

Uber Demand Supply Gap Case Study

Submitted By:

1. Karandeep Malik

Abstract

Business Objective :

The aim of the analysis is to identify the cause for Demand Supply Gap Problem (due to cancellation and non availability of cars) for rides between Airport and City for Uber and give recommendations to improve this situation.

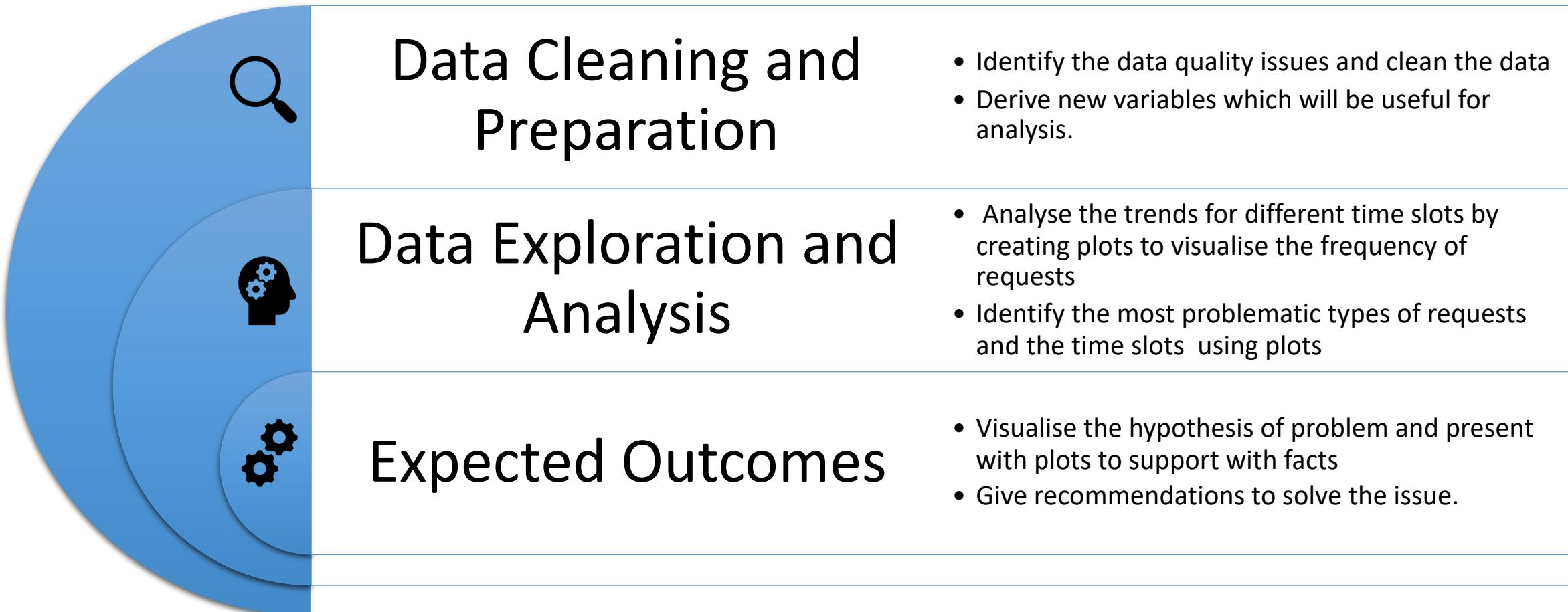
Problem Statement :

Uber is an online ride-hailing company. Due to cancellation of rides by drivers and non-availability of cars during certain time slots in the day, Uber is facing loss of potential revenue.

