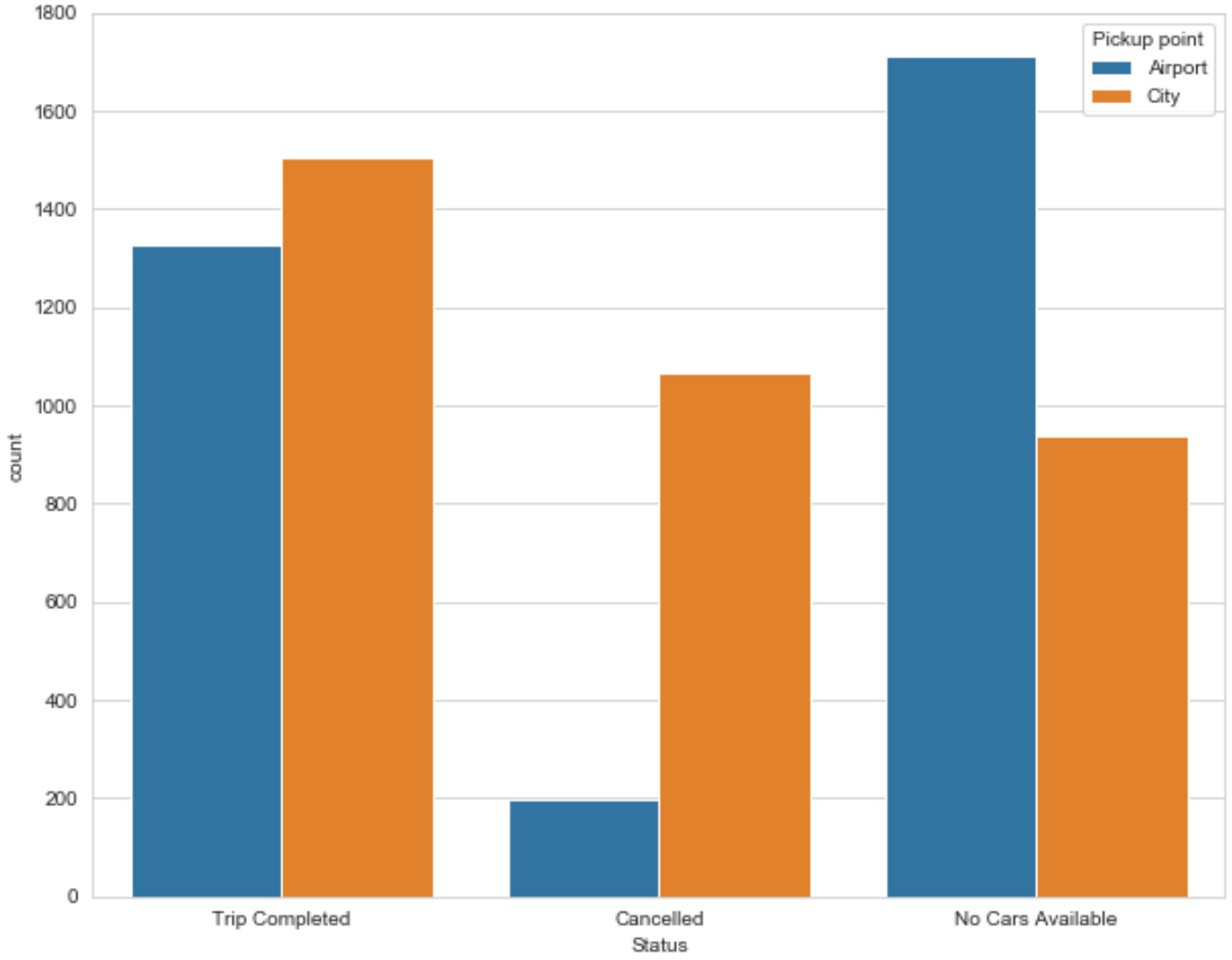
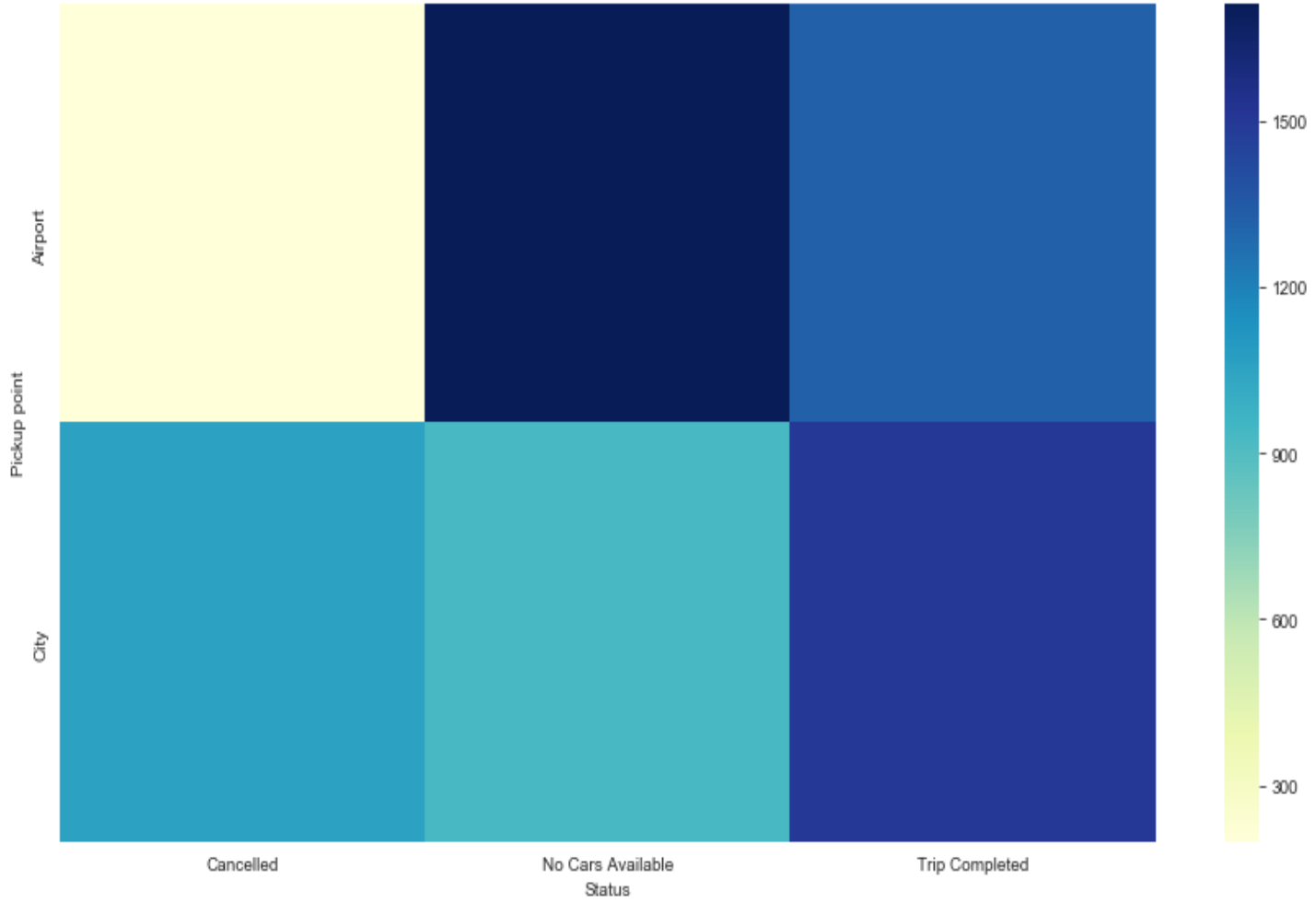
UBER—DEMAND SUPPLY ANALYSIS. 1: Visually identifying the most pressing problems for Uber.

