

UBER SUPPLY DEMAND GAP ANALYSIS

Lakshmipathi Kakarla

Business Objective

Business Objective

- Identify the root cause of the problem with cancellation and non-availability of cars
- Recommend ways to resolve the supply-demand gap

Data - The trips to and from the airport (11-Jul-2016 to 15-Jul-2016)

Data

- 6,745 pickup requests to and from the airport over the span of 5 days
- 3 different status such as 'Trip Completed', 'No Cars Available' and 'Cancelled'

Analysis

The analysis divided into five parts:

- Frequency of requests that get cancelled or show 'no cars available'
- Identify the time slot when the highest gap exists between supply and demand
- Identify the types of requests (city-airport or airport-city) for which the gap is the most severe in the identified time slots
- Identify the reason for the issue for the supply-demand gap
- Recommendations to resolve the supply-demand gap

Assumptions

Time slot

- 05:00 Hrs to 08:00 Hrs - Early Morning
- 09:00 Hrs to 11:00 Hrs - Morning
- 12:00 Hrs to 16:00 Hrs - Afternoon
- 17:00 Hrs to 21:00 Hrs - Evening
- 22:00 Hrs to 04:00 Hrs - Night

Supply

- Requests with 'Trip Completed' status

Demand

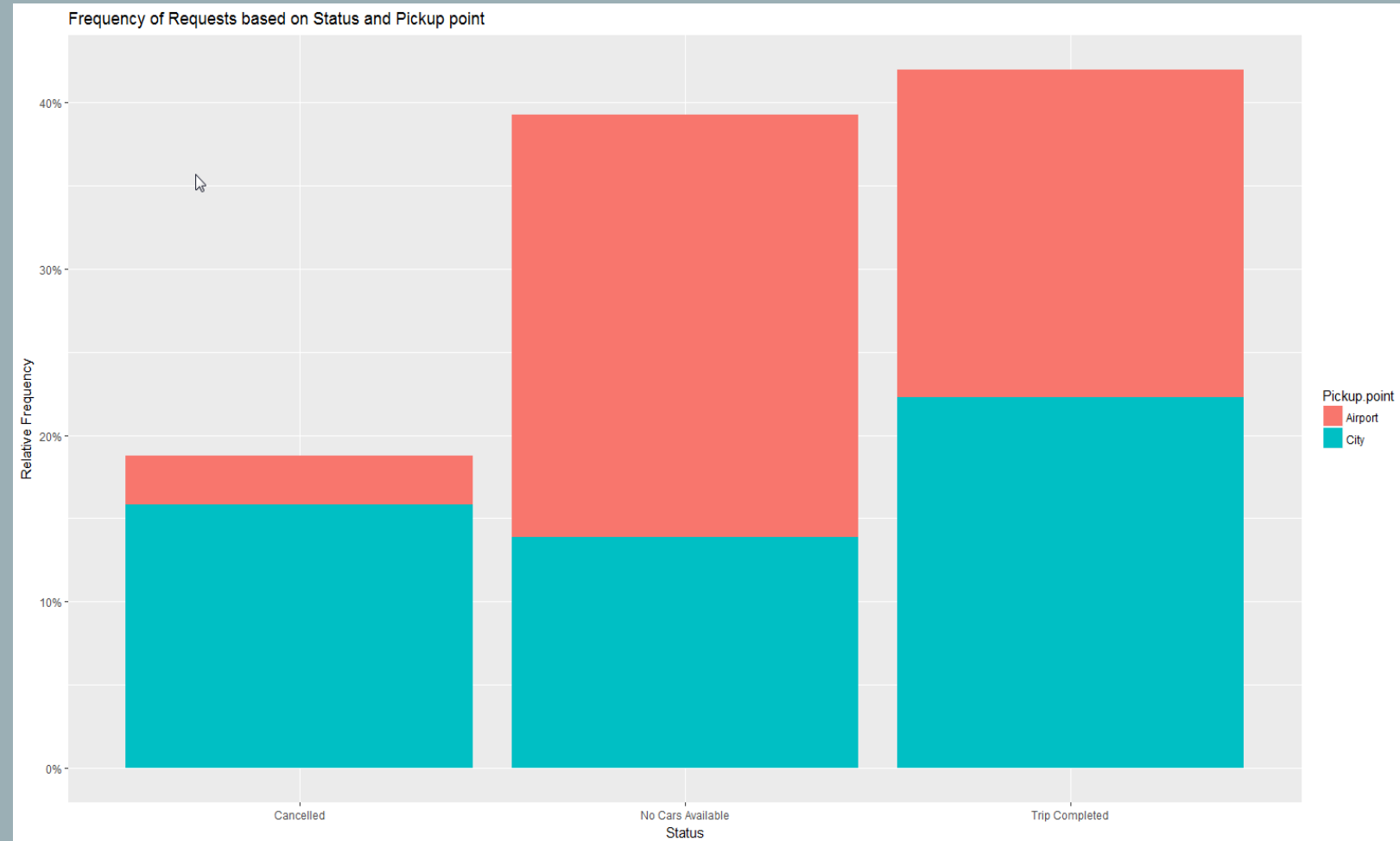
- All the requests with 'Trip Completed' , 'Cancelled' & 'No Cars Available' status