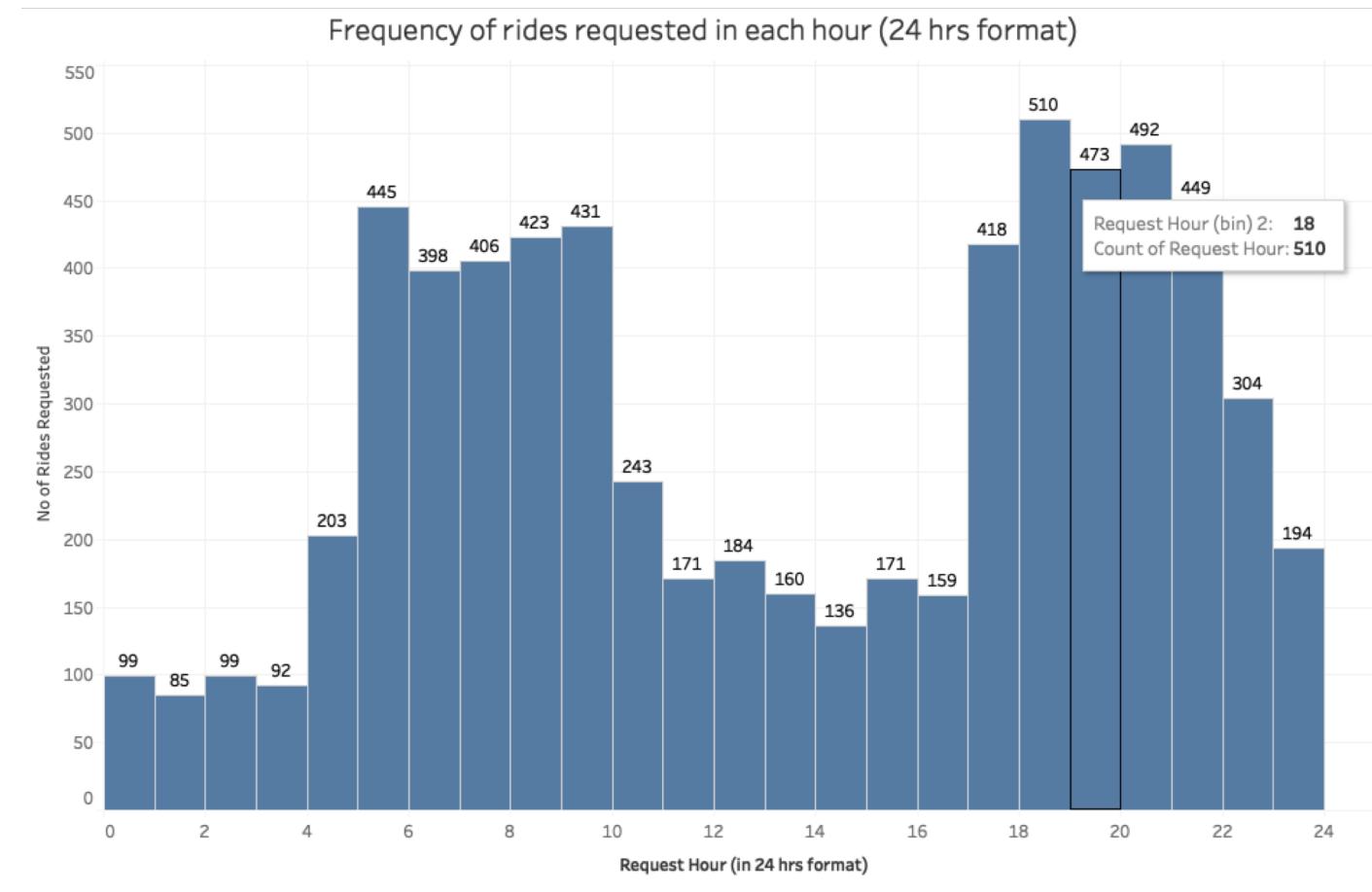
Analysis Methodology

Find the gap between Supply and Demand and identify the most pressing problems for Uber. Support this data with plots. Suggest recommendations to improve this situation

