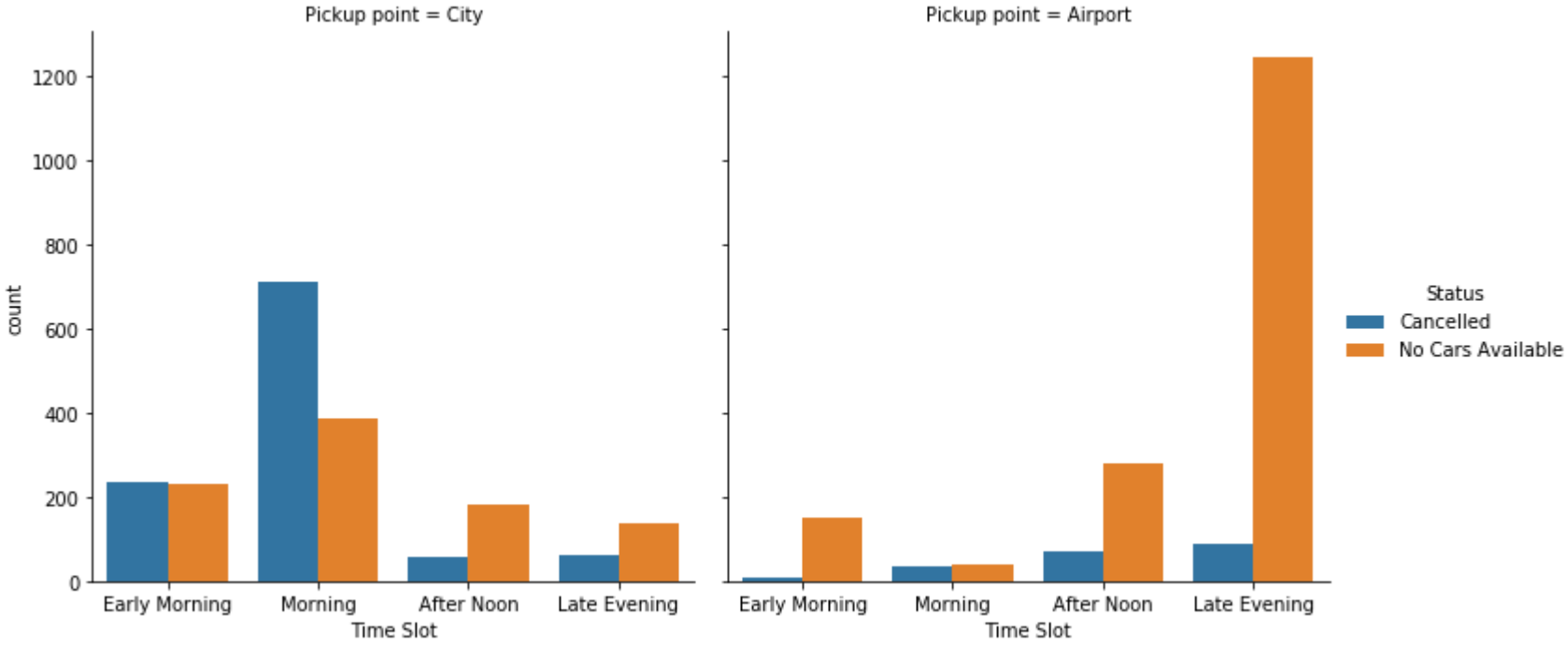
Uber Case Study - Abstract

Business Objective:- Uber, a leading entrepreneur in the cab service domain, has always encountered the issue of cabs getting cancelled for the customers, also has the issue of unavailability of cabs to the customer

