

Uber Assignment

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Problem Solving Approach

- For Analysis, only the trips to and from the airport are being considered.
- The aim of analysis is to identify the root cause of the problem (i.e. cancellation and non-availability of cars) and recommend ways to improve the situation.

Key Metrics used—

1. Completed Requests – Tells about the reliability of the Pickup points.
2. Time Slots – How many requests are getting completed at different time-slots from City and Airport?
3. Idle Time – How much time a driver has to wait to get the next trip
4. Supply Demand Gap – Gives an overview of the imbalance of supply and demand

Analysis

Approximately 42 % of the overall trips are getting completed. [i.e. More than 50 % of the requests have Cancelled or “No cabs available” Status]

- Cab Cancellation rate is very high for “City to Airport” requests. These two time slots are highly affected :-

1. Early Morning - [4 am to 8 am] – 8 % of total requests
2. Morning – [8am to 12 pm] – 6 % of total requests

- “No Cabs Available” is mostly higher for “Airport to City” requests. These two time slots are highly affected :-

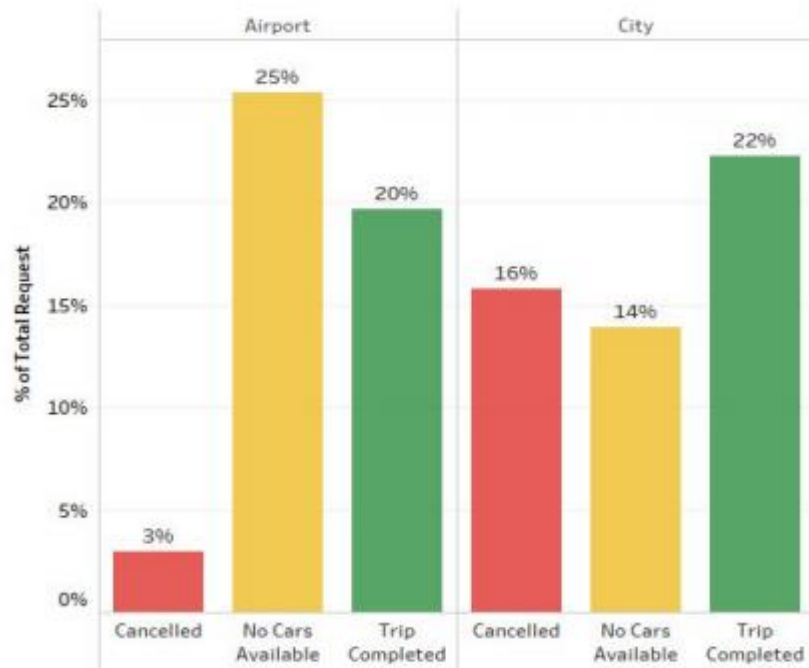
1. Evening - [4 pm to 8pm] – 12 % of total requests
2. Night – [8pm to 12am] – 10 % of total requests

- “Airport to City” requests during Evening time slot is severely affected by “Supply-Demand”

