

Uber Supply And Demand Gap

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Uber Supply And Demand Gap Case Study



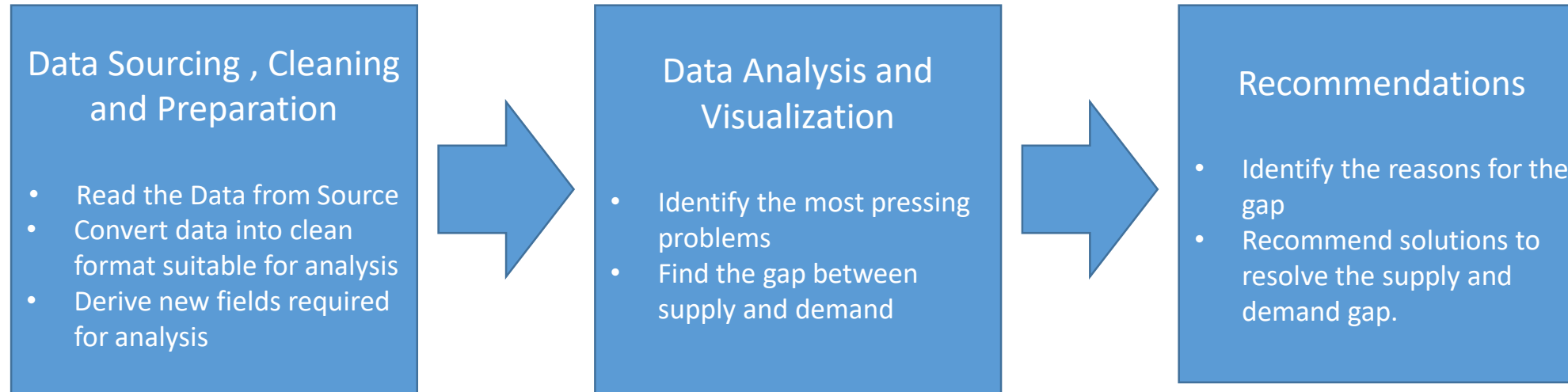
Uber is an online car aggregator service. Uber loses out on its revenue due to the supply and demand gap of the cars. This is mainly due to cancellation of requests by drivers and non – availability of cars

Business Objective :

- Identify the most pressing problems of Uber.
- Find gap between supply and demand and identify reasons for this gap
- Recommend ways to resolve the supply and demand gap

Strategy:

- Identify the problematic trip status for trips originating from airport and city
- Analyze if the day of week has any impact on the trips originating from airport and city for the problematic trip status
- Determine the pressing problems by analyzing the request frequency of trips from airport and city for problematic trip statuses.
- Analyze the demand for cabs for each timeslots for trips from airport and city.
- Identify the timeslot that has the highest demand and supply gap , and find the request type (airport to city or city to airport) that is hugely effected.
- Identify the reasons for the gap
- Recommend ways to resolve the gap.

