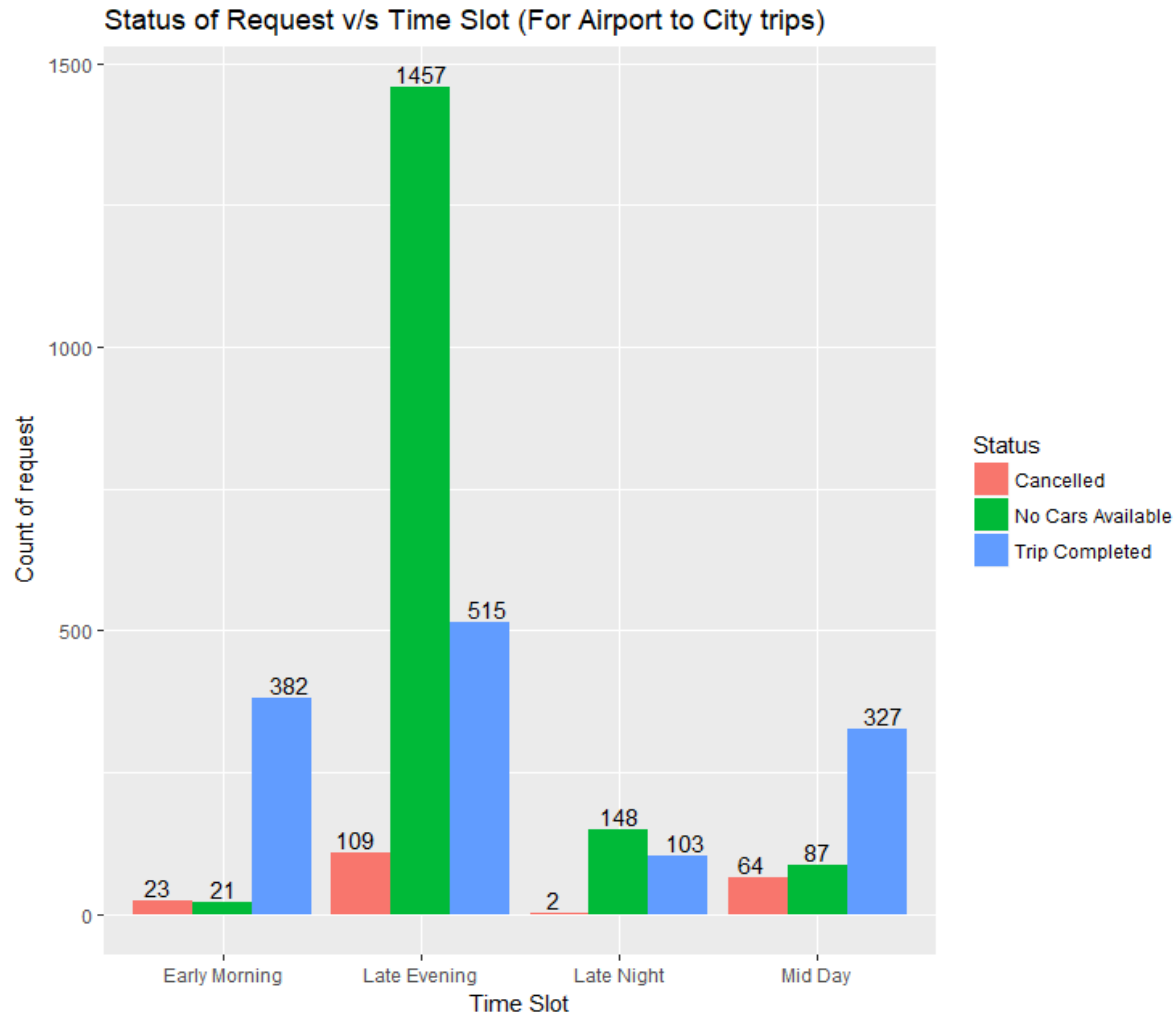
Status of Request v/s Time Slot (For City to Airport trips)