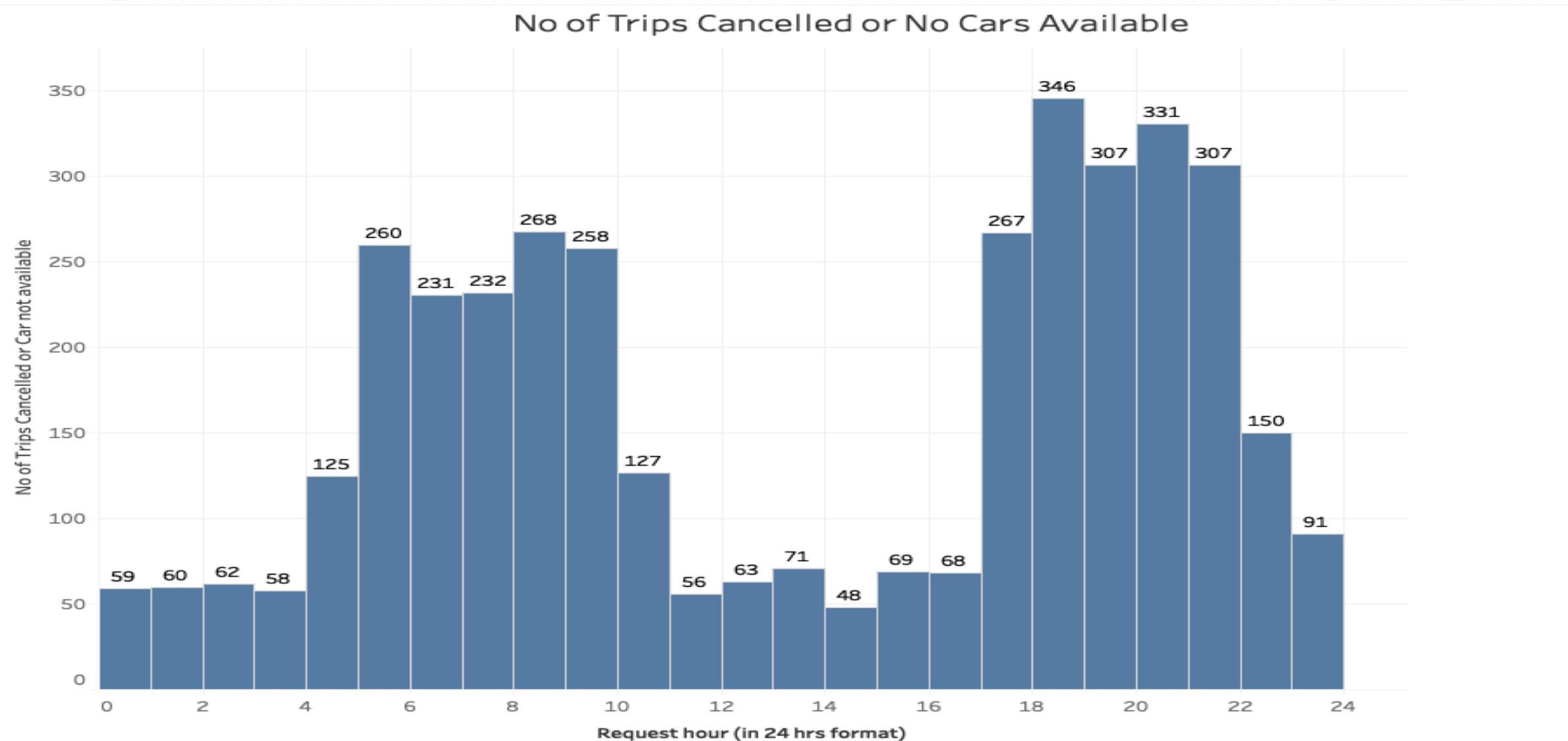
Analysis Procedure



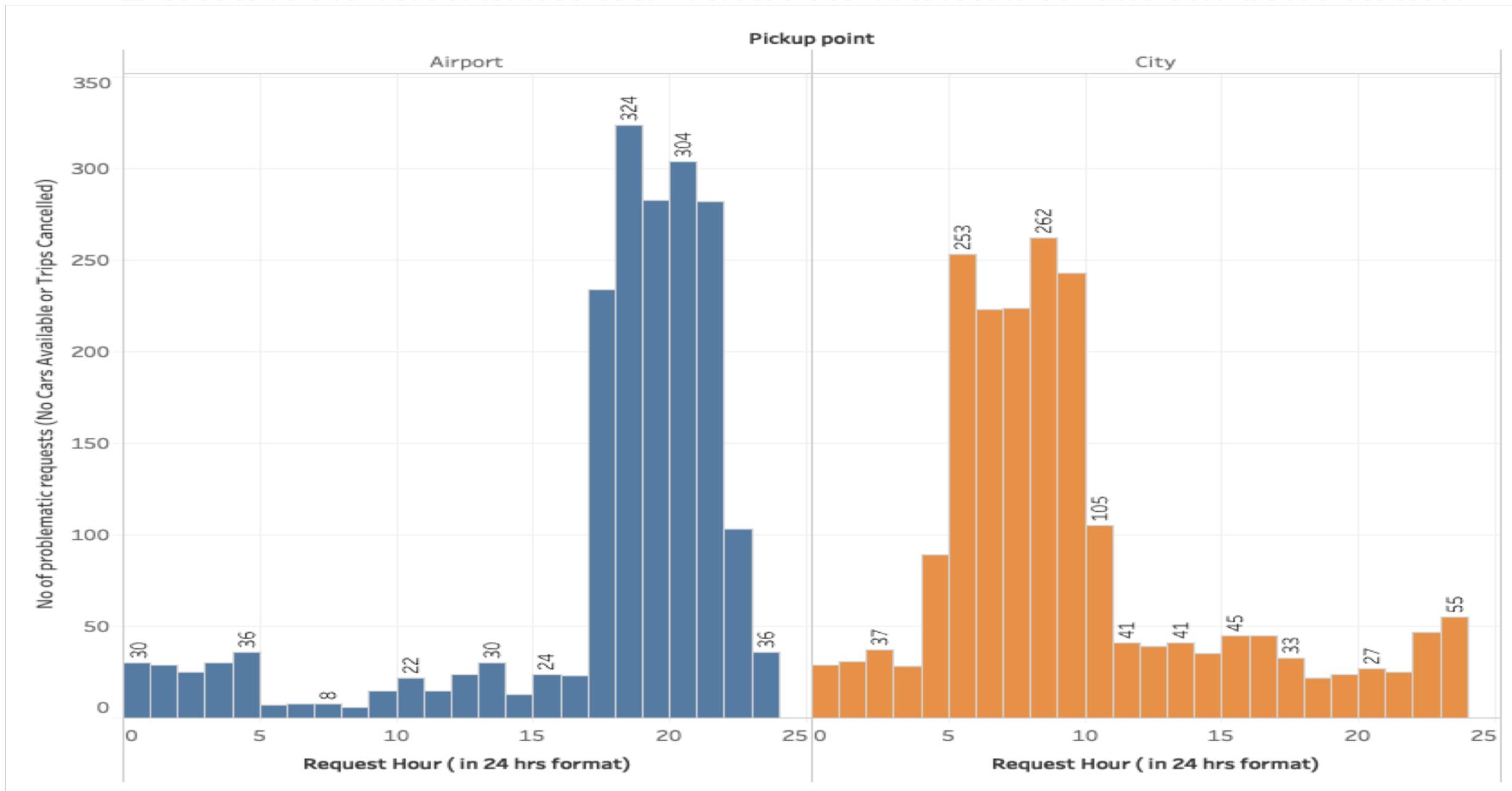
Frequency of Requests Generated Each Hour



