

UBER SUPPLY DEMAND GAP

- A CASE STUDY

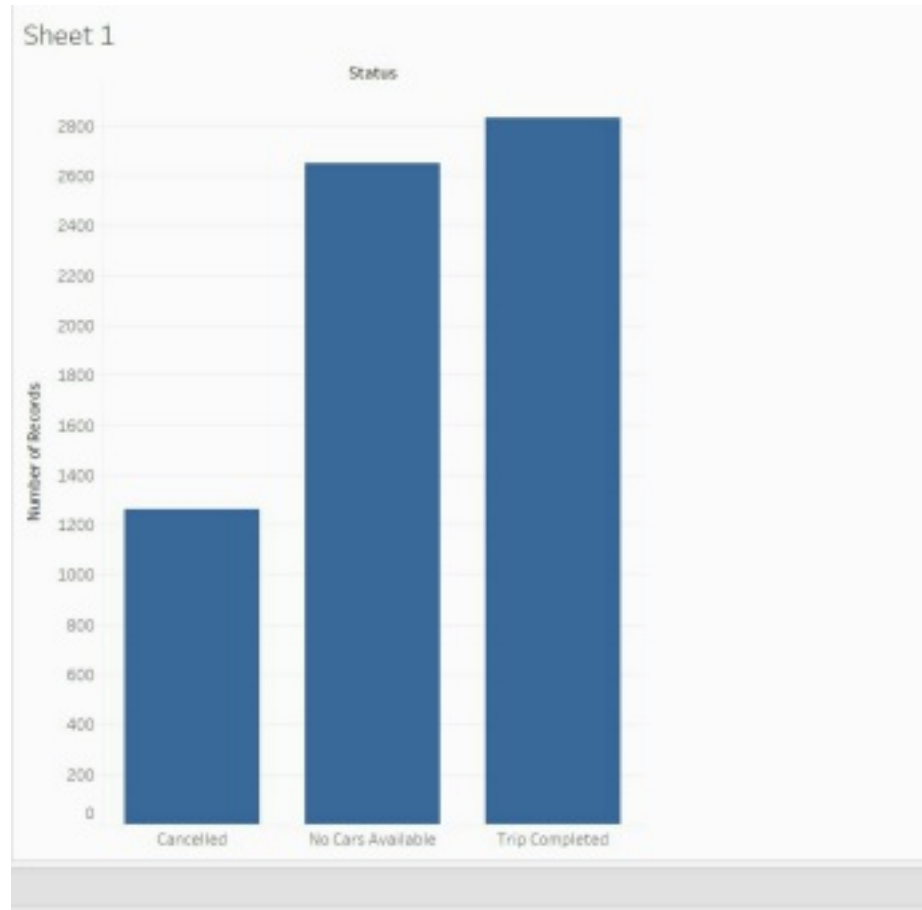
Problem Statement

- This data set is a masked data set which is similar to what data analysts at Uber handle. Solving this assignment will give us an idea about how problems are systematically solved using EDA and data visualisation.
- We may have some experience of travelling to and from the airport. Have you ever used Uber or any other cab service for this travel? Did you at any time face the problem of cancellation by the driver or non-availability of cars?
- The aim of analysis is to identify the root cause of the problem and recommend ways to improve the situation. As a result of your analysis, you should be able to present to the client the root cause and possible hypotheses of the problem and recommend ways to improve them.