Goals:-

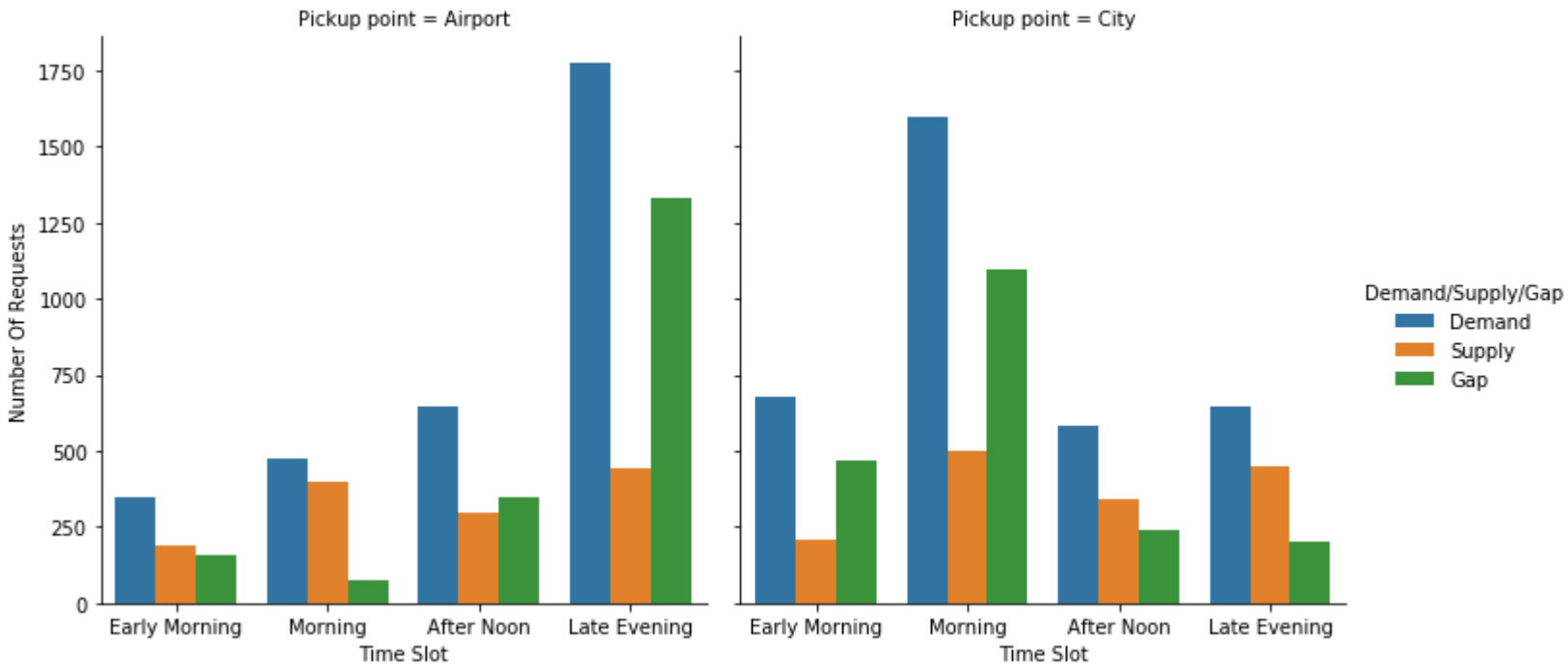
- Identifying the most pressing problems for Uber.
- Finding out the gap between supply and demand .
- Finding out the cause of the issue of supply and demand.
- Finding out the solution for the issue of supply and demand

Identifying the most pressing problems for Uber.



- It can be observed from the above plot with the frequency of the requests, that the **No Cars Available** status is observed the most in the **Late Evening** time slot for Airport to City and Cancelled Status is observed in the Morning Time Slot for City to Airport