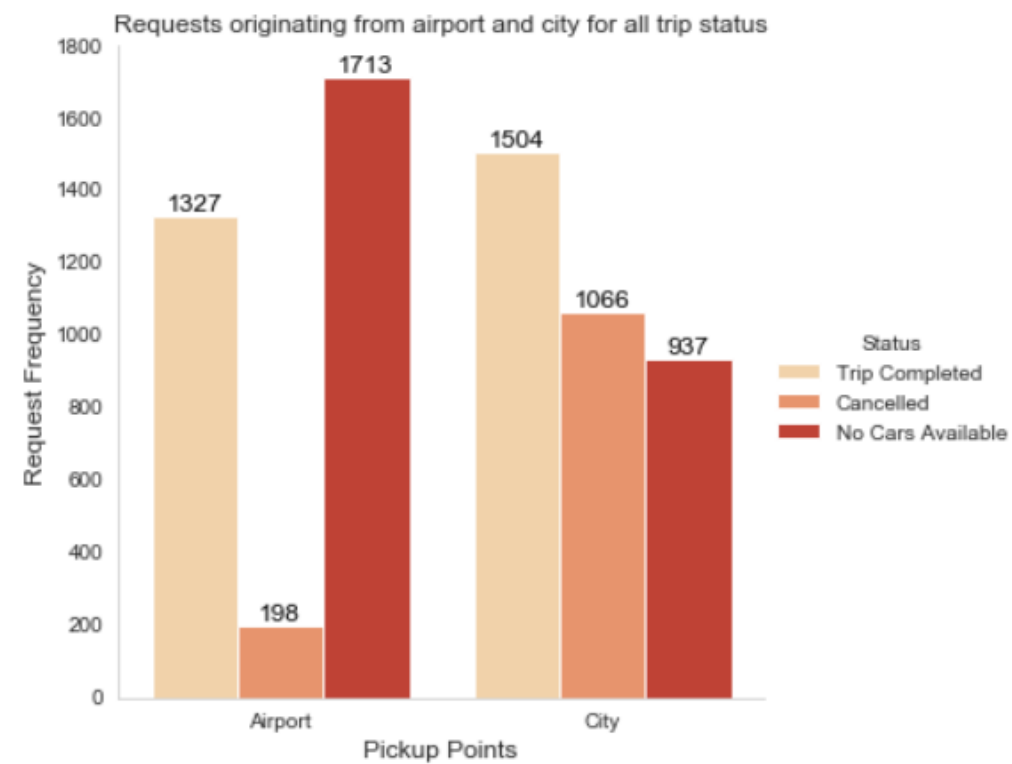
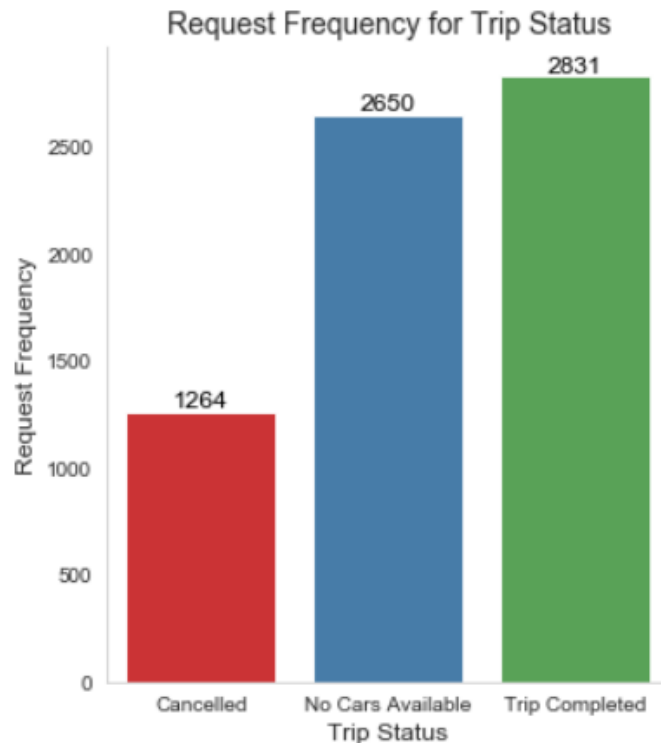


Following assumptions have been made for time slots:

- 4:00 AM – 7:59 AM → Early Morning
- 8:00 AM – 11:59 AM → Morning
- 12:00 PM – 3:59 PM → Afternoon
- 4:00 PM – 7:59 PM → Evening
- 8:00 PM – 11:59 PM → Night
- 12:00AM – 3:59 AM → Late Night

Inferences drawn from the below graphs are as follows :