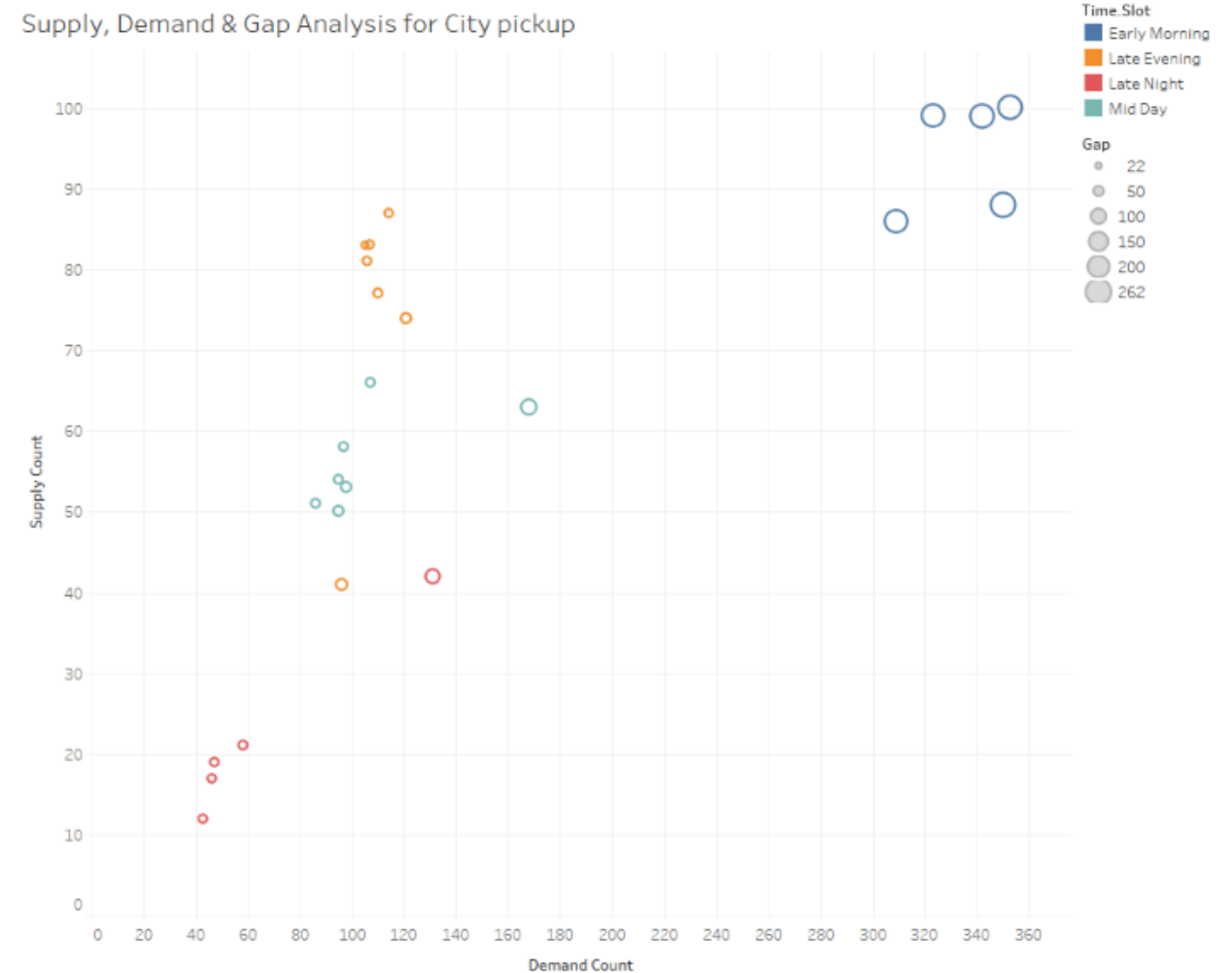
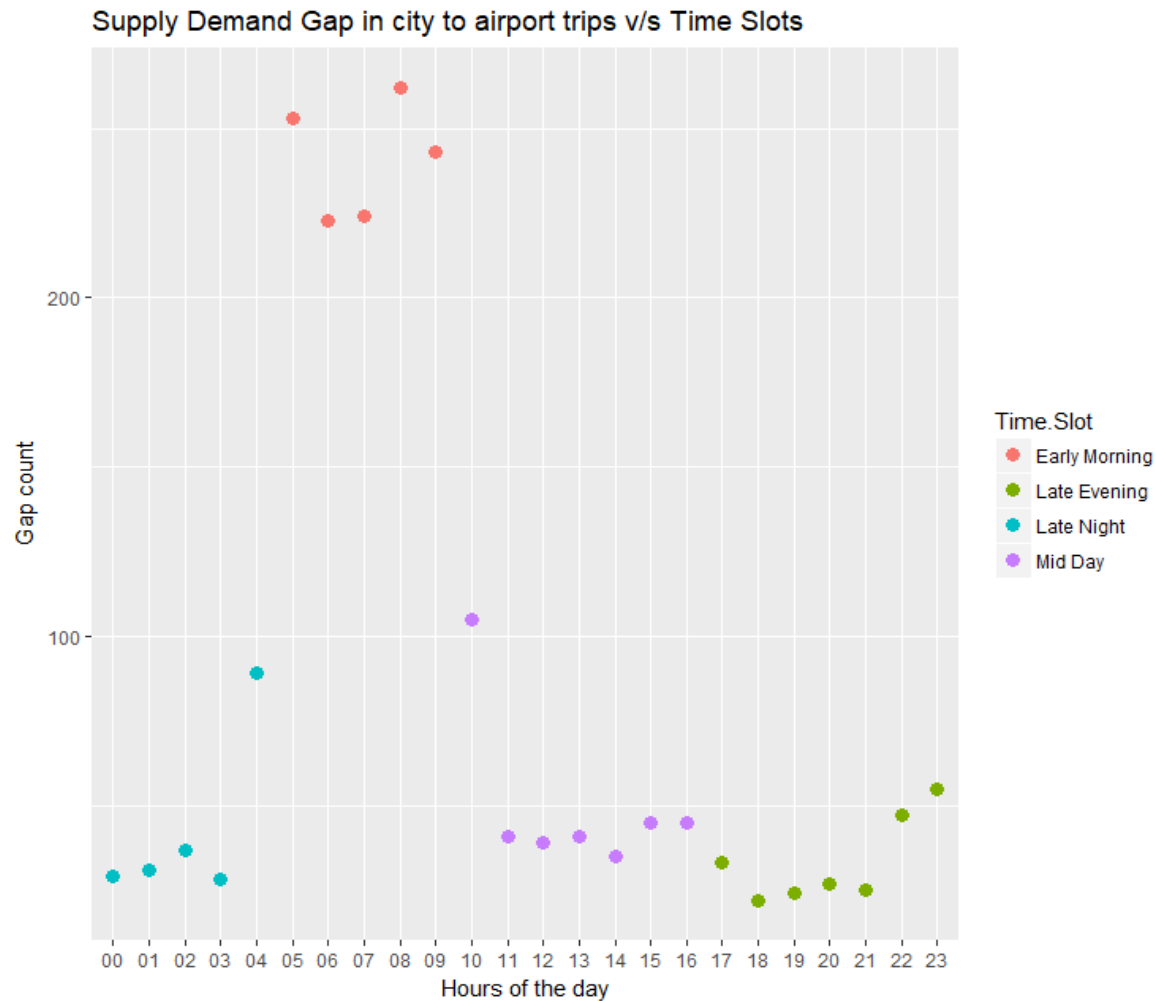
Request of cabs as per time slots on all trips