Here we can see ,maximum no. Of cabs were booked from city to airport. Maximum no. Of trips were completed however unavailability of cars from airport to city is higher.



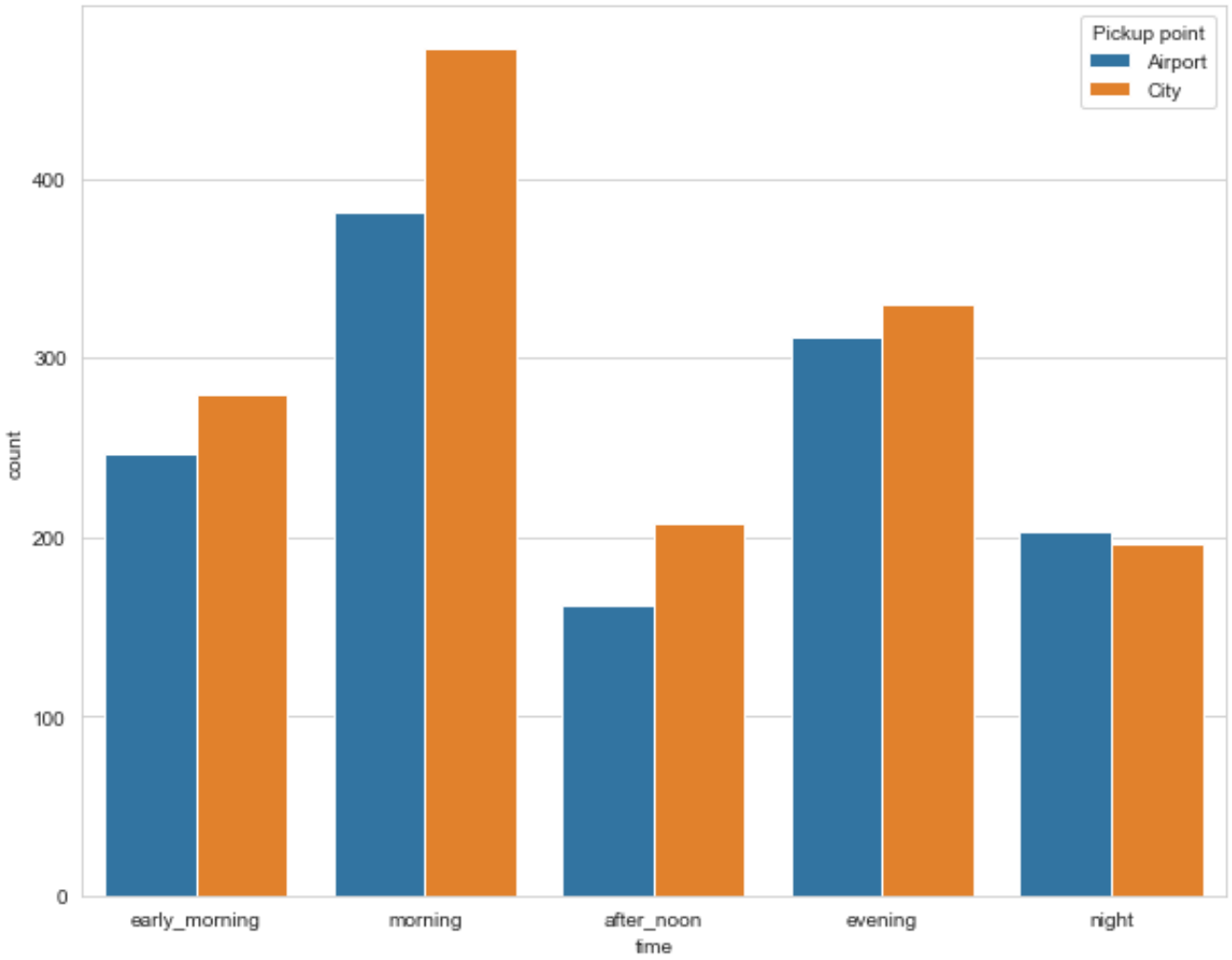
Status VS. Pickup point

- From the provided heatmap we can see that maximum of gaps in trip occurred while booking cabs from airport to city, the specific status faced by consumers is NO cars AVAILABLE. However minimal were cancelled while travelling from airport to city.