Methods:-

- Identify the data quality issues and clean the data
- Format date and time field
- Derive new variable if needed for analysis
- Analyze the data for different time slots
- Identify the demand supply gap
- Visualize and present the hypothesis of the problem
- Recommend way to resolve the problem

Status pattern in a day

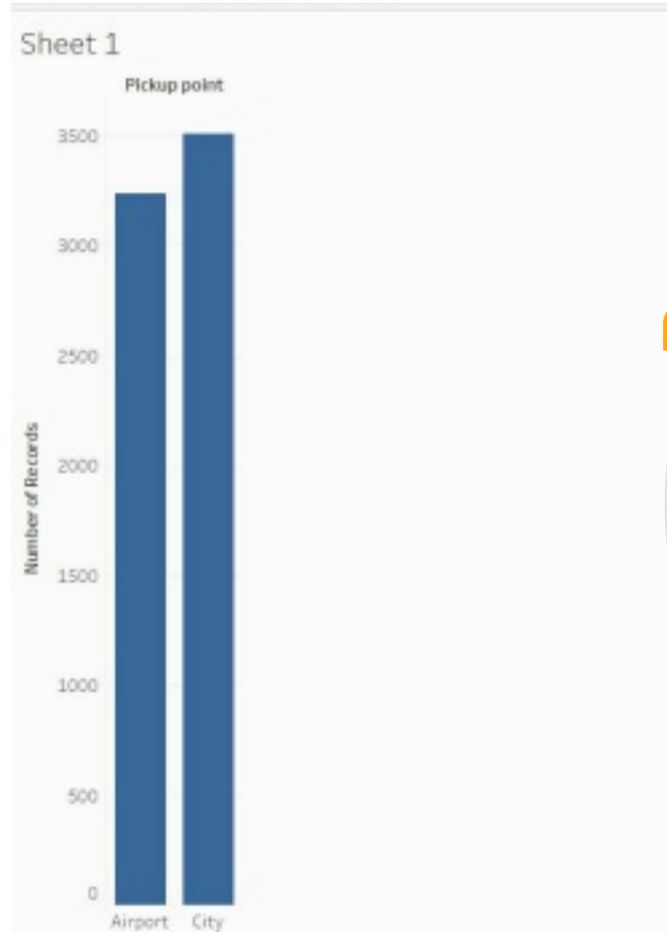


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There are 3
status :-
Cancelled, No
car available
and Trip
completed