Frequency of requests - 'Cancelled or 'No Cars Available'

- Frequency of requests that get cancelled or show 'no cars available'
- Identify the time slot when the highest gap exists between supply and demand
- Identify the types of requests (city-airport or airport-city) for which the gap is the most severe in the identified time slots
- Identify the reason for the issue for the supply-demand gap
- Recommendations to resolve the supply-demand gap

Frequency of requests - 'Cancelled' or 'No Cars Available'

- Frequency of Requests
 - Cancelled (Approx 19%)
 - No Cars Available (Approx 39%)

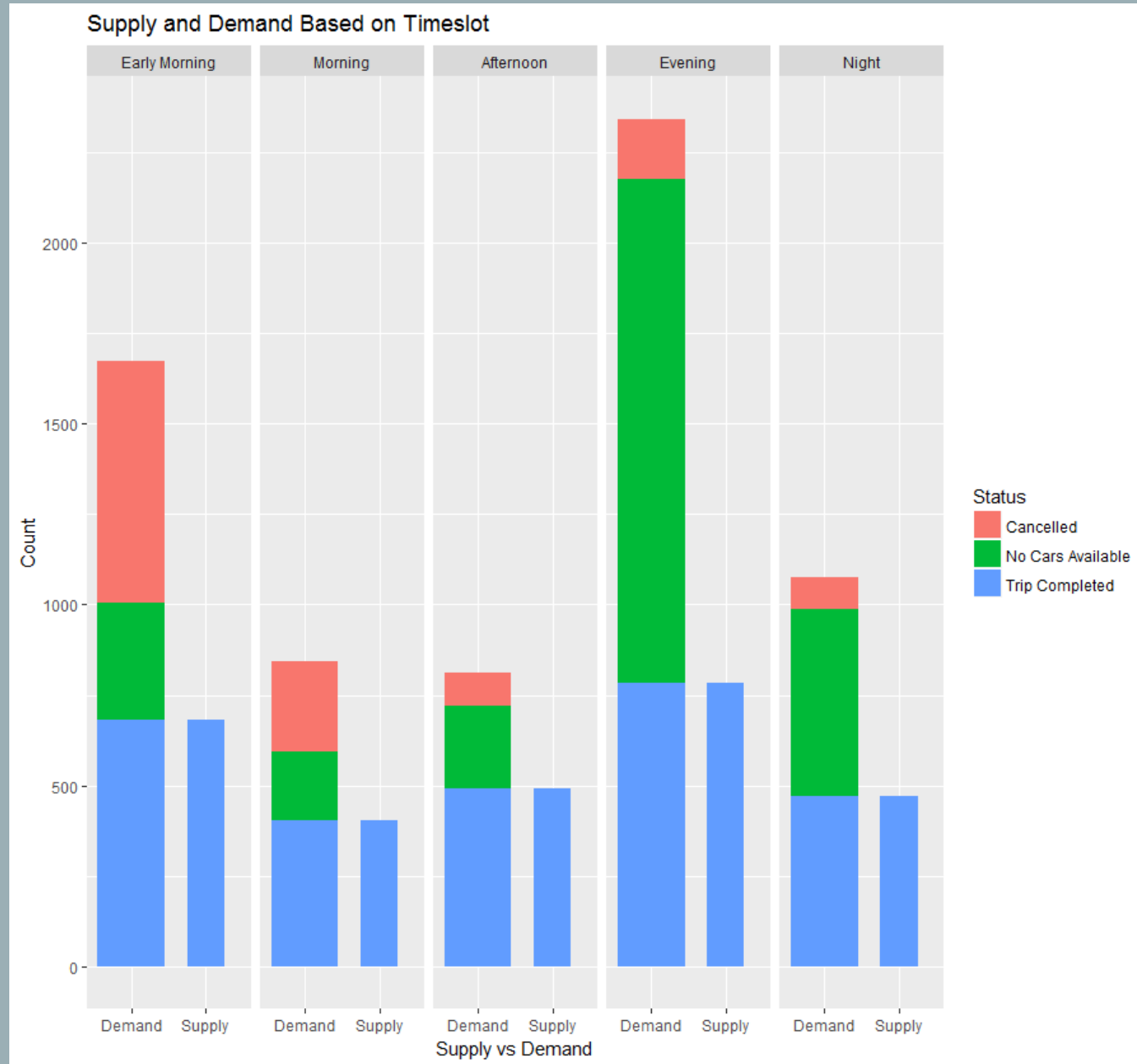


Supply Demand Gap - Timeslot

- Frequency of requests that get cancelled or show 'no cars available'
- Identify the time slot when the highest gap exists between supply and demand
- Identify the types of requests (city-airport or airport-city) for which the gap is the most severe in the identified time slots
- Identify the reason for the issue for the supply-demand gap
- Recommendations to resolve the supply-demand gap

Supply Demand Gap - Timeslot

- Following timeslots showing highest gap between supply and demand.
 - Early Morning
 - Evening