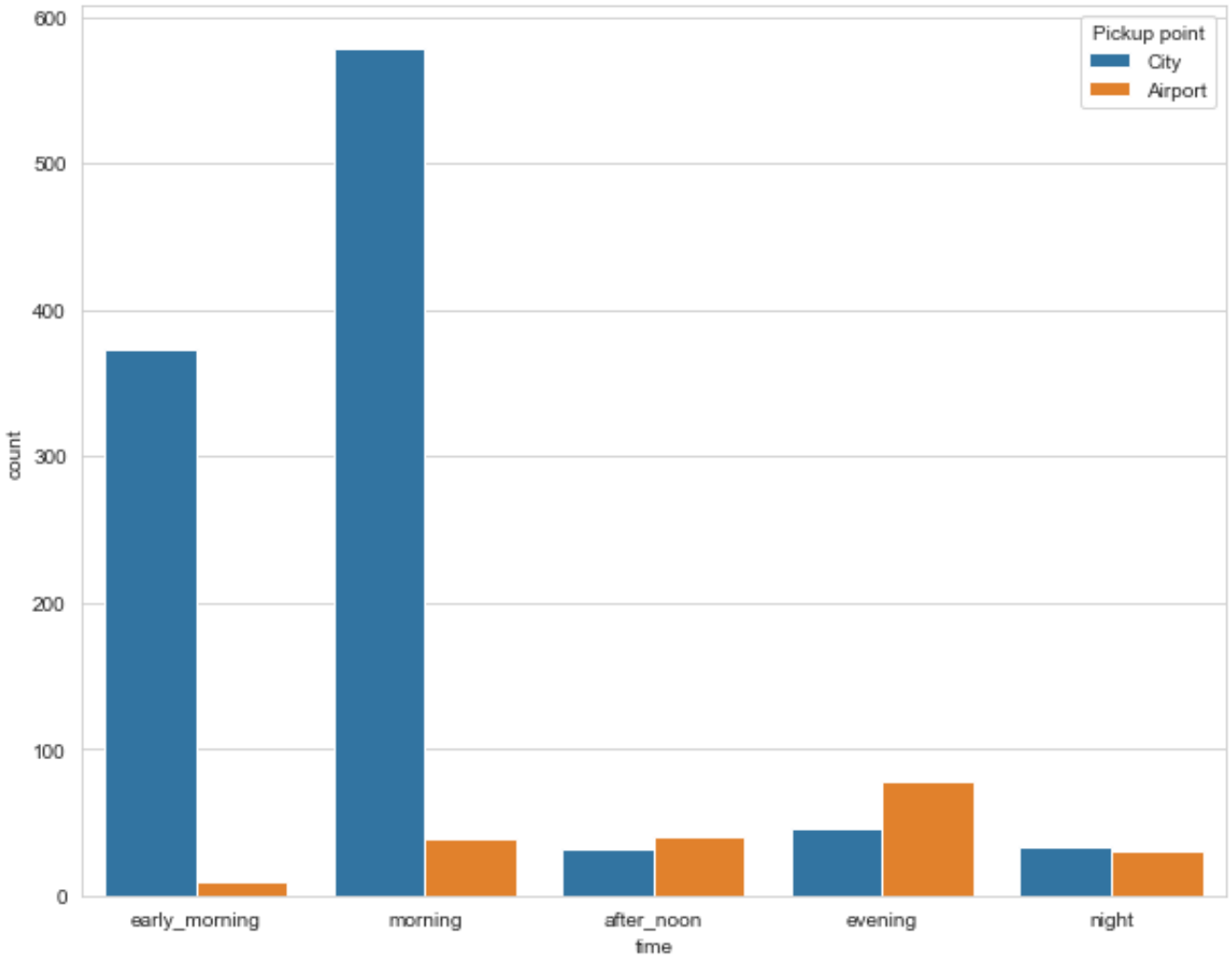
Trips completed

- From this plot we can see that for both city and airport maximum completed trips occurred in morning.