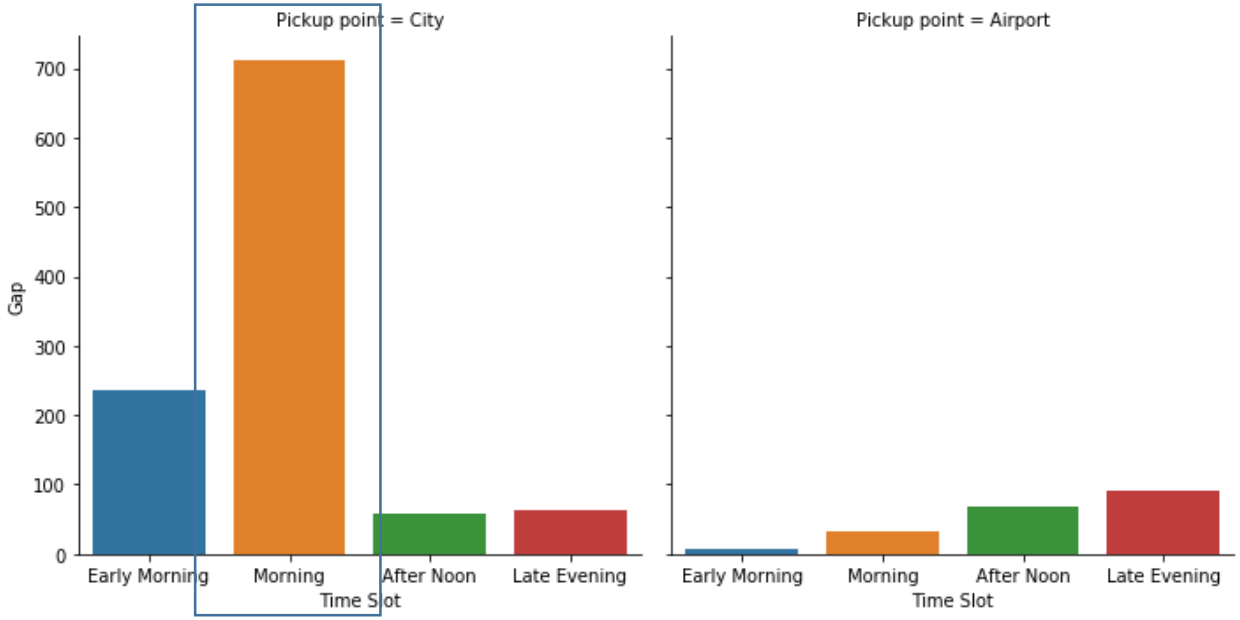
Finding out the gap between supply and demand