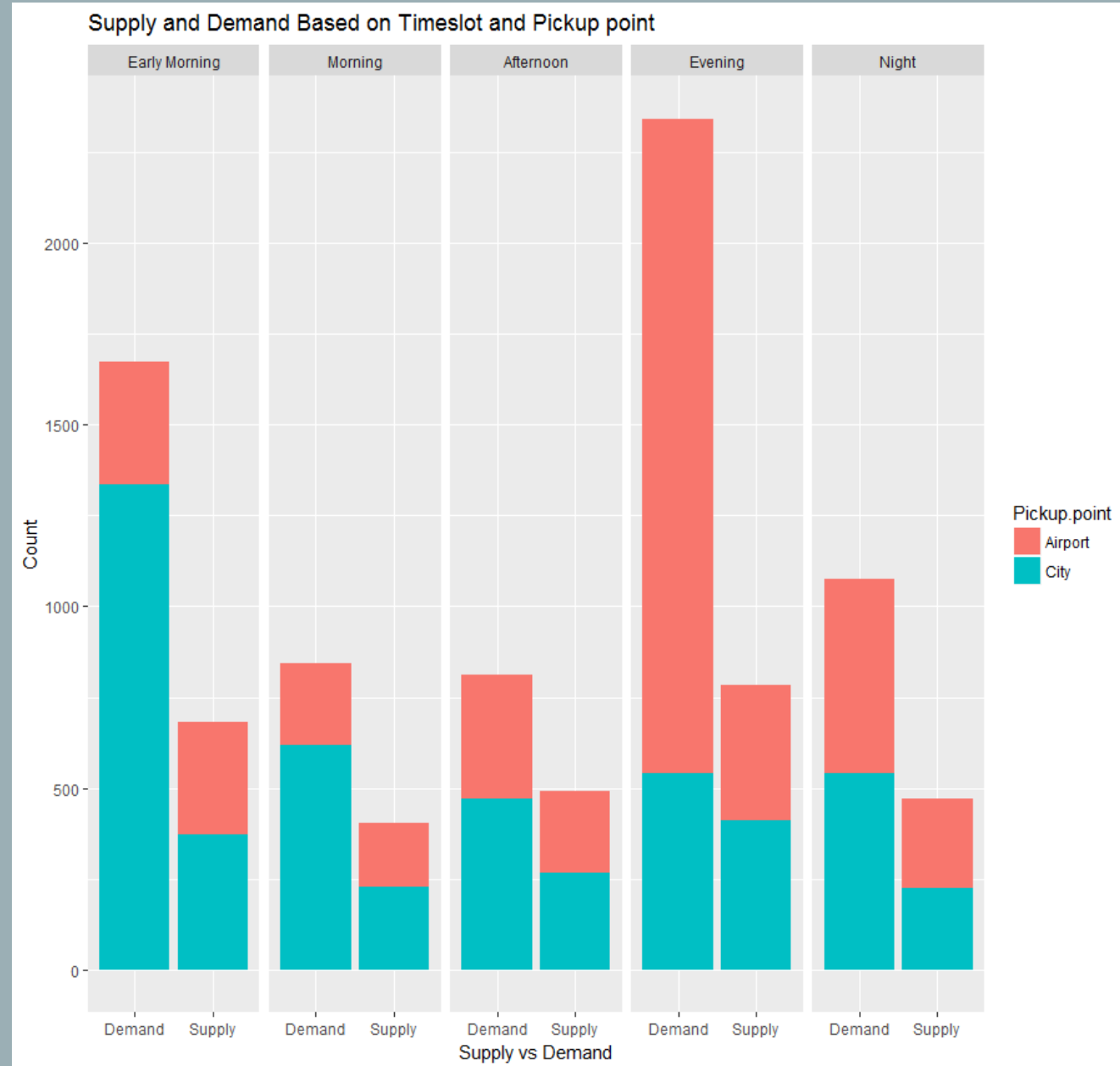
Supply Demand Gap - Type of Request and Timeslot

The analysis divided into three parts:

- Frequency of requests that get cancelled or show 'no cars available'
- Identify the timeslot when the highest gap exists between supply and demand
- Identify the types of requests (city-airport or airport-city) for which the gap is the most severe in the identified timeslots
- Identify the reason for the issue for the supply-demand gap
- Recommendations to resolve the supply-demand gap

Supply Demand Gap - Type of Request and Timeslot

- The Supply Demand gap is relatively high in below two timeslots
- Airport pickup requests in the evening timeslot
- City Pickup requests in the early morning timeslot



Supply Demand Gap - Issue Cause

- Frequency of requests that get cancelled or show 'no cars available'
- Identify the time slot when the highest gap exists between supply and demand
- Identify the types of requests (city-airport or airport-city) for which the gap is the most severe in the identified time slots
- Identify the reason for the issue for the supply-demand gap
- Recommendations to resolve the supply-demand gap