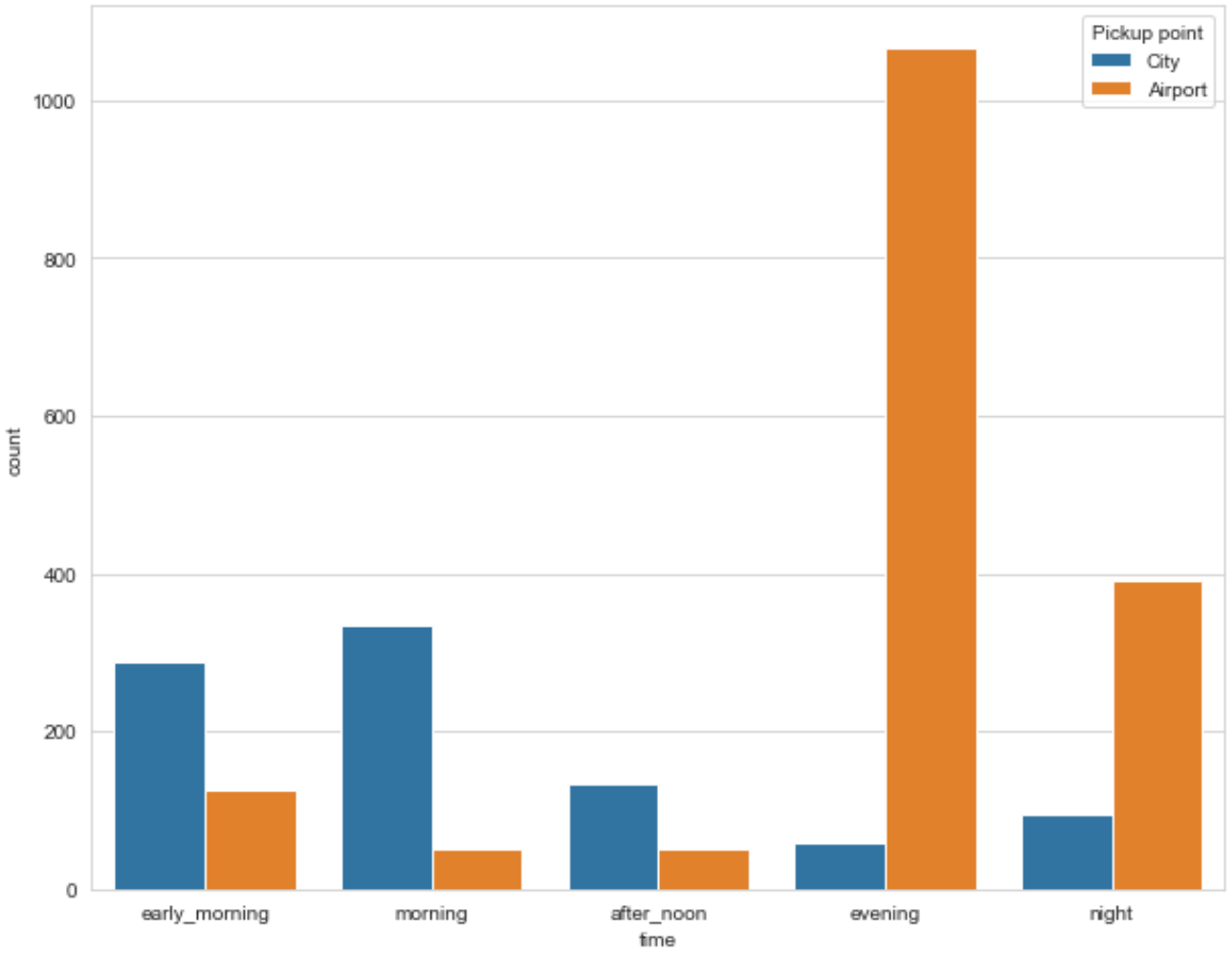
cancelled

- From the provided plot we can easily say that
- For CITY TO AIRPORT route maximum cabs were cancelled during MORNING time
- For AIRPORT TO CITY route EVENING time is the peak for cab cancellations.
- Exact no. Has been described in jupyter file provided along.