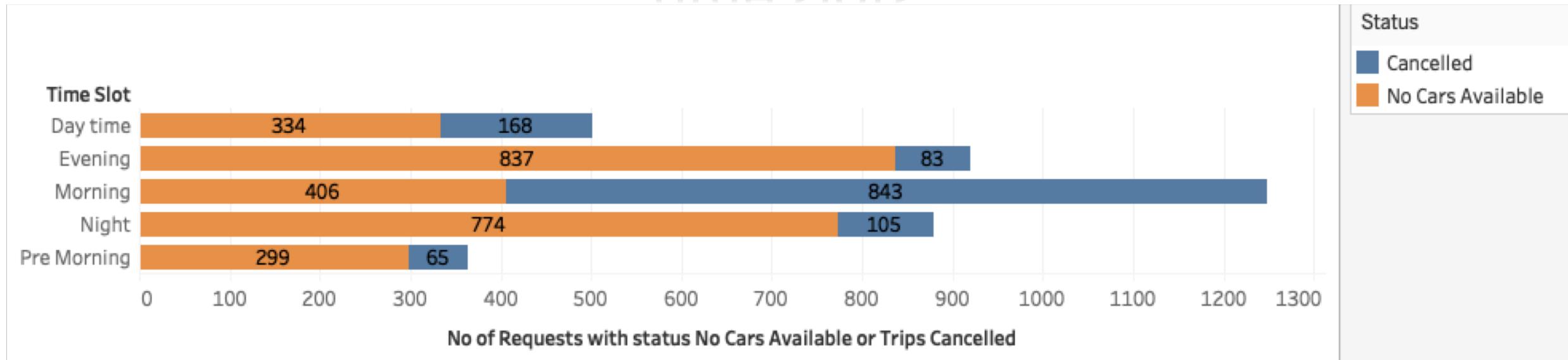
Frequency of Trips Cancelled or No Cars Available for Each Hour



Pattern of problematic type of requests by pickup point

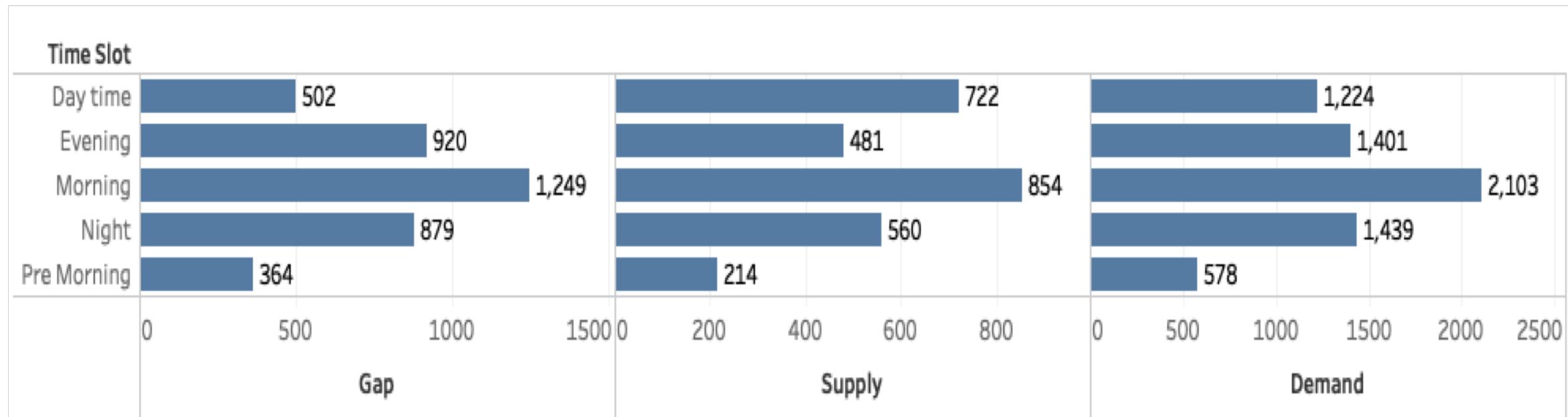


Problematic requests according to time slots



The time slots have been formed as 12 am – 5 am (Pre - Morning slot) , 5 am -10 am (Morning slot), 10 am -5 pm (Day time slot), 5pm -8pm (Evening slot) and 8 pm -12 am (Night slot)