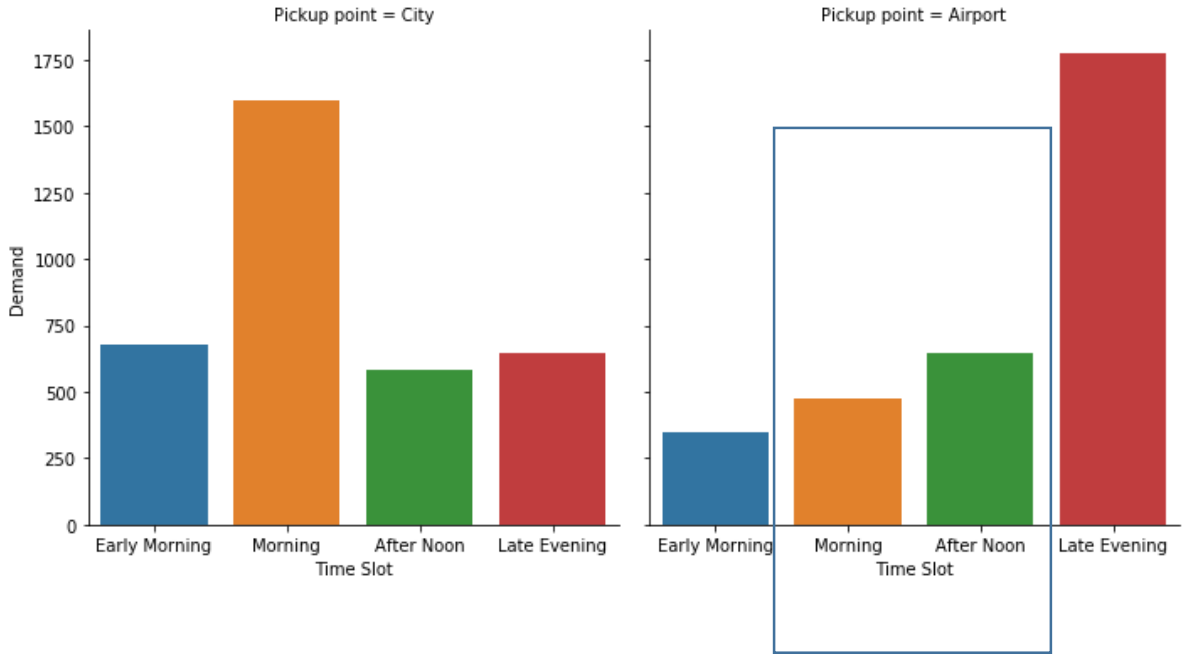


It can be observed from the above plot with the demand and supply gap analysis, that the Gap is observed the most in the **Late Evening** time slot for **Airport to City** and in the **Morning** Time Slot for **City to Airport**

Cause of the issue of supply and demand

- Gap between Supply and Demand is observed in two situations – When there are cancellations and there are no cars available
- Cancellation scenario:



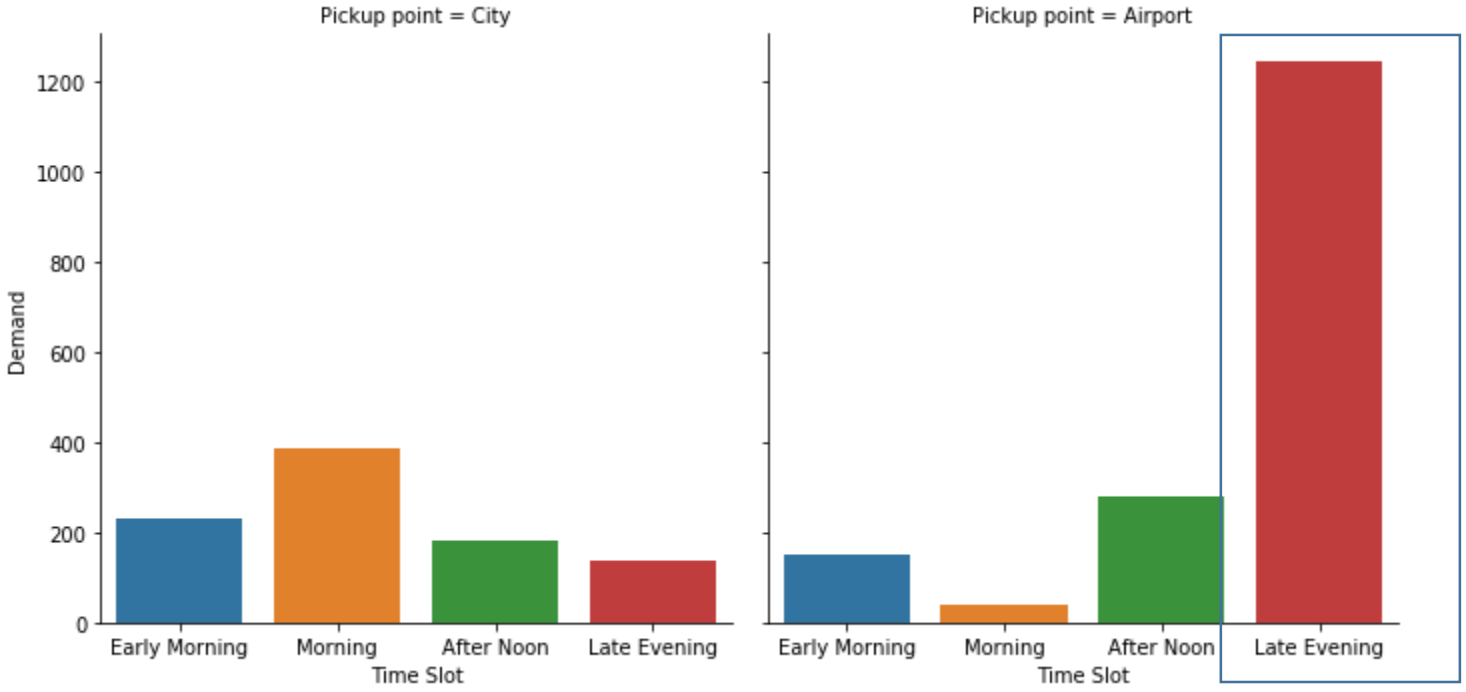


Cancellation scenario

The Spike of Gap in **Morning** time slot in **City to Airport** is observed because there is no equal Demand in the **Morning** and **Afternoon** time slots for the driver's return trip from **Airport to City**.