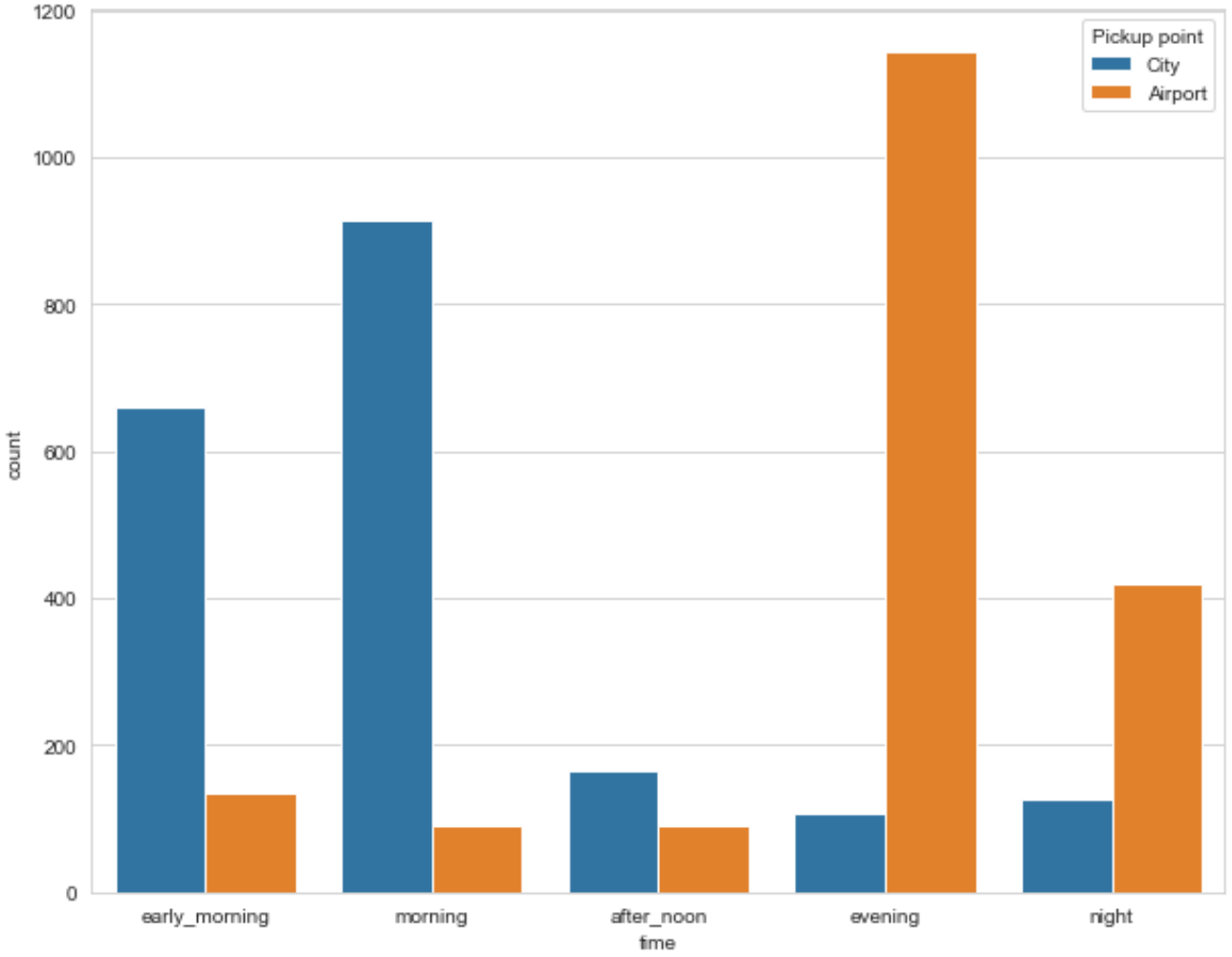
No cars available

- Now using, this plot ,its easily seen that early morning is the time when CITY to AIRPORT route was troublesome
- And for AIRPORT TO CITY route we have evening time as peak problematic one.