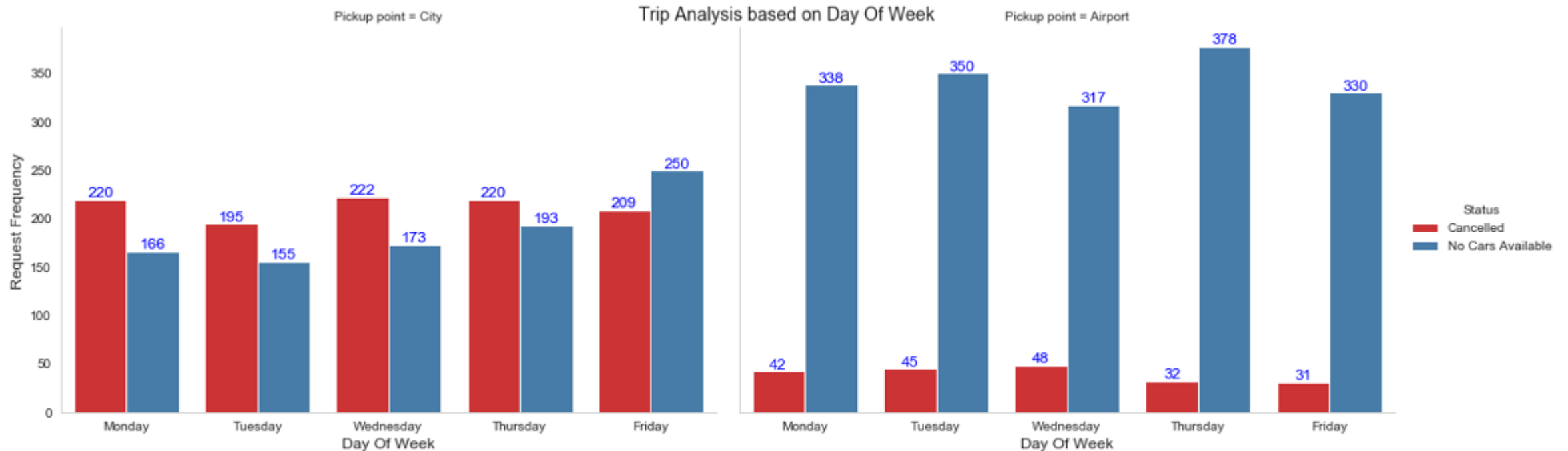
- The problematic trip status are Cancelled and No Cars Available status.
- For No Cars Available status, more number of cars are not available for trips from airport - city.