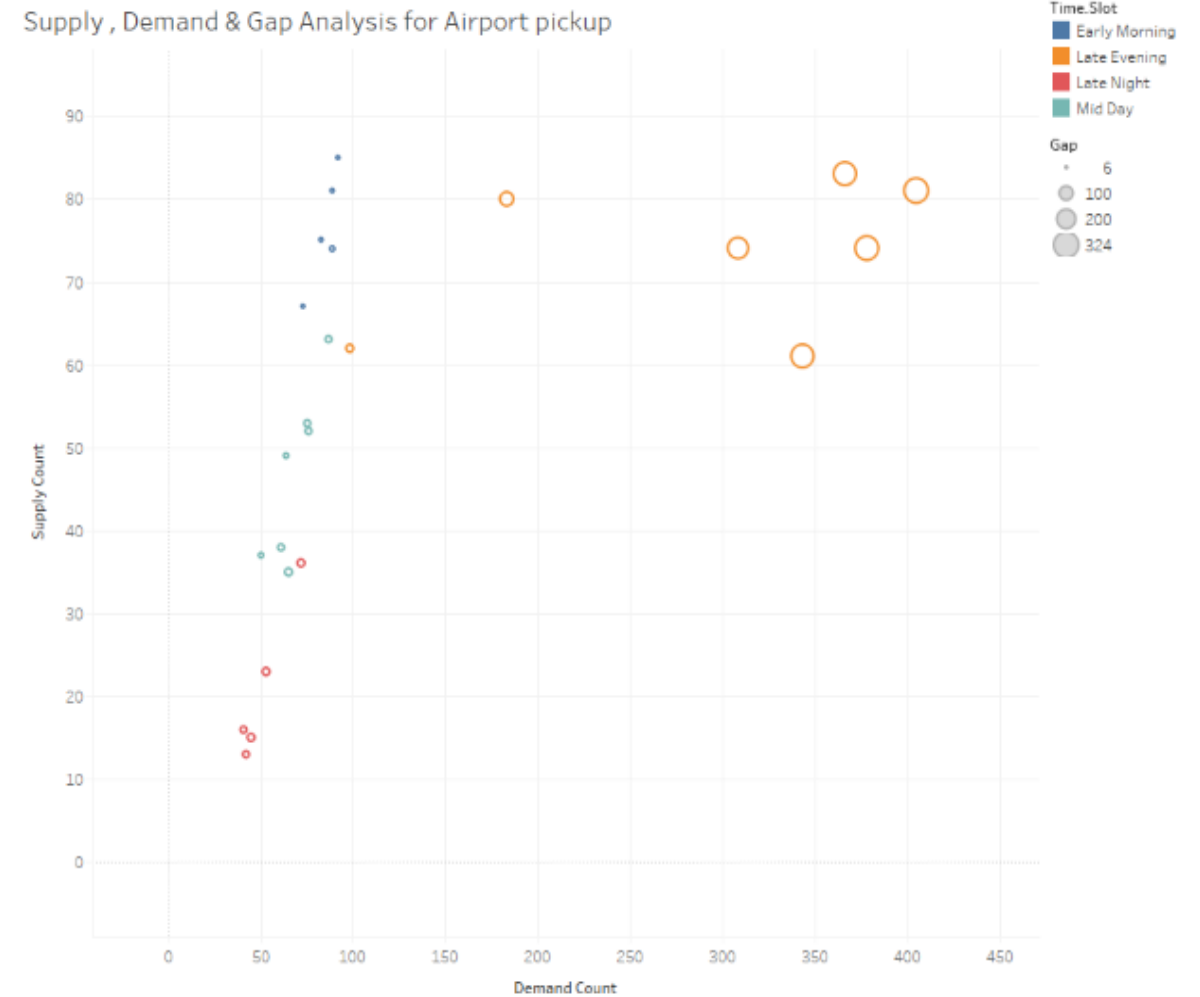
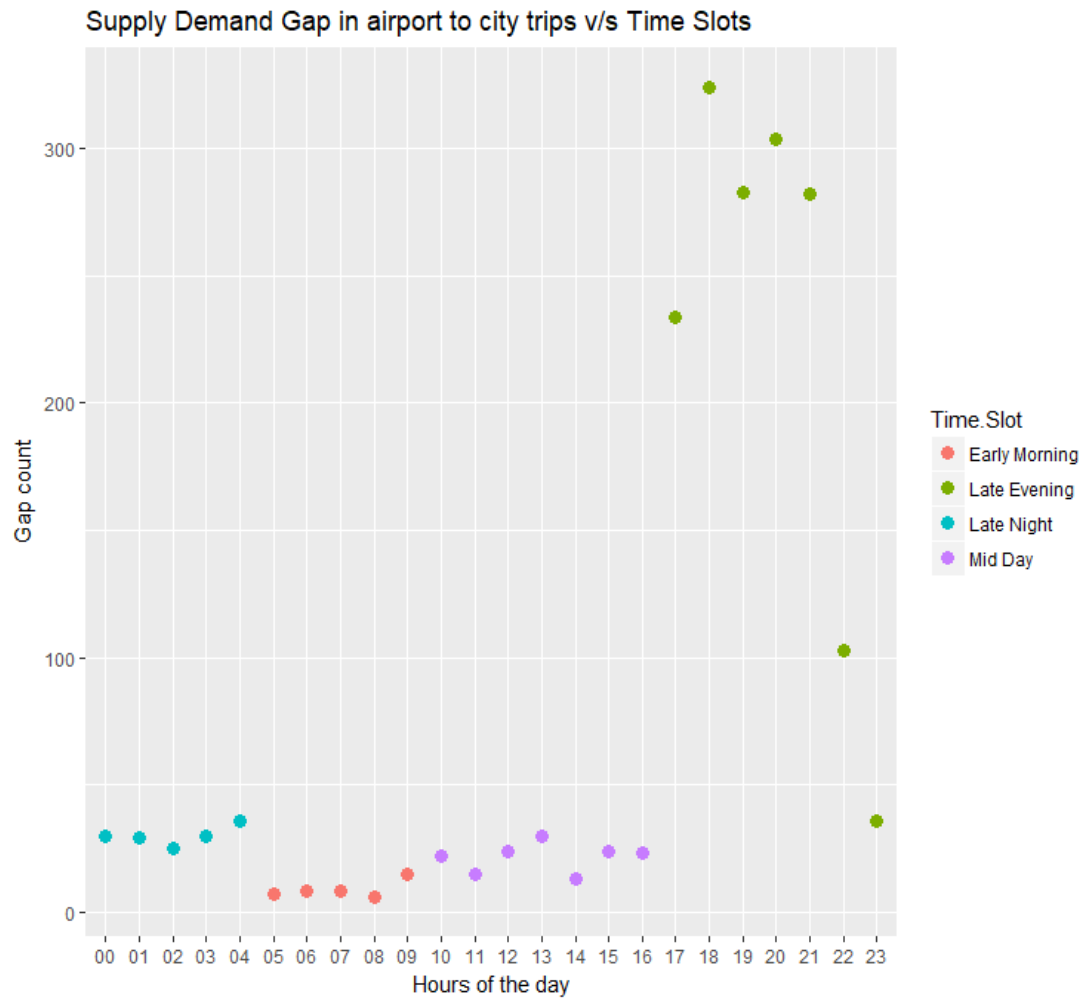