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Pick-up points

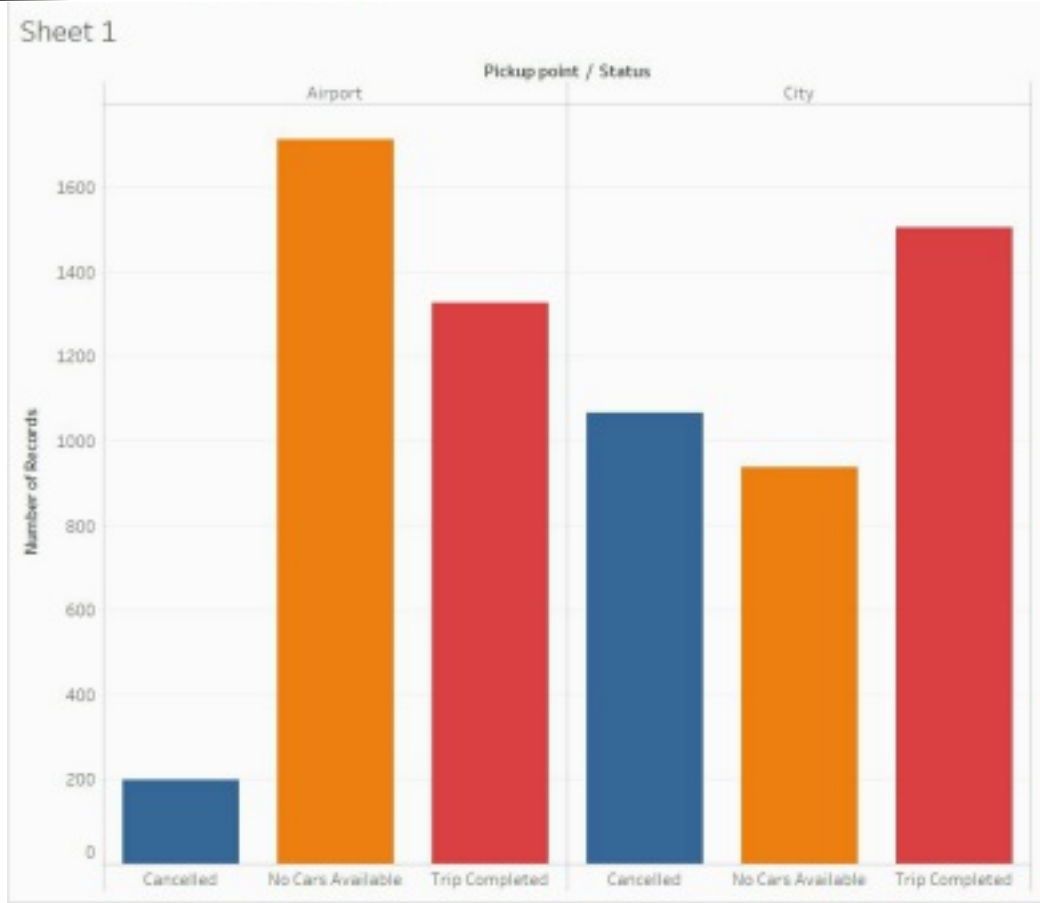


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There are two
pickup
points:-Airport
, city

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Status from pickup points

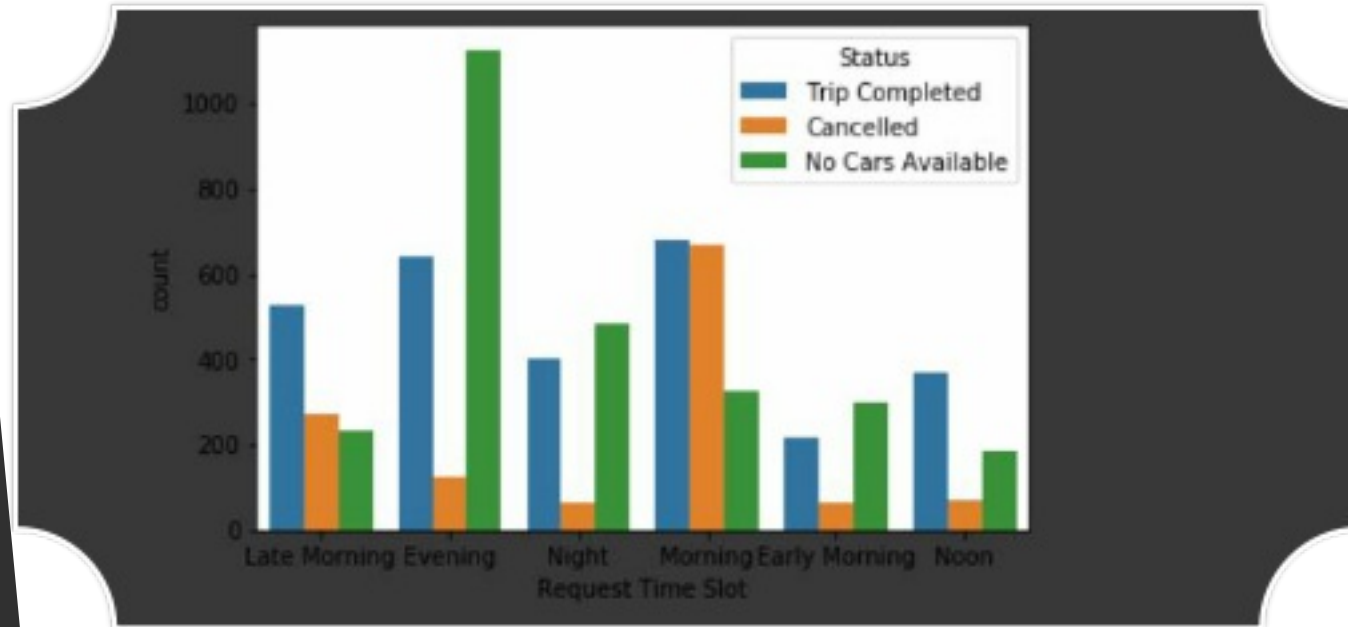


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There are more
"No cars
available" from
Airport to City
and more cars
"Cancelled" from
City to Airport