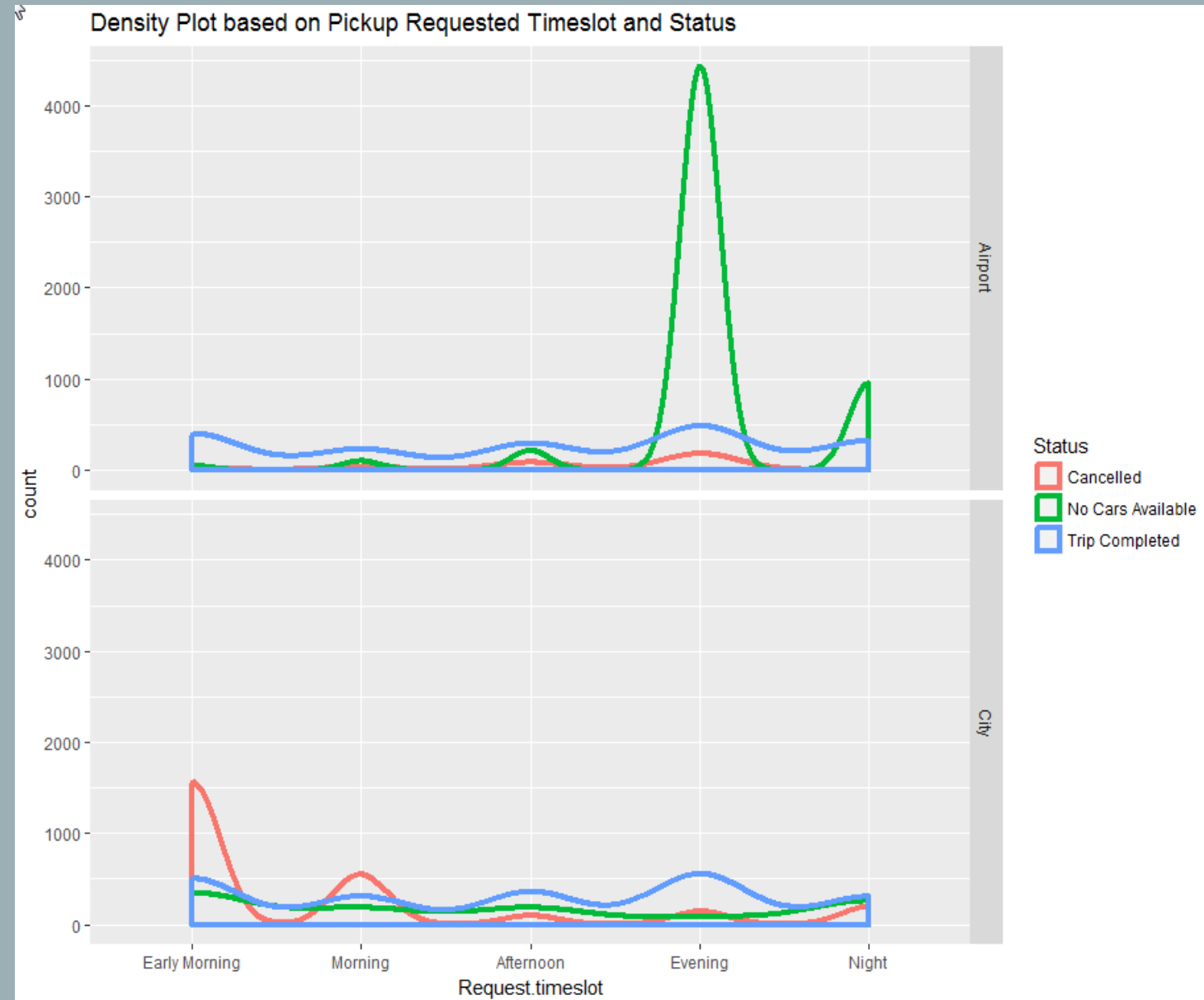
Supply Demand Gap - Issue Cause

1. Airport pickup - Evening timeslot

- There might be more number of incoming flights at Airport in the evening. So the drivers might be waiting for City pickup to reach Airport (or) they might have ended the shift for the day. In addition, traffic congestion in city and also daily office commuters go home during evening.

2. City pickup - Early Morning timeslot

- There might be more number of outgoing flights in the early morning. So they might have cancelled the city pickup requests as they might have to wait for long at airport for next pickup (or) due to inconvenience with the time.



Supply Demand Gap - Recommendations

- Frequency of requests that get cancelled or show 'no cars available'
- Identify the time slot when the highest gap exists between supply and demand
- Identify the types of requests (city-airport or airport-city) for which the gap is the most severe in the identified time slots
- Identify the reason for the issue for the supply-demand gap
- Recommendations to resolve the supply-demand gap

Supply Demand Gap - Recommendations

- Provide an option to the driver to show possible pickups near the dropping point to plan next pickup based on incoming (or) outgoing flight schedules.
- Increase driver's fare (or) reduce Uber's service fee during identified type of request and timeslot.
- Encourage the usage of electric vehicles to move towards to mobility with lower power consumption to provide best service at low cost and high savings.