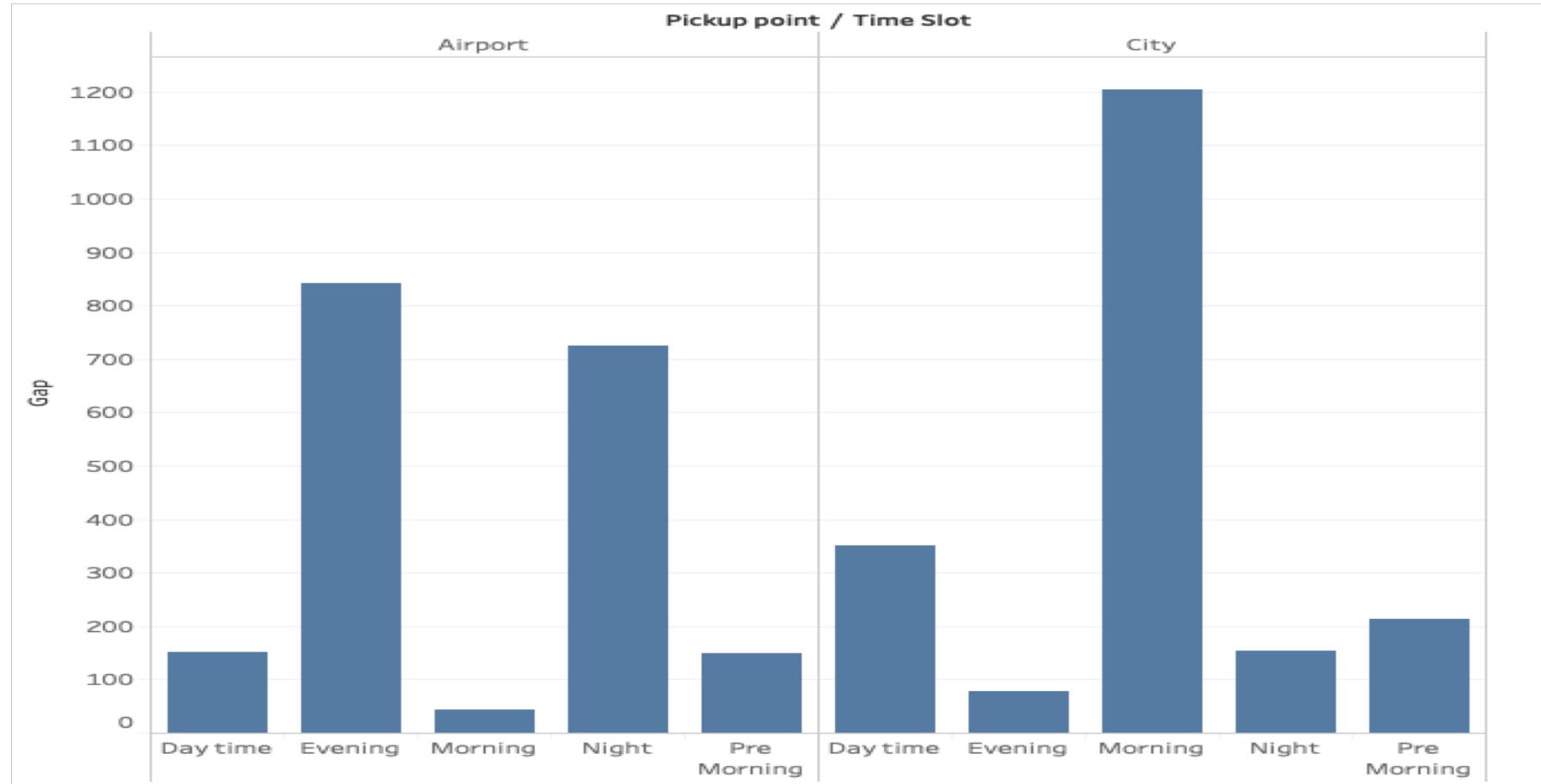
Demand - Supply Gap Analysis



The time slots have been formed as 12 am – 5 am (Pre - Morning slot) , 5 am -10 am (Morning slot), 10 am -5 pm (Day time slot), 5pm -8pm (Evening slot) and 8 pm -12 am (Night slot)