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Checking through time zones



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"No car available" is mostly not found during evening

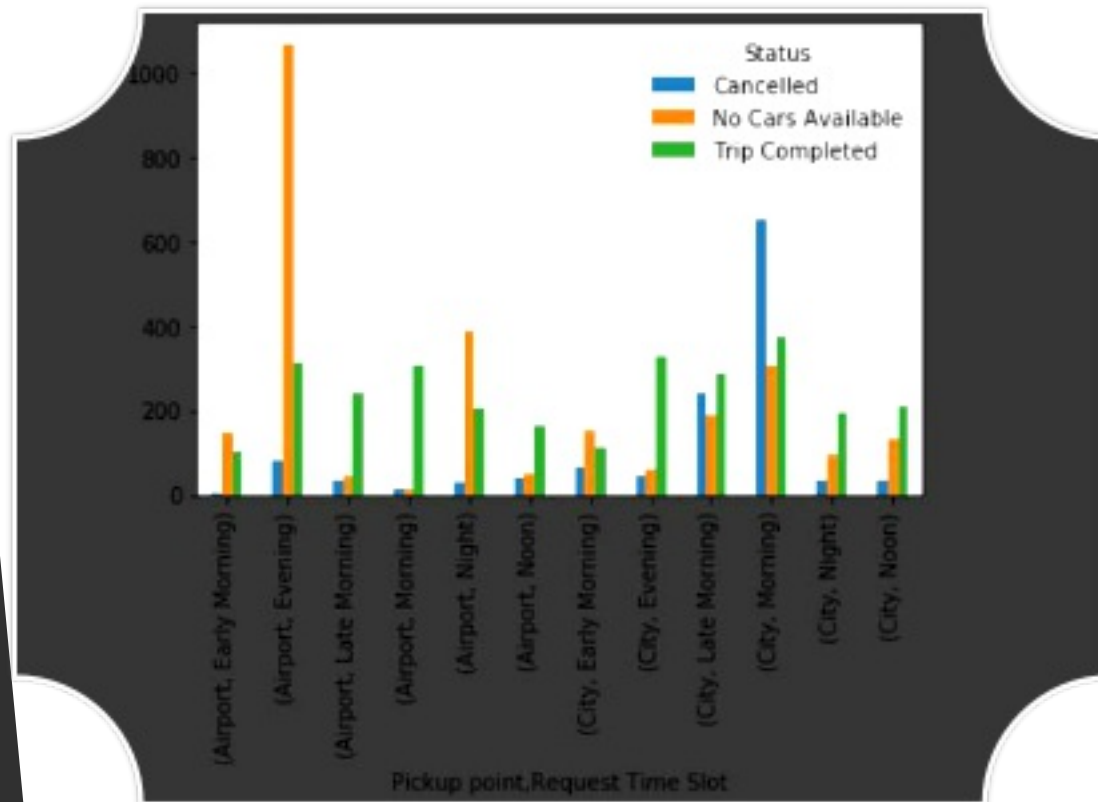
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Most Cars are "cancelled" at the morning

