



UBER SUPPLY DEMAND GAP



Assignment Submission :
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<https://www.uber.com/in/en/>

Abstract : Uber supply demand gap

Problem Statement

- Driver Cancellations and Non-Availability of cabs to and from Airport leading to loss of potential revenue.

Objective

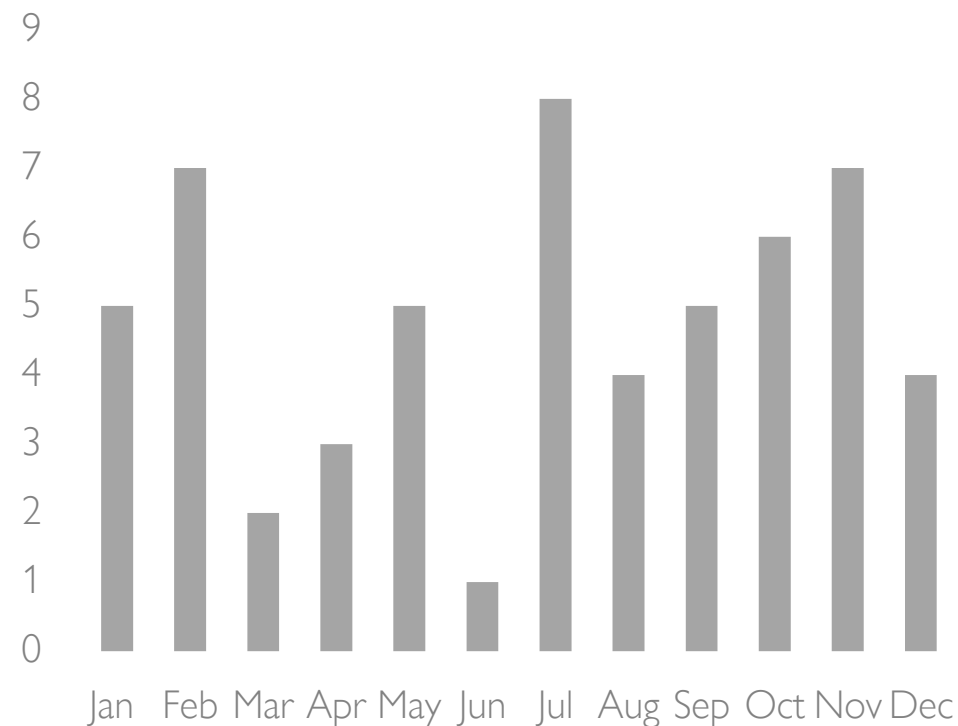
- To identify the Supply-Demand gap in cabs from Airport to City and vice versa.

Research Questions

- Identify the most pressing problems for Uber.
- What is the gap between supply and demand to and from Airport.
- What might be the reason for this supply-demand gap?
- Recommend some ways to improve the supply-demand gap.