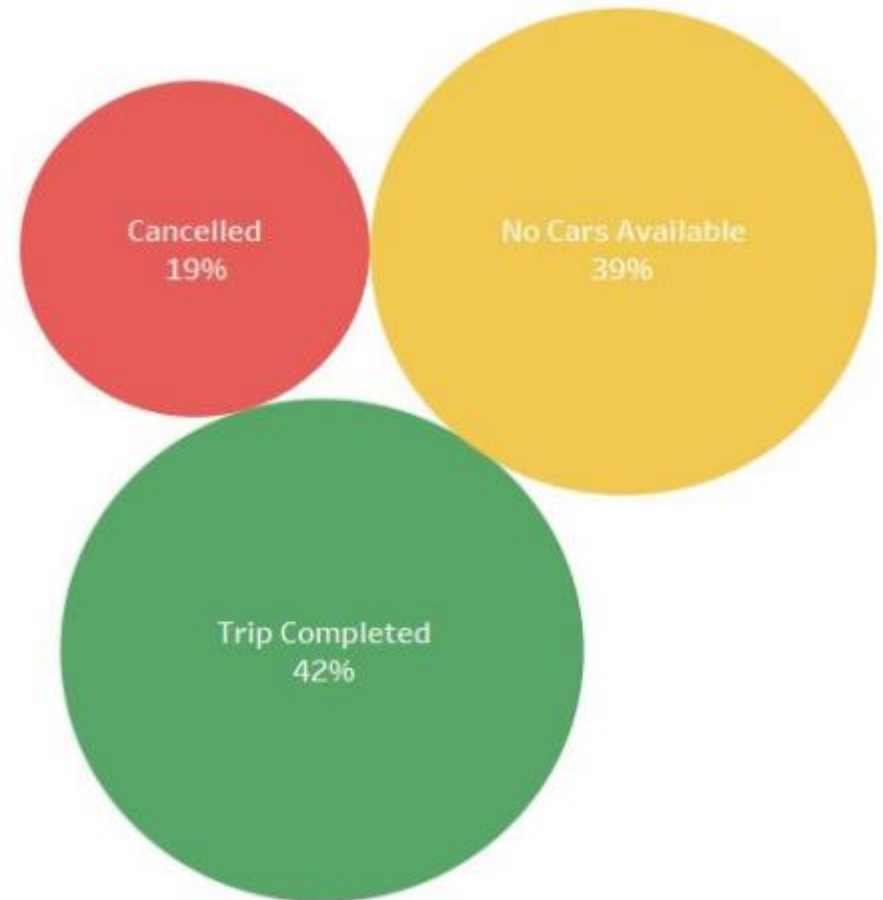
Tableau Screenshots

Visual Analysis - I

Frequency of requests segmented by Pickup Point - Airport and City

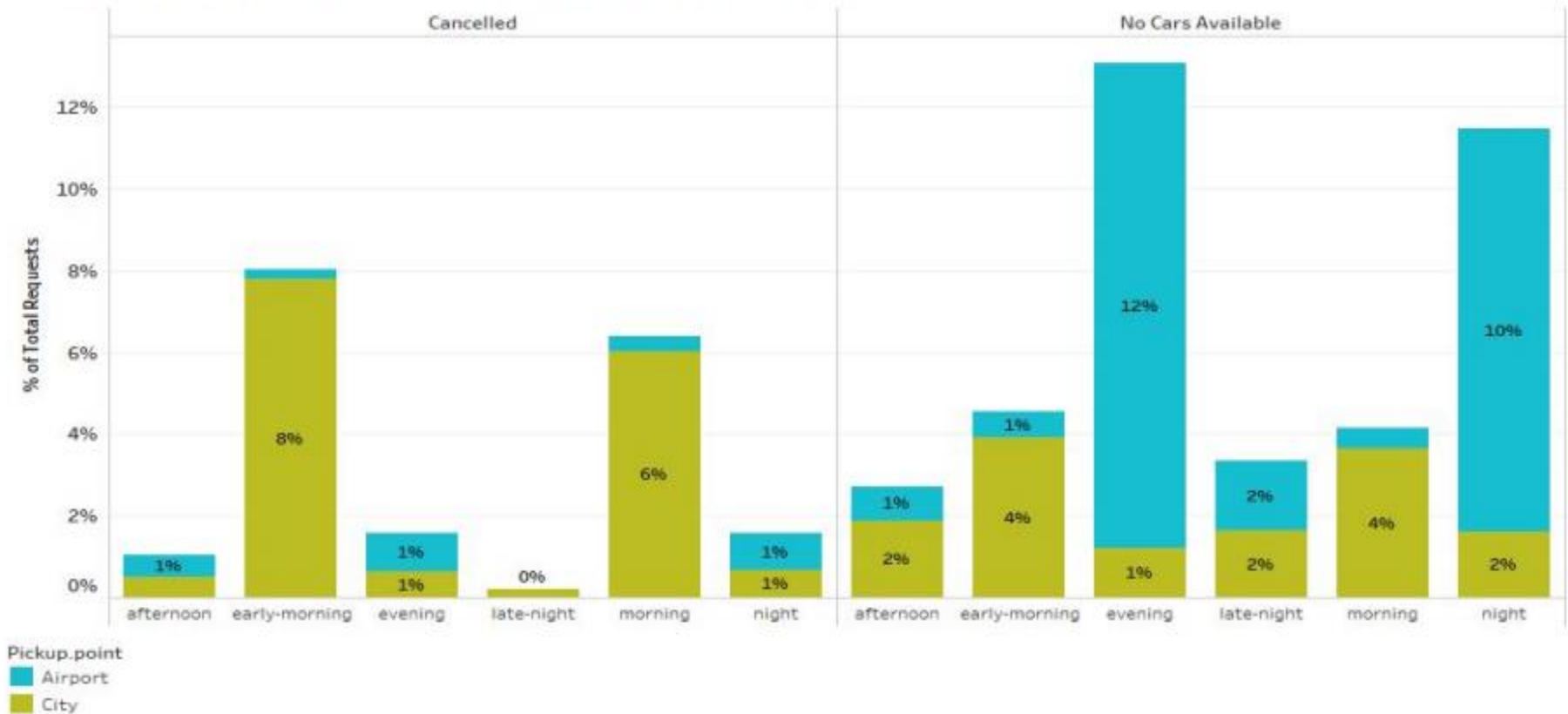


Over-all frequency of requests as per Status



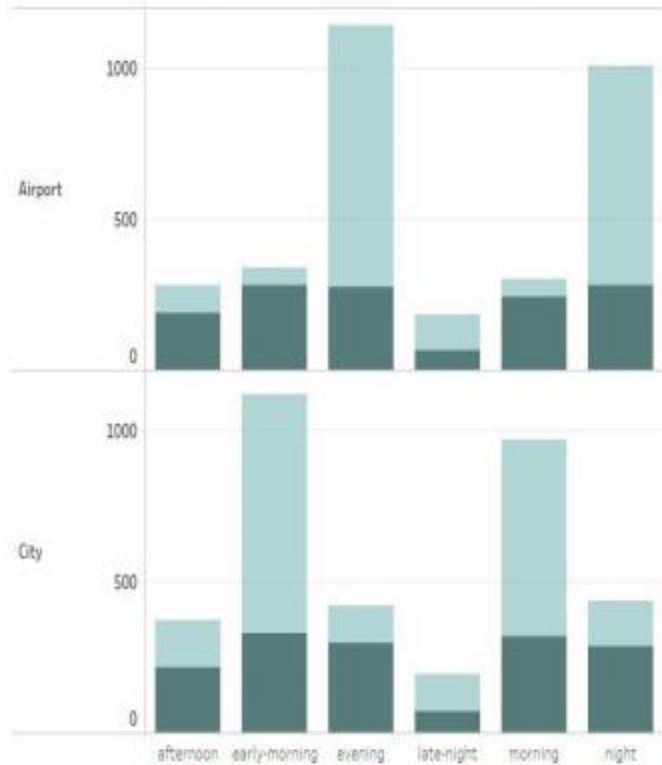
Visual Analysis - II

Most problematic types of requests and time-slots

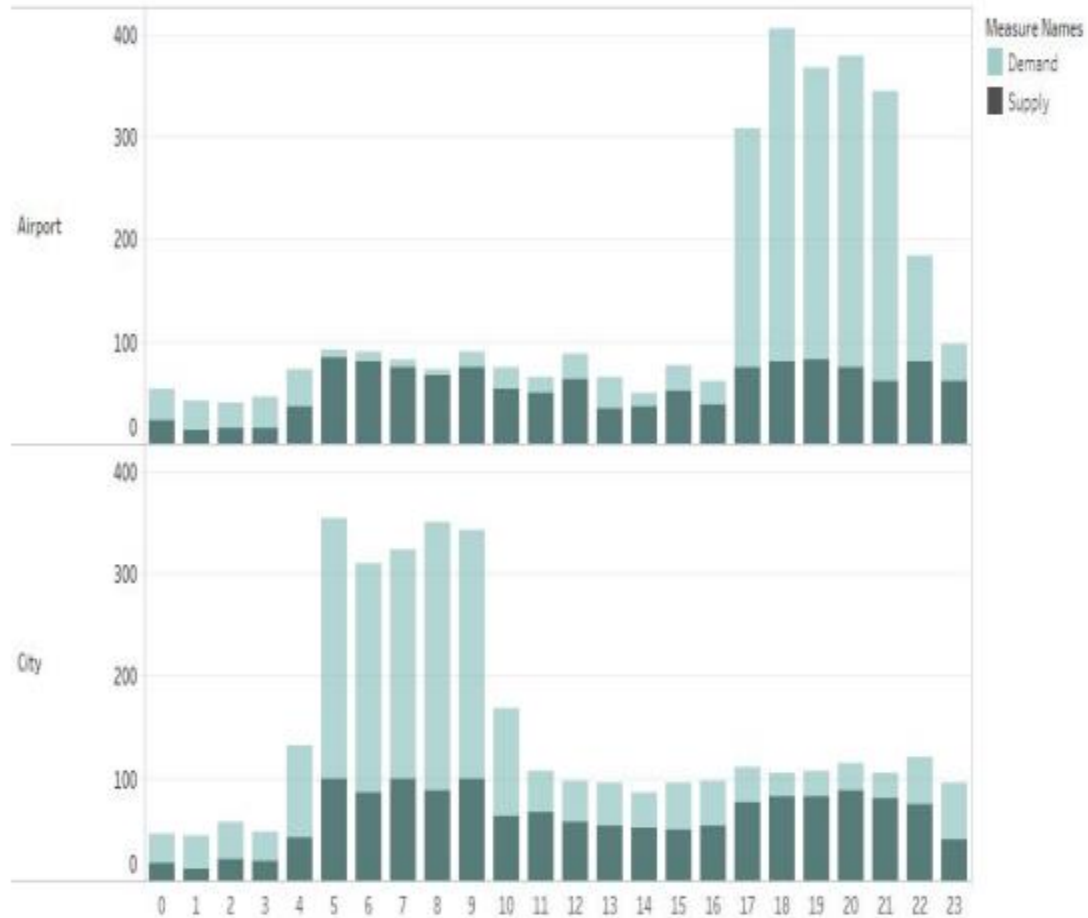


Visual Analysis - III

Supply - Demand per Time-Slot at Airport and City



Supply - Demand per hour at Airport and City



Root Cause Analysis

Reasons for higher rate of Cancellation –

1. Airport trips from city takes long time to reach airport .Again ,driver has to wait for the next trip. It makes no economic sense if he comes back empty.
2. Based on flight patterns, there is a huge variance on the next trip a driver will get. [e.g. If a driver reached airport at 5 am to drop a customer then he has to wait for 2-3 hours to get the next trip back to city from airport. Because at this airport, all the domestic flights will start arriving from 8am onwards.]

Reasons for “No Cabs Available” –

1. Most of the drivers will logged out for the day before midnight .Hence, supply decreases.

Recommendation

What is Supply and Demand:-

- Supply refers to the number of cab requested having status “Trip Completed”.
- Demand refers to total number of requests for cabs irrespective of the status.

Supply-Demand Gap :- At some point, too much of a demand for the product will cause the supply to diminish.

How to Overcome Supply-Demand Gap for UBER:-

1. We can introduce Vibrant pricing of the fare during peak hours to avoid Cancellation.
2. We can provide incentives to the drivers to stay longer in the airport to avoid “No Cabs available”.