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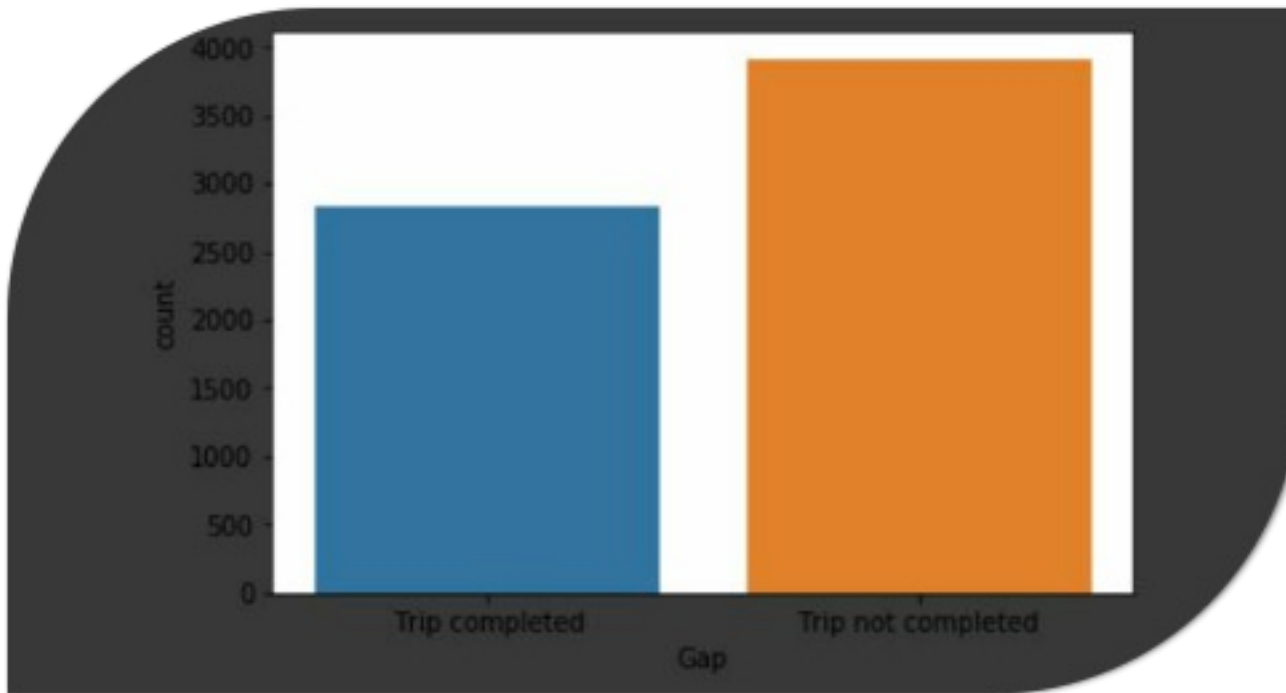
Checking through pickups and timeslots



Most "No Cars Available" are in the Evening from Airport to City

Most "Cancelled trips" are in the Morning from City to Airport.