Data Used for Analysis

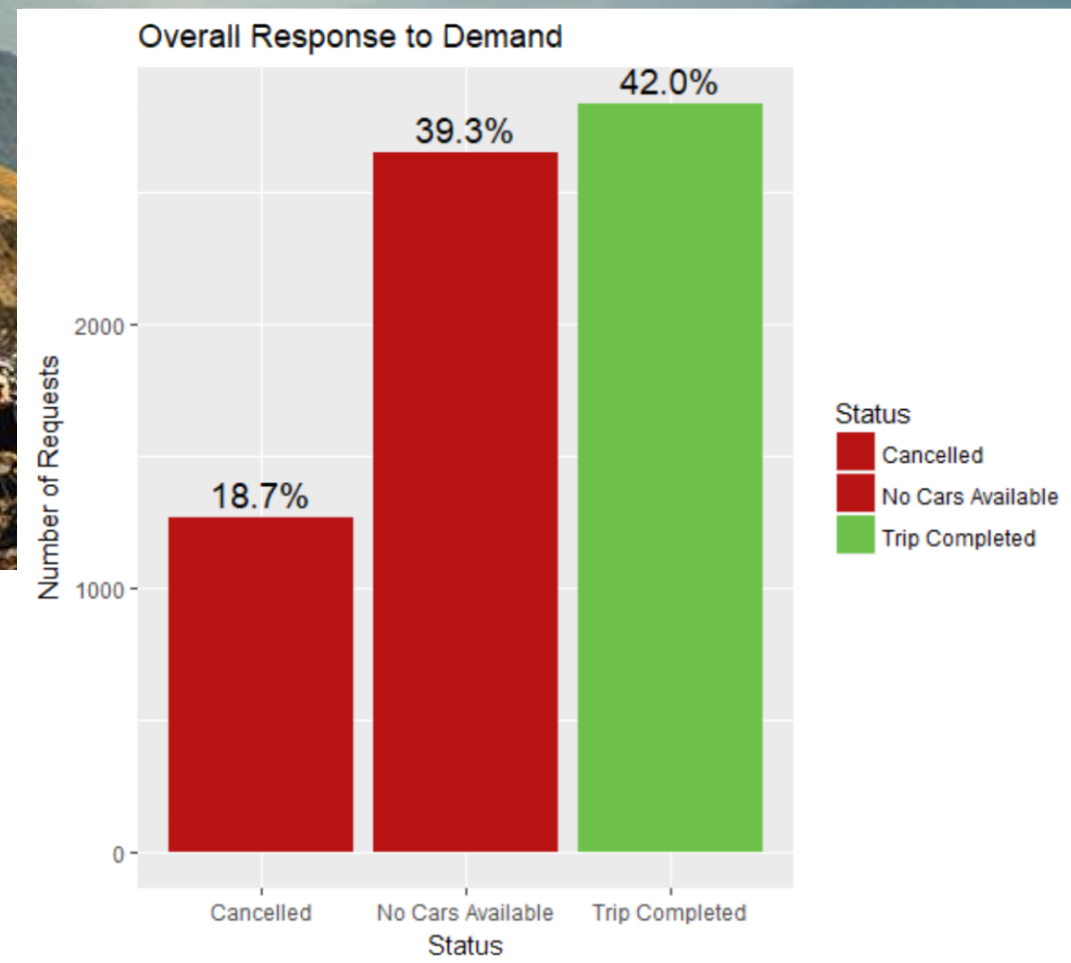
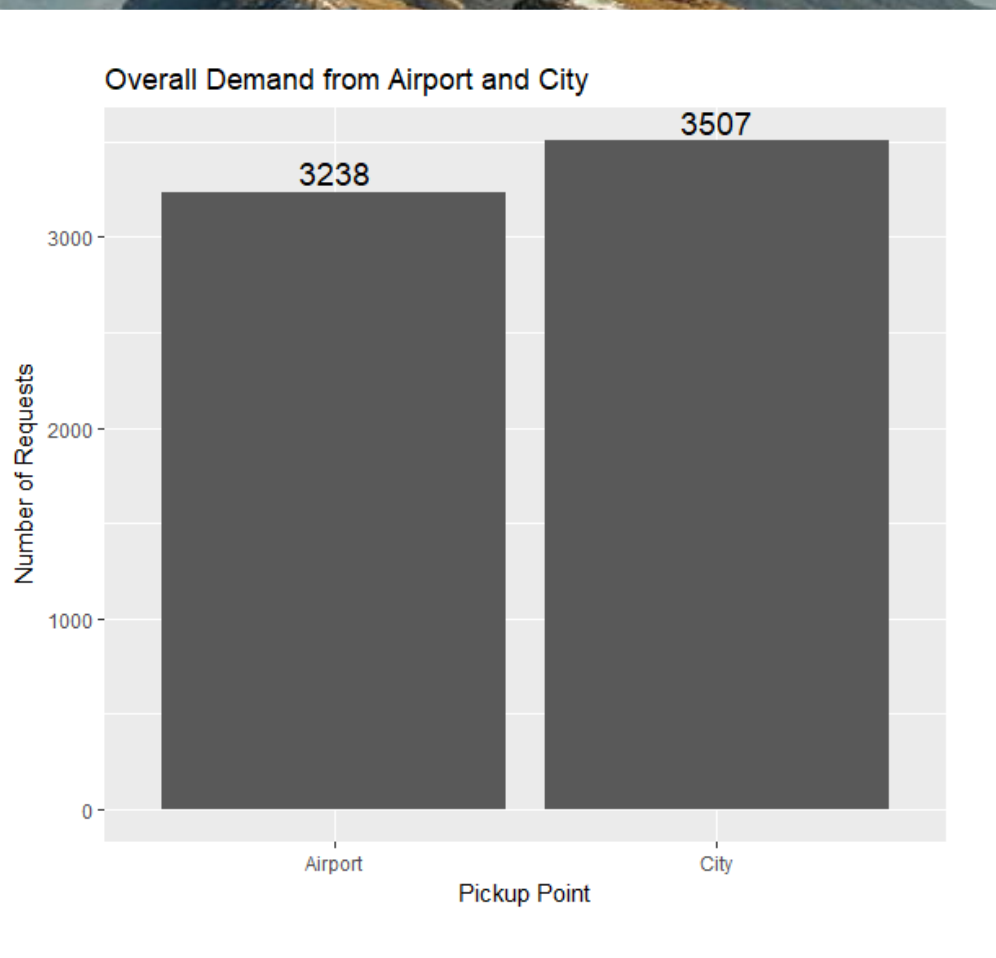
- The data used is only to and from Airport
- Analysis has been done on data of **5 days**.