Observation : The highest Gap exists in Morning time slot

Demand - Supply Gap Analysis



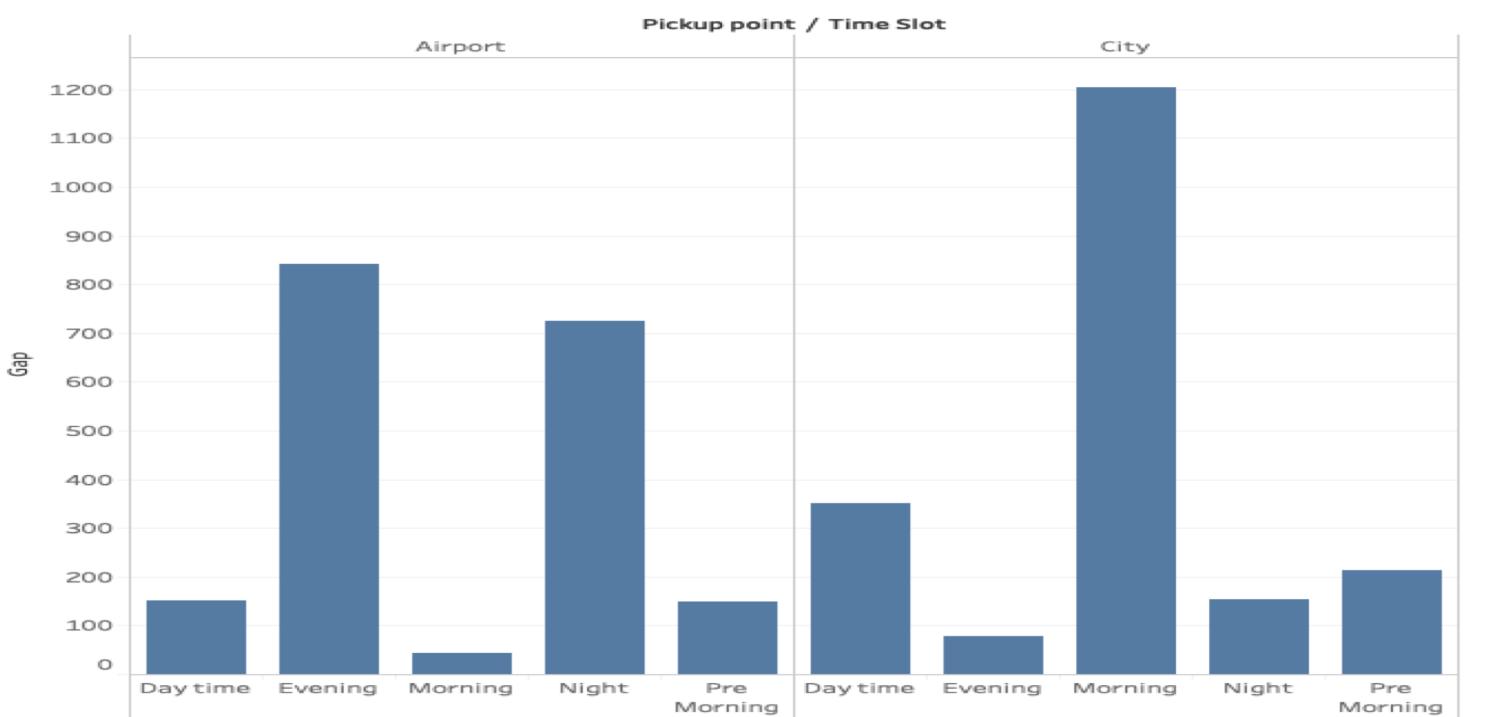
The time slots have been formed as 12 am – 5 am (Pre - Morning slot) , 5 am -10 am (Morning slot), 10 am -5 pm (Day time slot), 5pm -8pm (Evening slot) and 8 pm -12 am (Night slot)

Observation : The highest Gap exists in Pre Morning, Morning and Day time for City to Airport Rides. The highest gap exists for Evening and Night for Airport to City Rides