- For Cancelled status, cancellation is more for trips from city - airport.



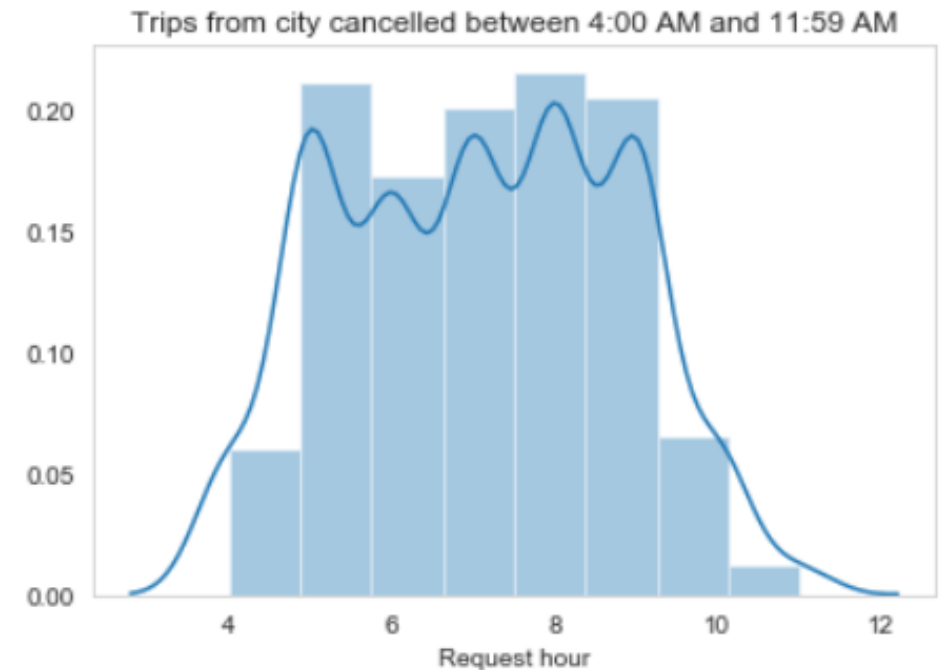
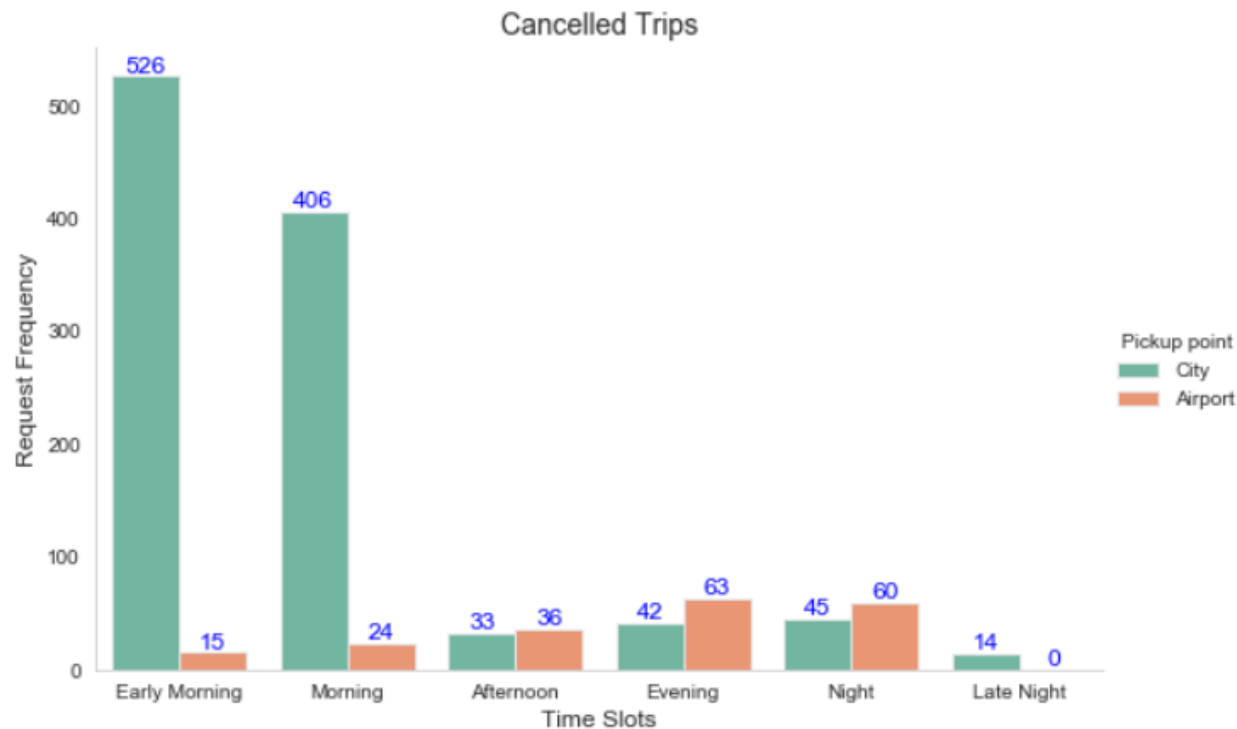
Following can be inferred from the below plots:

- For trips from city - airport, except for Friday, cancelled trips are more for all other days of week
- For trips from airport - city, for all days there are more number of No Cars Available

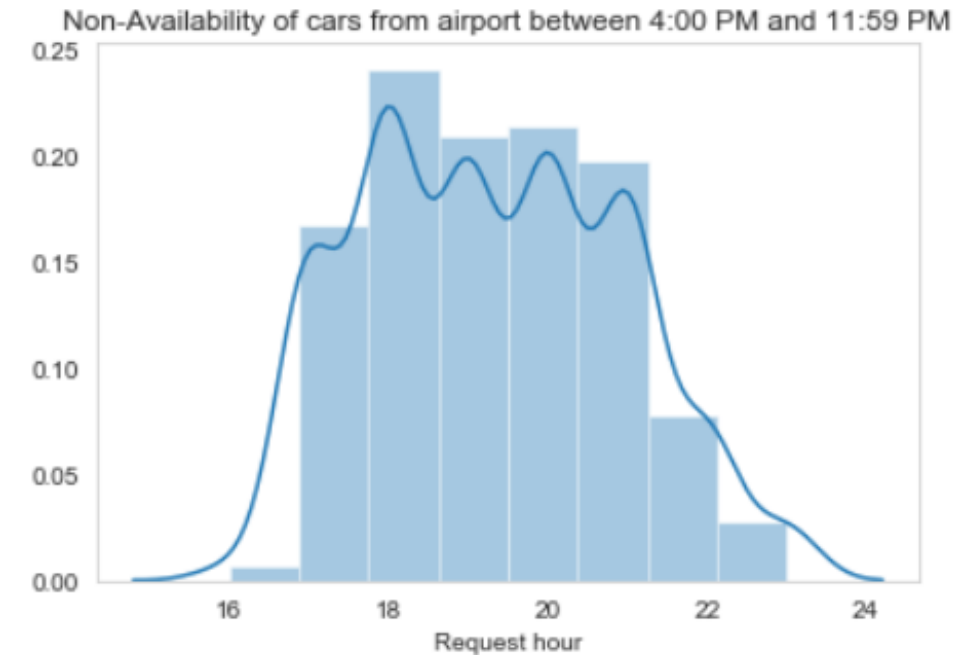
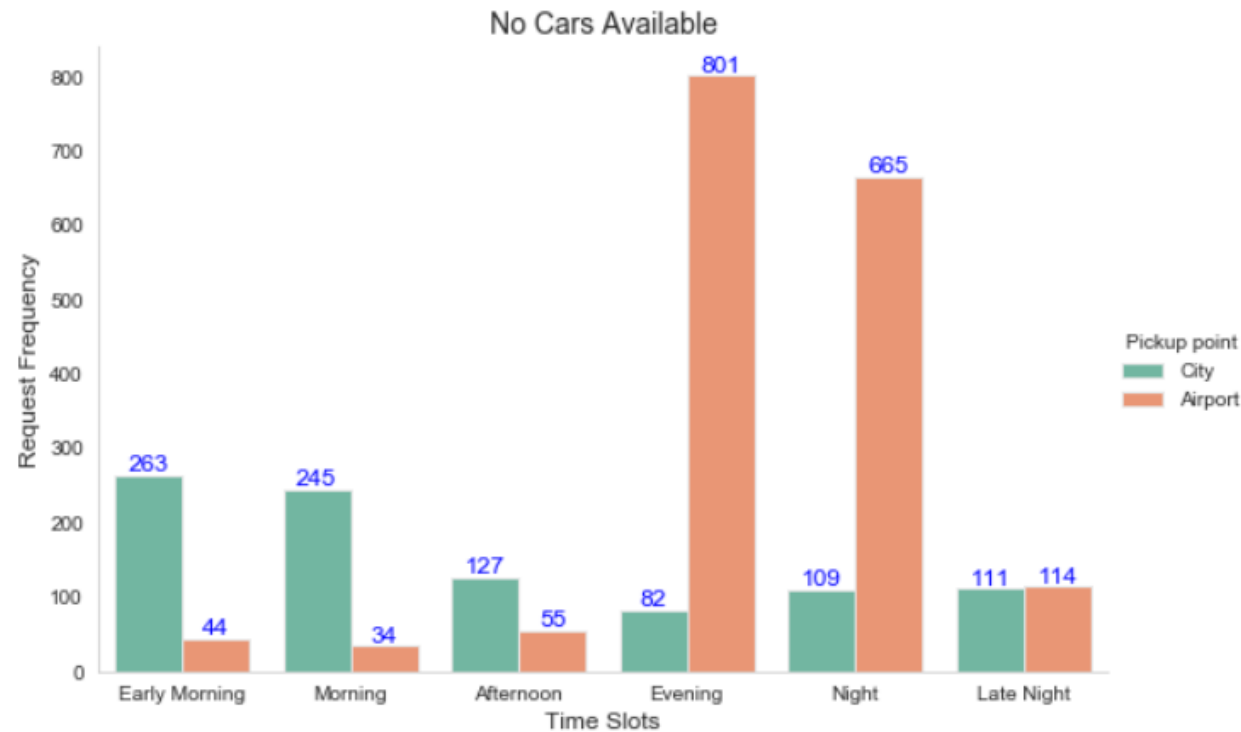
Hence, day of the week does not differ from the conclusion derived in the previous slide.