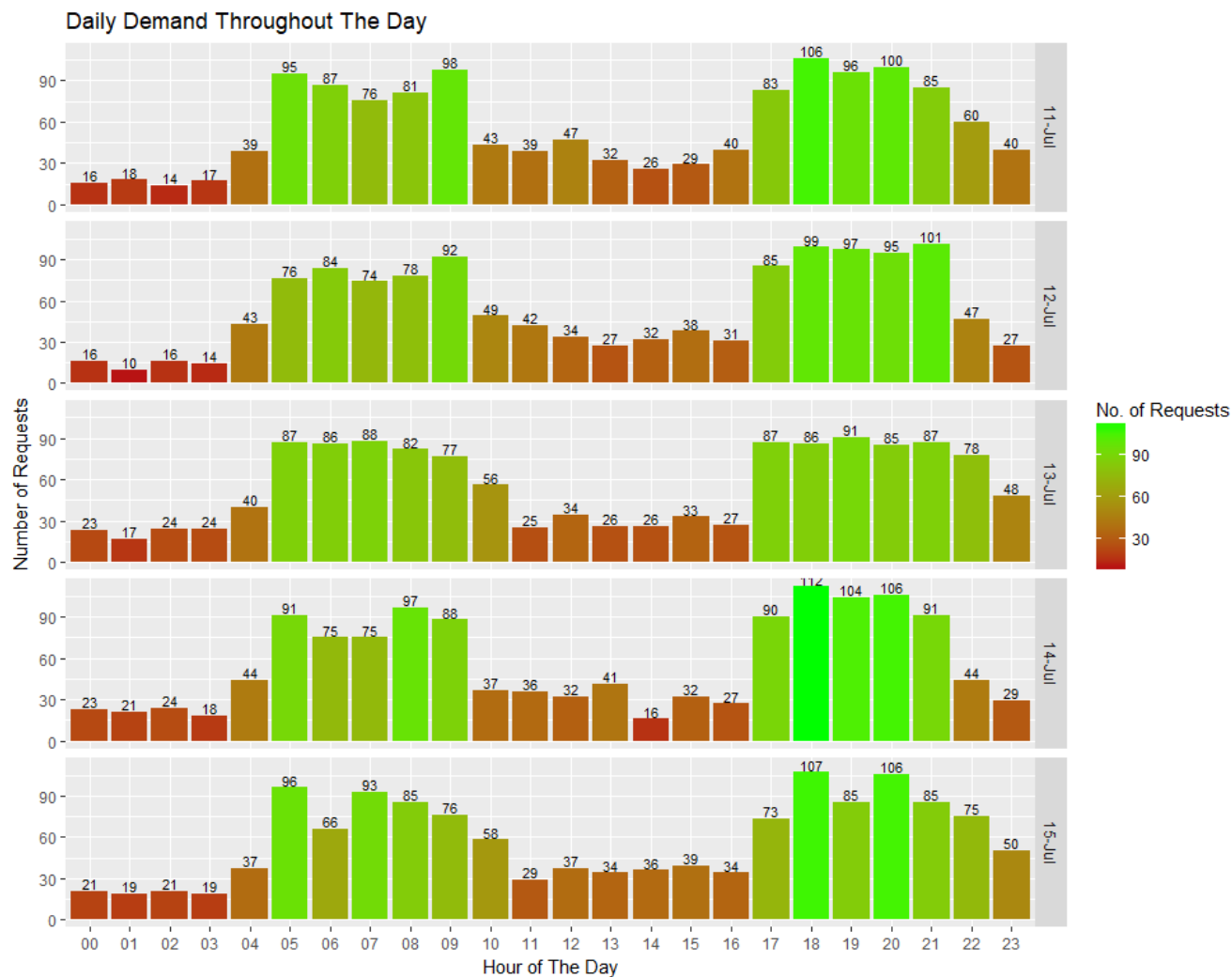
The Problem :

The Demand for cabs is equivalent both from Airport to City and vice versa.
There is a huge gap in Supply as only about **42%** of the requests are fulfilled.