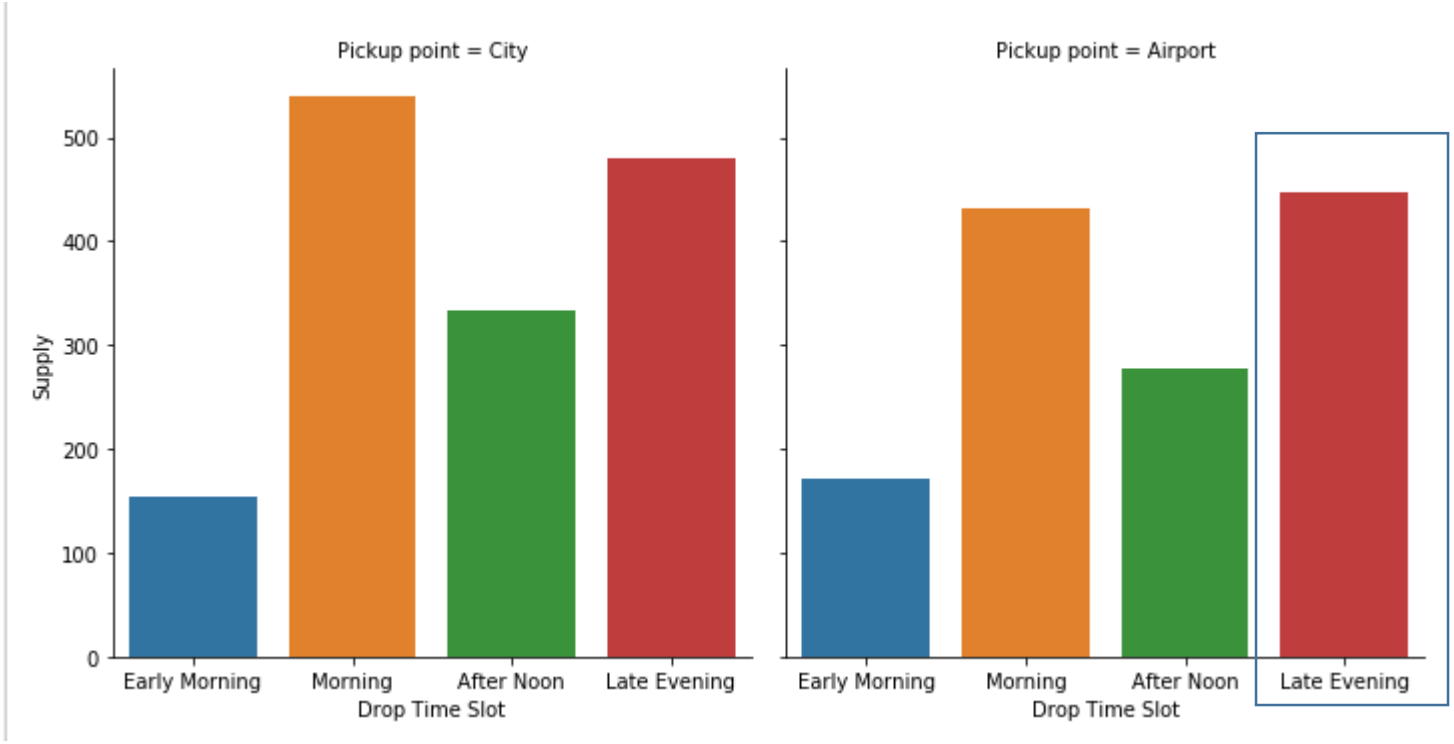
Thus a driver cancels due to long idle times or empty returns also since the driver is in the city, he or she can find another trip.