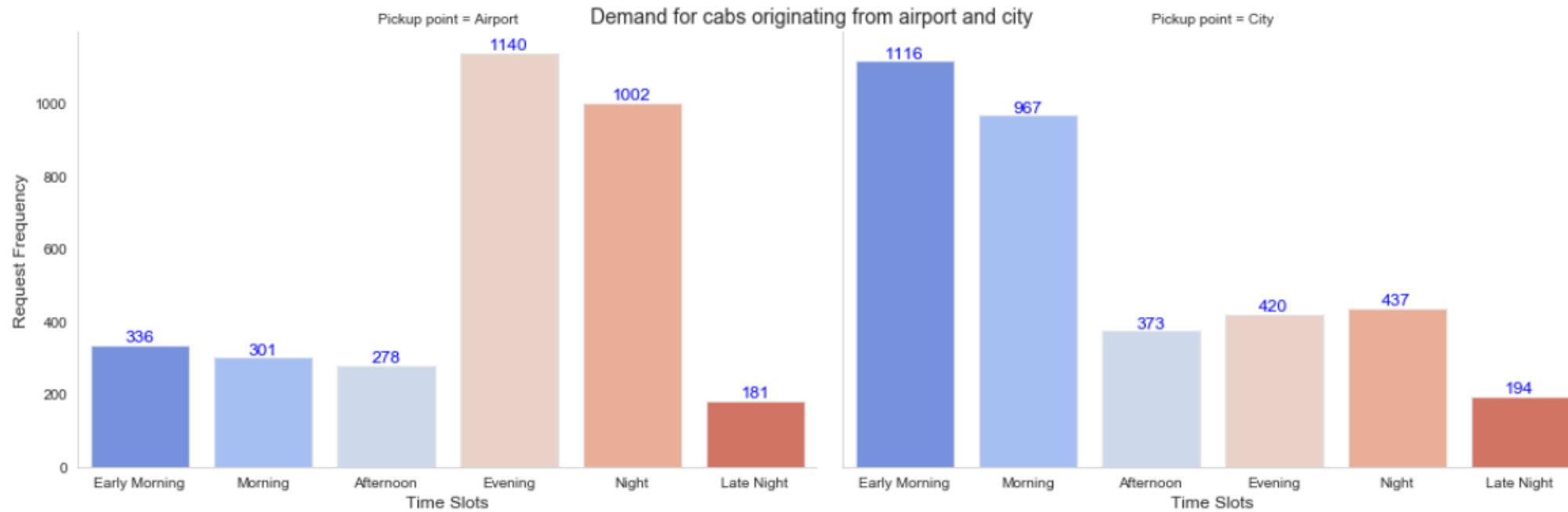
- Maximum number of cancellations happen for trips from city - airport during the hours of Early Morning followed by Morning hours i.e., between 4:00 AM and 11:59 AM.
- Between 4:00 AM to 11:59 AM, maximum cancellations happened around 8:00 AM, followed by 5:00 AM, 9:00 AM, 7:00 AM and so on..



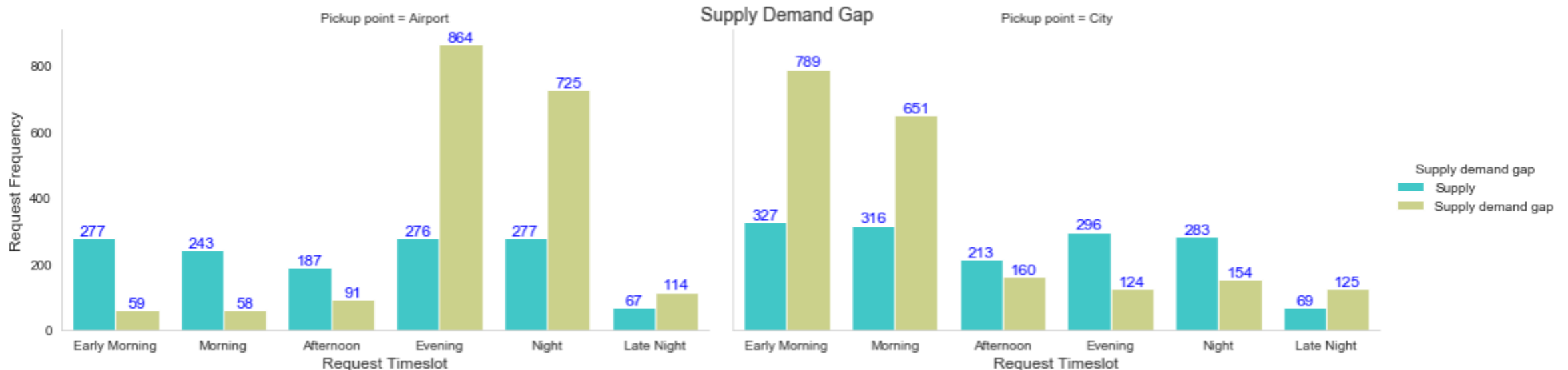
- Maximum cars are not available for trips from airport - city during the Evening and Night hours. i.e., between 4:00 PM to 11:59 PM.
- Between 4:00 PM to 11:59 PM, more cars are not available around 6:00 PM followed by 8:00 PM, 7:00 PM, 9:00 PM and 5:00 PM