There is a gap of **58%** in the supply of cabs.
About **39.3%** shortage in cabs availability in the concerned areas and **18.7%** trips cancelled.



Overall Demand Based on Date and Time



Irrespective of days, it is clearly seen that the demand is high demand of cabs mainly in:

- Morning (5am to 10am)
- Late Evening and Night(5pm to 11pm)

Demand Based on Time and Location

There is a high demand of cabs from

City to Airport

in the **Early Morning and Morning** hours.

There is a high demand of cabs from

Airport to City

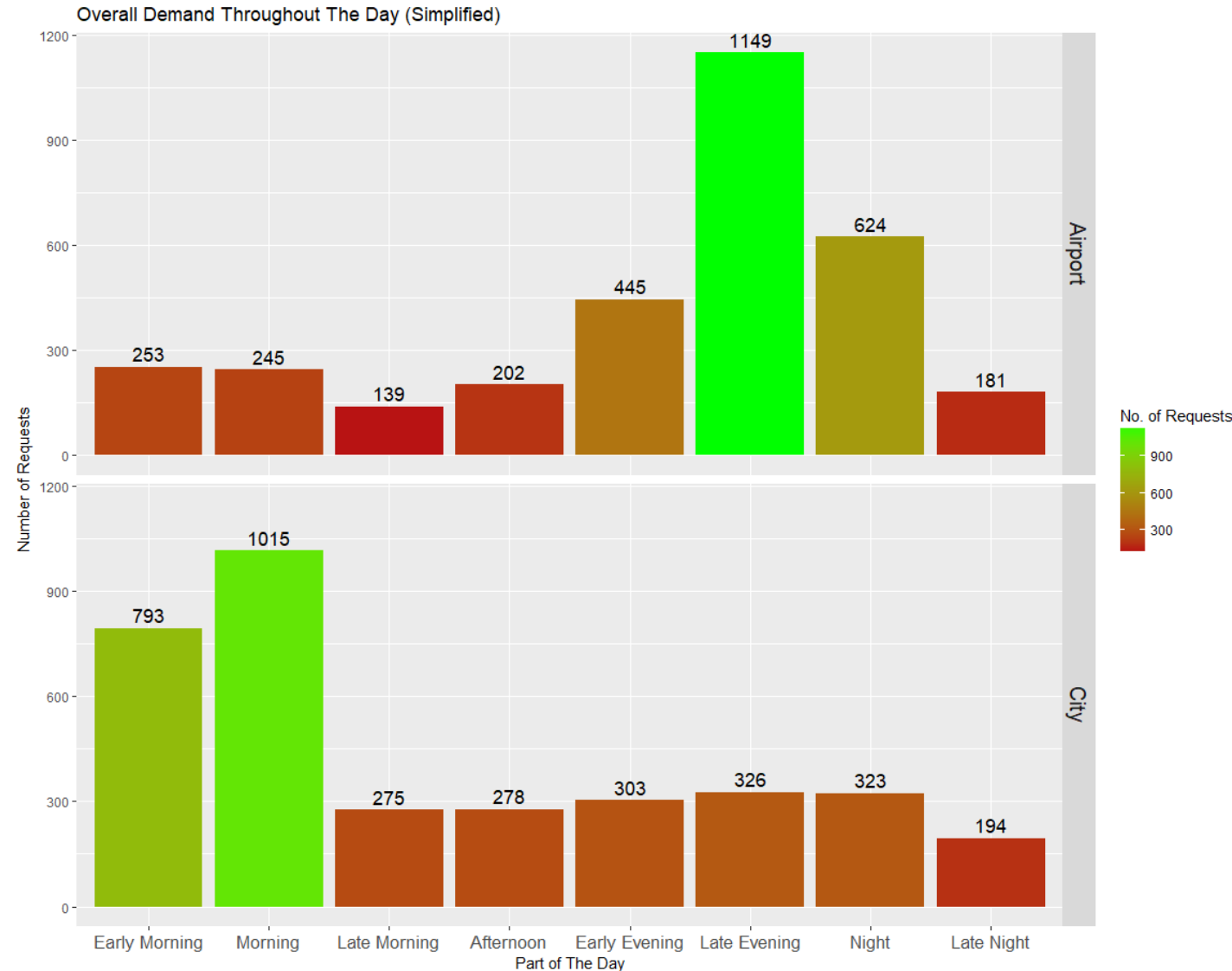
in the **Late Evening and Night** hours.