The DEMAND SUPPLY GAP

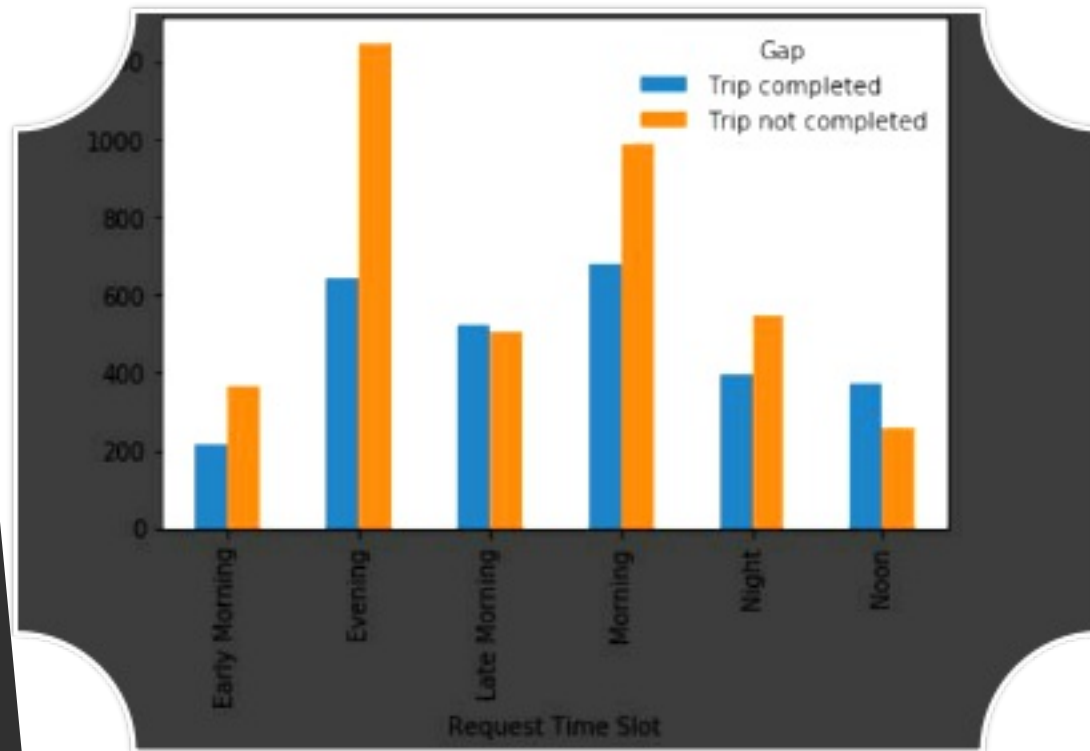


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Most of the
trips are
NOT
COMPLETE
D

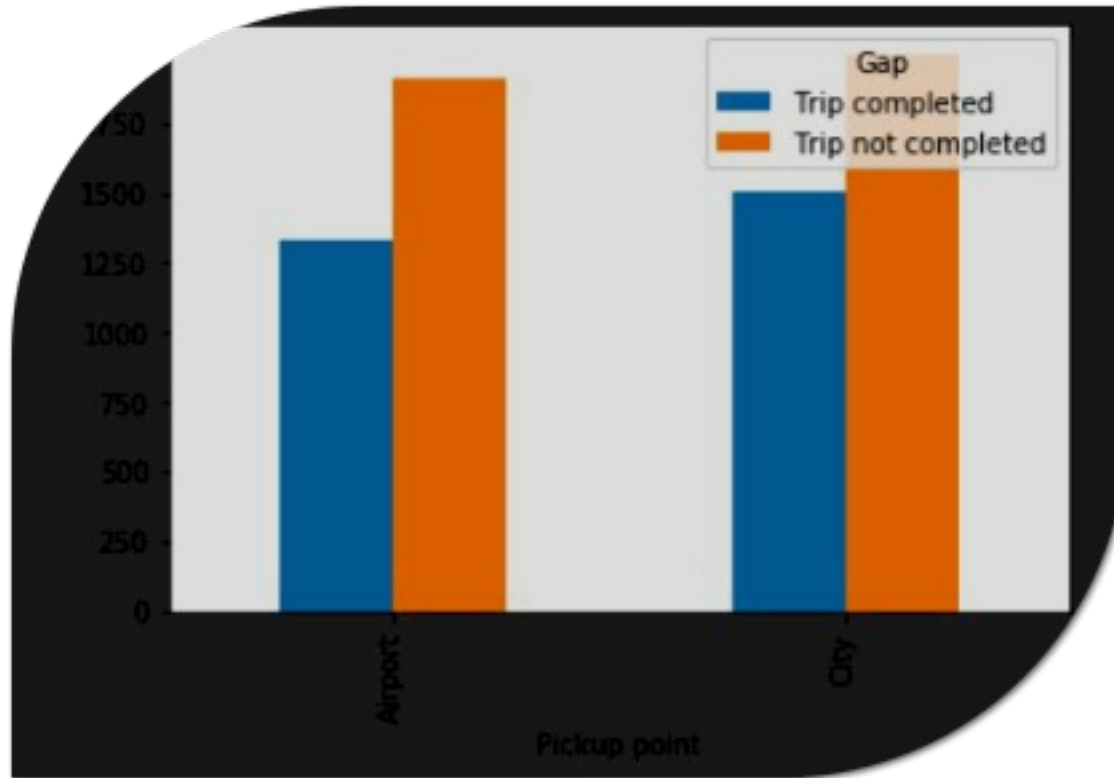
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GAP vs Timeslots