No Cars Available scenario



It can be observed from the above plot with the demand and supply gap analysis, that the Demand is observed the most in the **Late Evening** request time slot for **Airport to City** with the status **No Cars Available**

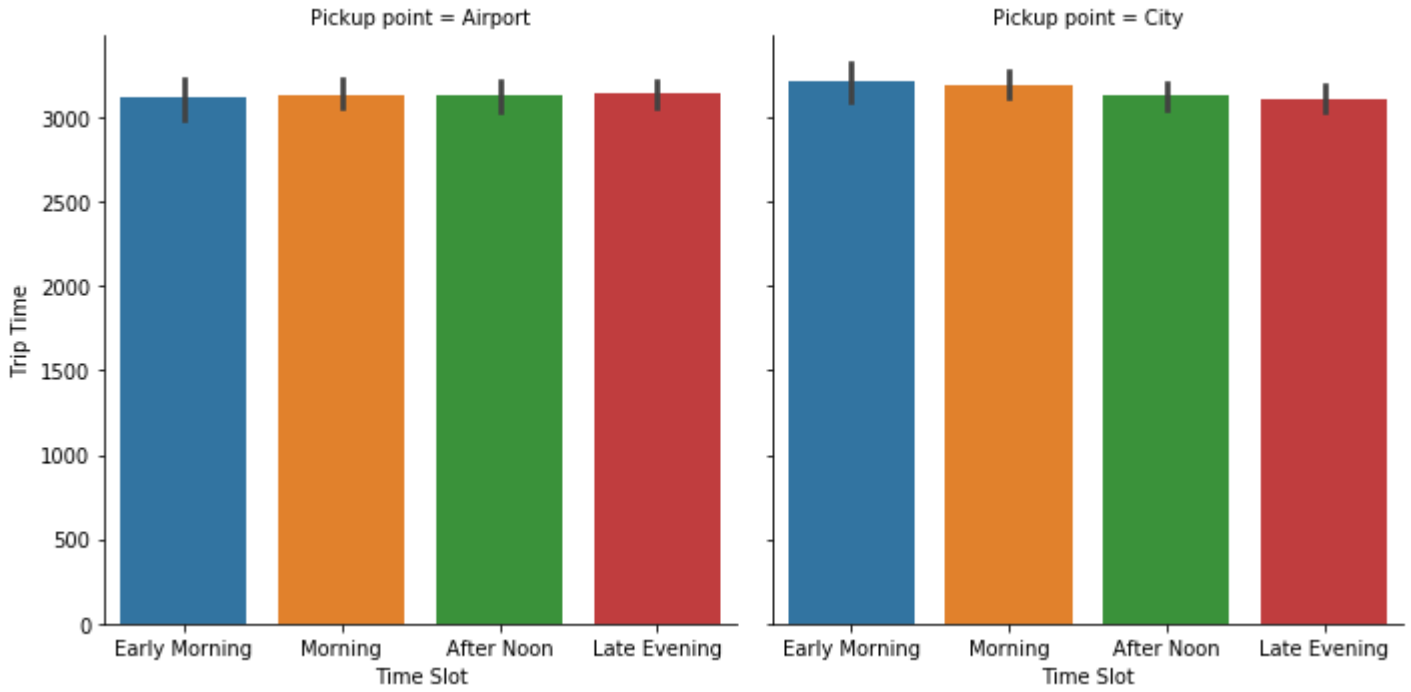
No Cars Available scenario



While the Demand is more that 1200, the supply is only of the order 450 in the Late Evening time slot, thus there are no cars available to cater user's request.

Solution for the issue of supply and demand

In order to address the situation of bridging the gap between Demand and Supply in this scenario, the average time taken (in seconds) for a trip during the timeslots is taken into account since this time differs for different time slots based on the traffic.



0	Early Morning	Airport	3115.031915
1	Early Morning	City	3213.151659
2	Morning	Airport	3136.726817
3	Morning	City	3193.506986
4	After Noon	Airport	3127.200669
5	After Noon	City	3126.303207
6	Late Evening	Airport	3145.160998
7	Late Evening	City	3103.623608

Solution for the issue of supply and demand

Thus in slots where there are clear difference in the supply of drivers, drivers had to be planned with the duration calculation mentioned above to meet the supply.