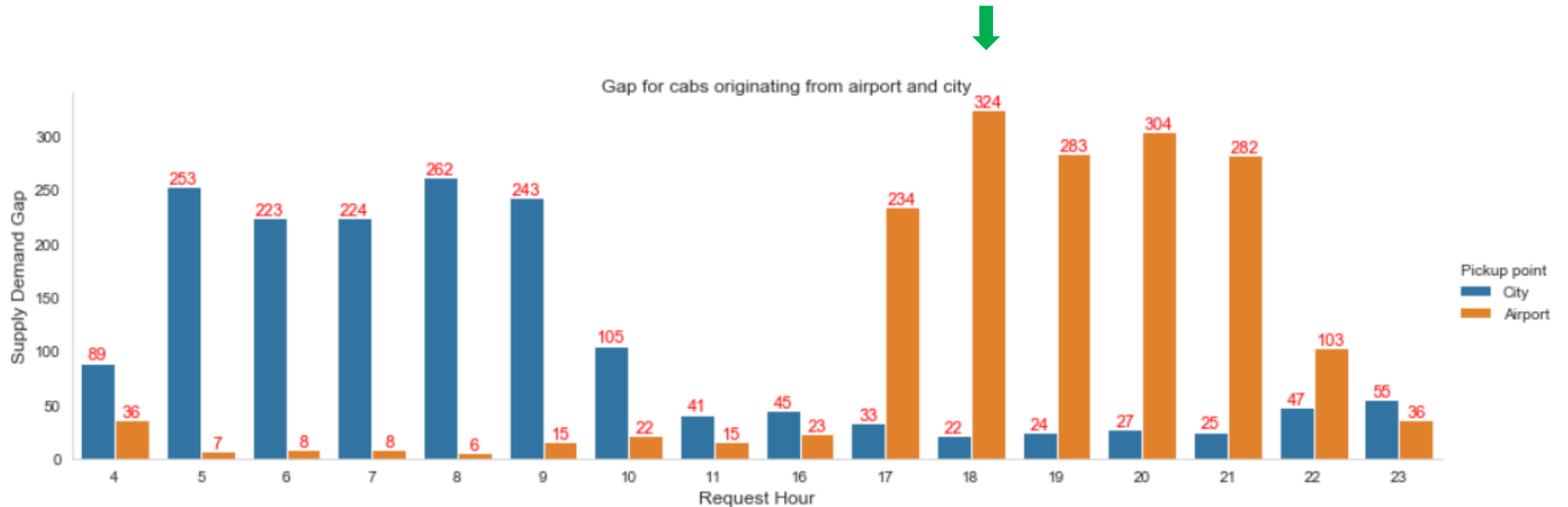


- For trips from airport – city, there is a huge demand for cars during the Evening followed by Night hours
- For trips from city - airport, there is a huge demand for cars during the Early Morning followed by Morning hours



- For trips from airport - city, there is a huge demand for cabs during the Evening followed by Night hours
 - In the evening hours, supply is only 24%, where as the supply demand gap is 76%
 - In the night hours, supply is 28%, where as the supply and demand gap is 72%
- For trips from city - airport
 - In the early morning hours, supply is only 29%, where as the supply demand gap is 71%
 - In the morning hours, supply is 33 %, where as the supply and demand gap is 67%





- Between the request types airport – city and city – airport, the supply and demand gap is more for requests from airport - city during the evening hours.
- Amongst the airport – city requests type, the supply demand gap is more between 6:00 PM to 9:00 PM , maximizing at 6:00 PM



Reasons for Supply Demand Gap



- There are not many trips from city – airport, during the afternoon time slot. Hence availability of cars from airport - city is low during evening and night timeslots.
- There may be many part time drivers who may prefer to drive within the city limits as both morning and evening slots are peak hours within city limits (people going to work, school etc...). Thereby achieving their daily targets would be easier.
- For a trip from airport to city, the waiting period/ idle time at the airport is more and hence drivers may avoid a trip from city to airport on the first place as they would have to wait for longer duration in the airport before they can return to city.
- Morning and evening are peak hours in city and hence driving from city to airport or airport to city during this time may take longer time due to traffic jams.
- The drivers may have subscribed with other cab aggregators and hence may cancel requests from Uber if they get a trip within city from the other car aggregator.



Recommendations

- Communicate with drivers to find out the reason for drivers cancellation of trips from Airport – City and City - Airport
- Incentivize drivers for trips from Airport to City and vice versa. Thereby helping them in achieving the target.
- Communicate with part time drivers and try to convert them to full time drivers so that the availability of cabs can be increased.
- Have a loyalty program in place which would help to incentivize the drivers to drive for Uber as opposed to other aggregators.