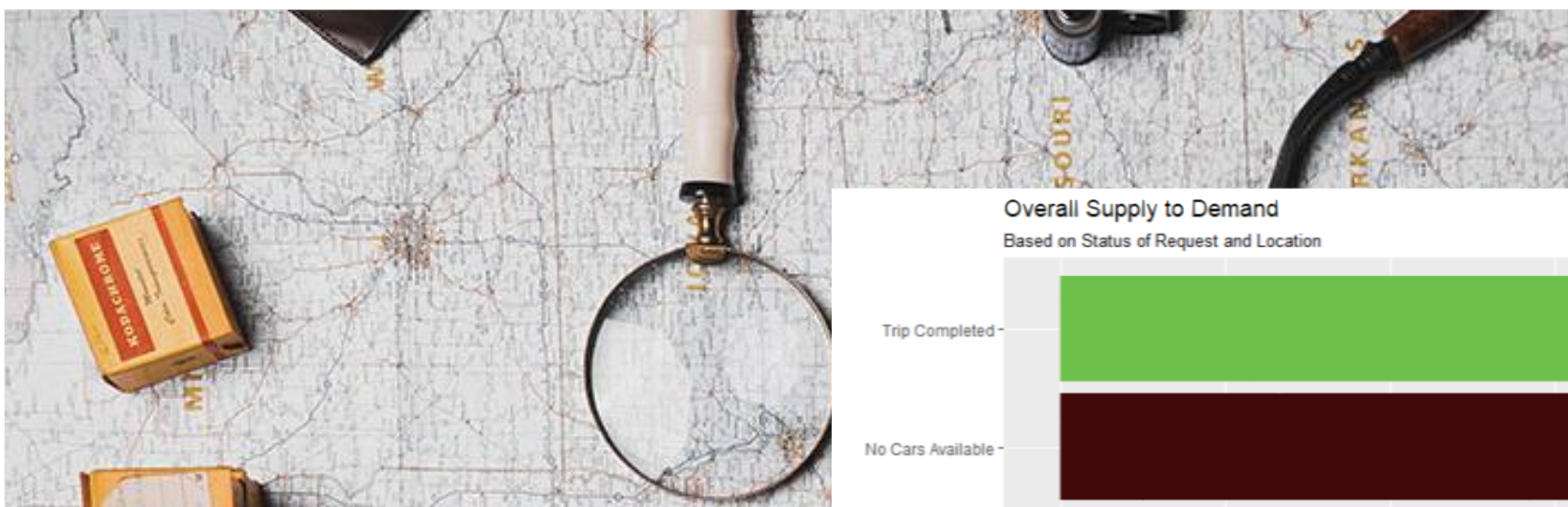
- This means there are chance of having :

More Outbound flights in the Early Morning and Morning. Hence more customers going to Airport and **less customers coming to City.**

More Inbound flights in the Late Evening and Night.

Hence more customers coming to City and **less customers going to Airport.**





Supply Based on Location

➤ Airport to City :