Hypothesis for Supply – Demand Gap

Supply Demand Gap

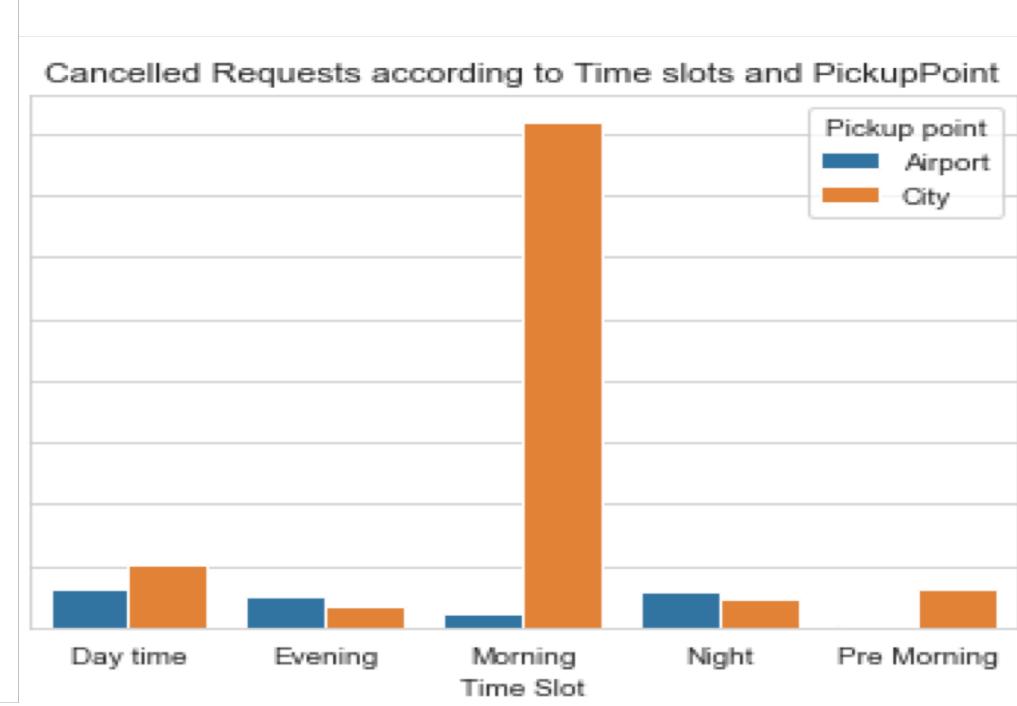
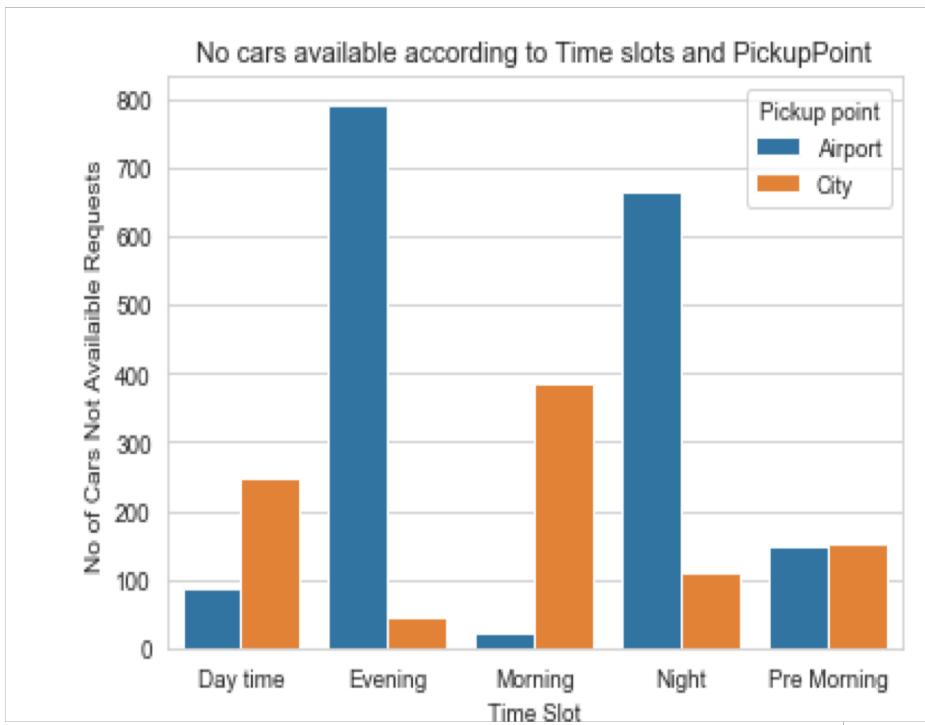
- From the analysis we can see that there is a huge gap in during the Pre Morning, Morning and Day Time. In Pre-morning there are no cancelled requests from airport .This could be attributed to the fact that drivers were waiting at the airport overnight and rode customers from International Flights to City from Airport. Drivers would prefer waiting at airport at this time because there is very less demand in City during early morning and drivers have already spent a lot of fuel in getting to airport at night, they prefer to stay near/at airport for early morning flights and hence city has shortage.