We can visualize the request of pickup from city is maximum in the **Early Morning** and in the same time slot most users at city gets status as "**Cancelled**"



We can visualize the request of pickup from airport is maximum in the **Late Evening** and in the same time slot most users at airport gets status as “**No Cars Available**”





So we can observe high gap in the **Late Evening** time slot, mainly between 5PM – 10PM, and for airport pickup Gap increases as the Demand exceeds a certain level.

Reason for the supply demand gap

- For trips from city, we observed a gap in the Early Morning time slot. 46% of users gets their request cancelled and 30% of users gets status as No cars available.

Reason for the request being cancelled is due to the fact that in Early Morning time slot, the number of requests from airport to city is very low (Plotted in “*Request of cabs as per time slots on all trips*”). Hence drivers would have to wait there for a significant time or return back to city without any trip.

- For trips from airport, we observed a gap in the Late Evening time slot. 70% of users are not able to get cabs from airport (Status - No Cars Available) in late evening.

Reason for this can be due the fact, there aren't many flights taking off from the airport in the Late Evening time slot. Hence trips made from city to airport are very less in this time slot, resulting very less amount of drivers waiting at airport.

Recommendations to solve supply demand gap

To solve the supply demand gap we follow these steps :

- To reduce the gap in the early morning time slot for trips from city, we can make it mandatory for a driver to make at least one trip to airport in the early morning time slot. This would reduce the count of requests being cancelled by drivers in the early morning for trip to airport.
- Providing some bonus amounts for completing trips to airport in the early morning can urge more drivers to take trip to airport. Thereby Uber can cut of a loss of revenue as well.
- To reduce the gap in the late evening time slot for trips from airport, we can keep some stand by cabs in the airport to meet the demand in the late evening.

Thank You