52.9% face Non -Availability

Shortage of cabs around Airport

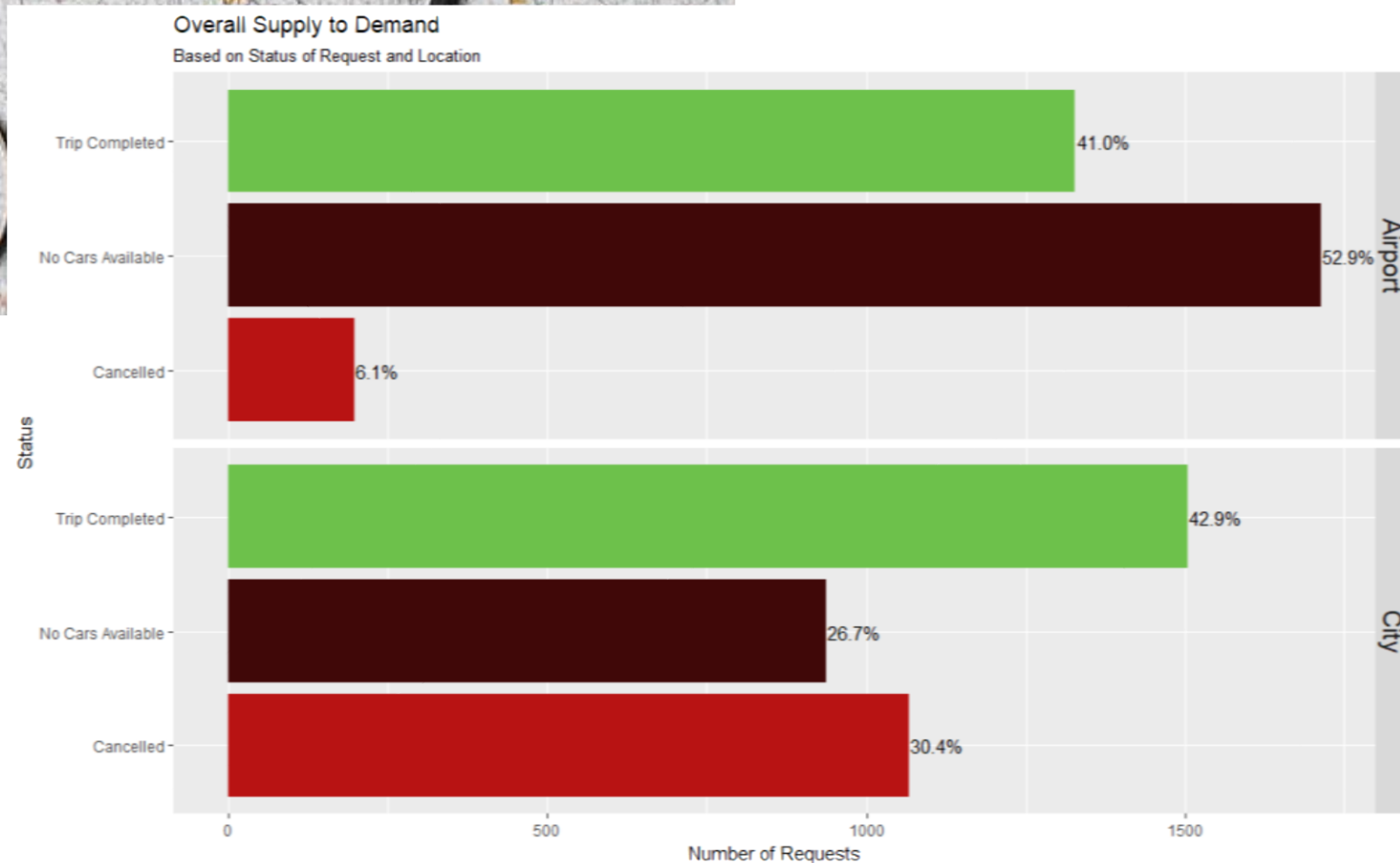
City to Airport :