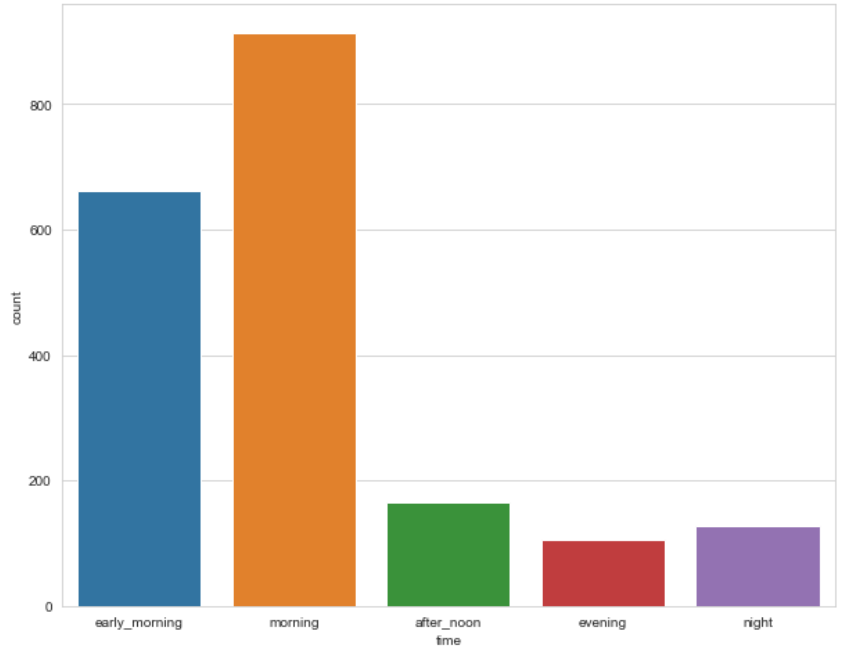
Find out the gap between supply and demand and show the same using plots.

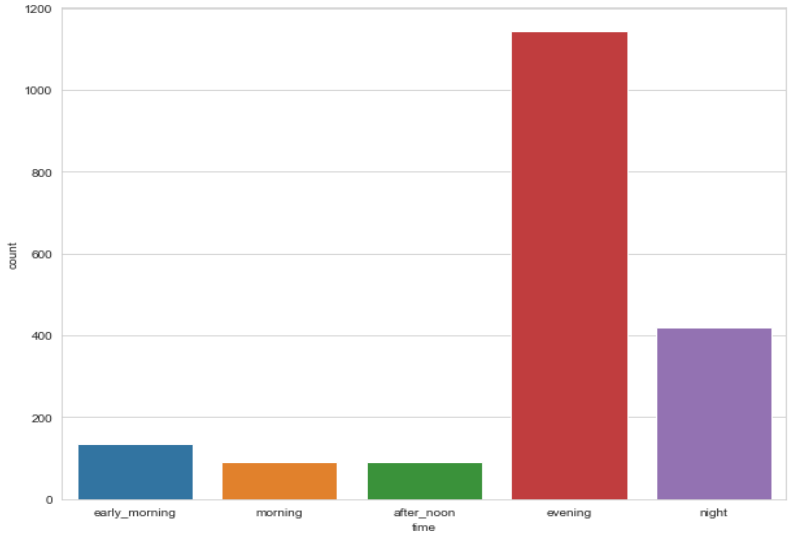
- 1-Find the time slots when the highest gap exists
- Answer= after analysing the data we can say that the GAP(cancelled and no cars available) is maximum for the time between 16:00 evening to 20:00 .
- This is the time between which demand was not met.



- Find the types of requests for which the gap is the most severe in the identified time slots.

- CITY TO AIRPORT
- The time range for which the gap is maximum in this route is 6:00 to 12:00 in morning.
- AIRPORT TO CITY
- The time range for which the gap is maximum between demand and supply in this route is 16:00 to 20:00 in evening.





Reason of problem.

- Pickup:Airport
- Evidently demand is higher compared to supply for the mentioned time in analysis.
- Demand being high signifies that flights/passengers.
- We don't have enough cabs to meet this surge at airport.
- Although there are few requests in midnight, but half of them gets rejected due to no cars available.
- Few request result in higher waiting time for the driver who is in other deterrant in generating enough supply.

Pickup:city

- Morning hours(5-9) seems to be the time when maximum cabs are cancelled.
- Drivers don't want to go to airport during these hours as by the time day reach,they know they have to wait there for some time in order to gain passengers.
- High demand at city andwaiting and airport would mean that there is less inbound flight and more outbound flights.

Ways to resolve issue.

*We need to motivate drivers for accepting requests.

- It can be achieved by allowing them to come back from airport without extra gas cost..or subsidised cost.

*Specific uber station at airport-------

- As the drivers won't have to pay parking cost.
- They won't have to wait in queue again and again to attend passengers.
- Concession in company's commission is an option too.
- Weekly/monthly bonus for drivers for goal achievement can be implemented.