Hypothesis for Supply – Demand Gap

Supply Demand Gap

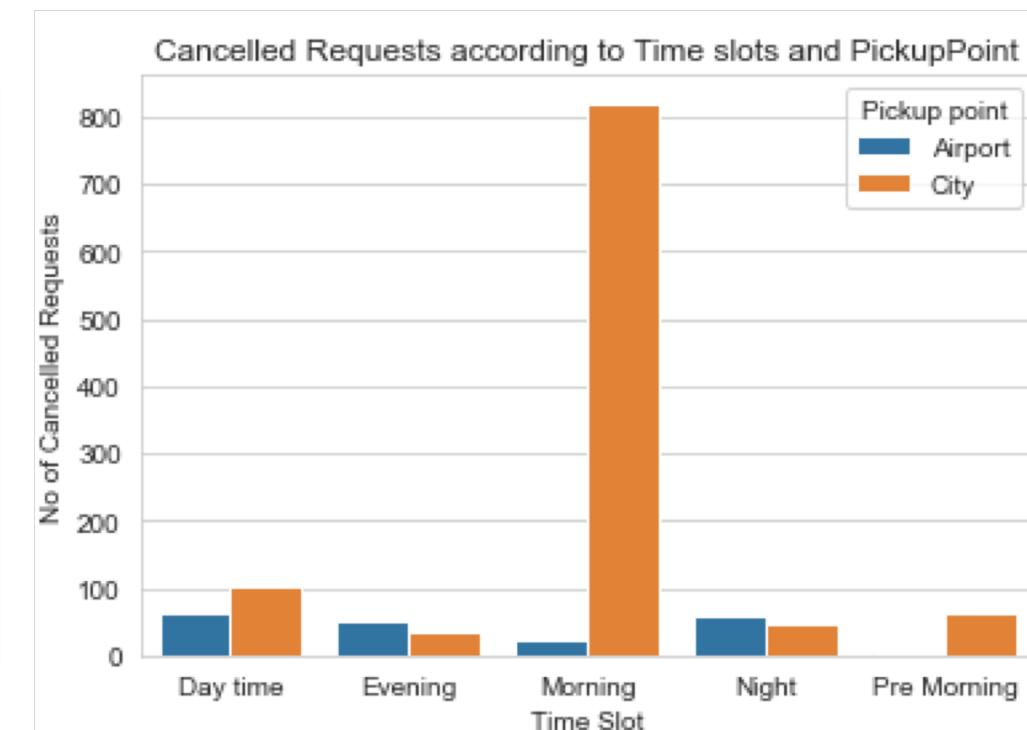
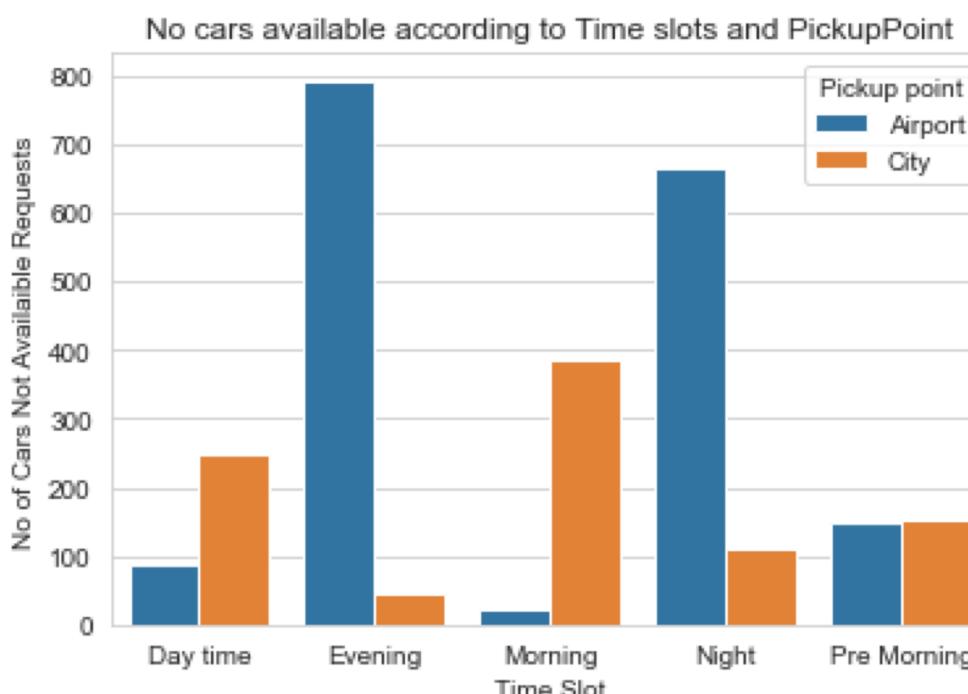
- During evenings and night there is a problem of cars not being available at the airport to fulfil demand this is because there is a surge in domestic travellers during evenings and nights due to domestic flights at airport and there are not many cars staying over in day time (as they get alternatively lot of intracity rides during day time). city rides (rides within city) available during the day, the drivers prefer intra city rides and evening is when their shifts end.



Hypothesis for Supply – Demand Gap

Supply Demand Gap

- Also, in the morning there are very few instances of Cars not Available at airport. So all cars that came in early morning to drop International passengers from City to Airport and all cars that came during morning to drop domestic passengers from City to Airport were actually meeting the requests from Airport. So, Gap at the airport is minimal during morning. Also, there are very few cancellations because there are very few travellers in the city in early morning.



Suggestions for Improving the situation

- Since during peak hours like morning the drivers do not have much incentive in the travellers in city to take rides to airport as they have alternate intracity rides available and airport rides are long distance. So, there is a dearth of supply at airport for cars. It is required that this be incentivised and they should be given increased revenue share for meeting this demand to leave intra city rides and go airport.
- Once the drivers reach airport at night they wait for flights till they don't get passengers for city this causes problem in city. So, drivers again should be given extra incentives to complete more rides during their work time. The more rides they complete the more revenue Uber gets, the less is gap.
- Allow Airport to City pre booking to ensure drivers of return pickup.
- Also, share service can be specifically started during rush hours to bridge the gap.