30.4% requests Cancelled

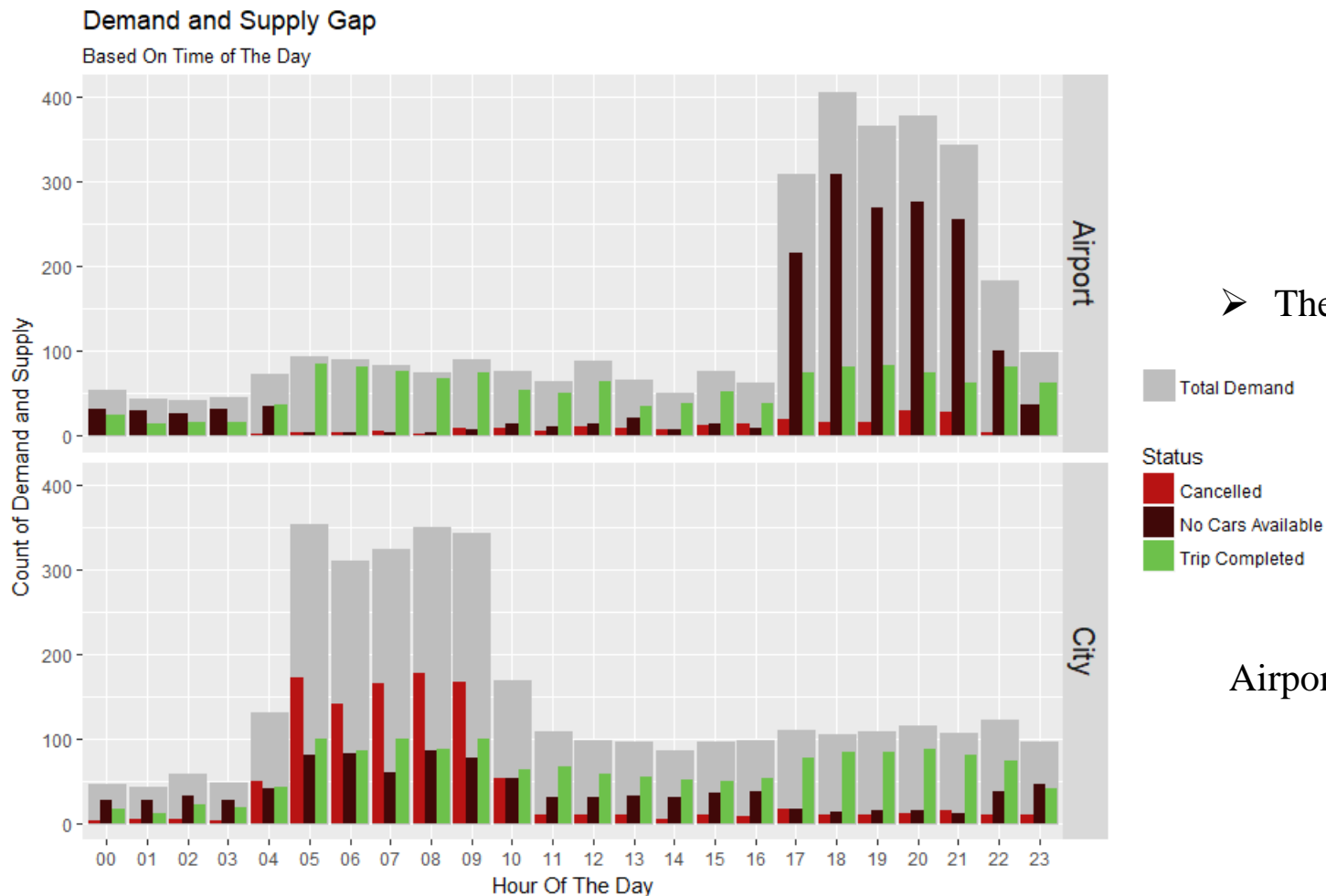
Cabs denying services

26.7% face Non -Availability

Shortage of cabs in city



Demand and Supply Gap –The Reason



What is the reason for this supply-demand gap?

➤ The flow of traffic is one-directional due to flight timings.

□ Early Morning and Morning: High demand from City, but low demand from Airport. Hence, it's risky/less opportunity for drivers to get return trip to City and the trips are cancelled.

□ Late Evening and Night : High demand from Airport but not enough cars around as less number of cars go towards airport in evening.

➤ There is a shortage of cabs in general. At the peak times there is about **26%** chance of Non-Availability of cabs both to and from Airport.

Demand and Supply Gap

The bar graph also show us the following:

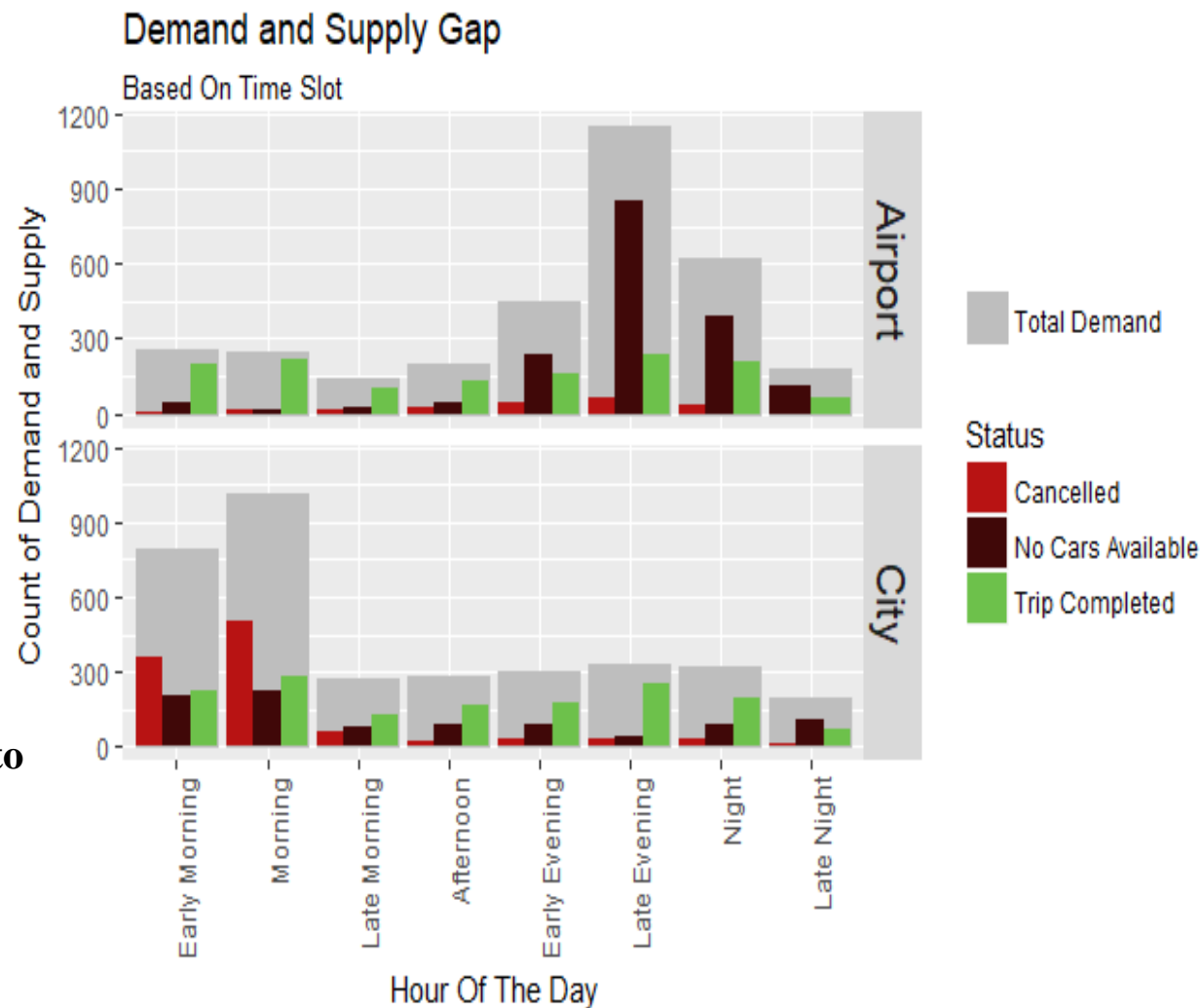
- Airport to City (Late Evening and Night) :
 - o High Demand
 - o Low Supply

☐ Not enough cabs go towards Airport to meet the demands

- City to Airport (Early Morning and Morning) :
 - o High Demand
 - o Low Supply

☐ Cabs denying services as not enough demand from Airport to meet the influx of cabs

☐ Also not enough cabs to meet the demand.



POSSIBLE SOLUTIONS AND RECOMMENDATIONS



- It was found the demand at peak times is mostly unidirectional and demand at destination around that was not enough for return trips for drivers.
- ✓ It is recommended to provide incentives to drivers for trips to and from Airport during these rush hours (i.e. 5am to 11am and 5pm to 11pm).
- ✓ During these rush hours customers can be charged higher for trips to and from Airport.
- It was also observed that there is a shortage of cabs in general. Though the reason of shortage from Airport is not enough organic supply to the airport, but from city as well, overall about 26.7% requests face Non-Availability of cabs.
- ✓ Avg. Non-Availability hourly:
 - Airport = 71
 - City = 39
- ✓ Hence based on the available data a new fleet of 40-70 cabs can added to Uber services.
 - The average time of travel is 52.4 minutes for these trips.
- ✓ Incentive based on distance of trips will encourage drivers to take these trips. This would make a better financial sense for drivers.
- ✓ Accordingly longer trips should be charged.
 - Incentivising these trips will in turn meet more customer demands, resulting in better profits for Uber.
- Educating drivers about these demand-supply gap.



THANK YOU !!