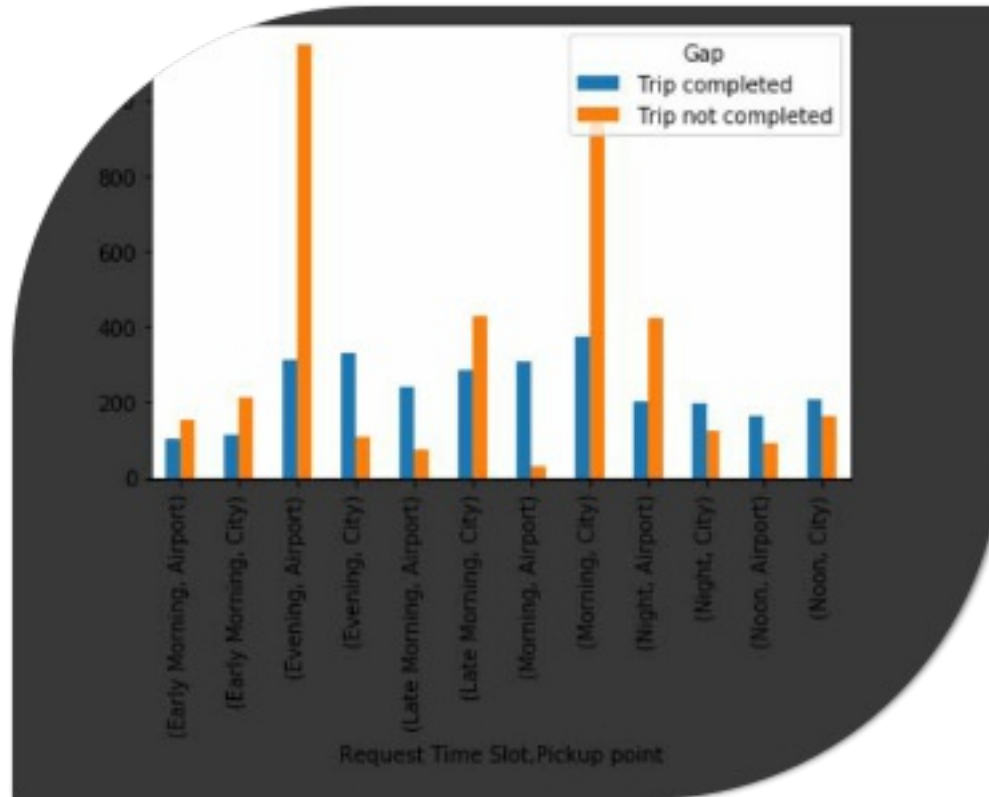
Most of the
Evening
Trips are
NOT COMPLETED

Demand gap vs Pickups



Trips Not
completed are
more from the City

Final Gap Study



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Trip not completed are more at airport during evening time

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Reasons:-

- Pickup Point - City : As per the analysis, the morning time slot is most problematic where the requests are being cancelled. Most probably the requests are being cancelled by the drivers due to the morning rush as it being the office hours and seeing the destination as airport which would be too far, the driver would think to earn more for the shorter trips within the city.
- Pickup Point - Airport : Upon analysis, the evening time slot seems to be most problematic for pickup points as airport where the requests being No Cars Available. The reason seems to be that not enough cars are available to service the requests as cars might not be available at the airport due to the cars serving inside the city.

Solutions:-

- For reducing the demand supply gap from airport to city, making a permanent stand in the airport itself where the cabs will be available at all times.
- Uber can provide some incentives to the driver who complete the trip from city to airport in the morning part. This might result the driver to not cancel the request from city to airport trips.
- Last solution to bring down the gap is to increase the numbers of cab in its fleet.