

# UBER CASE STUDY

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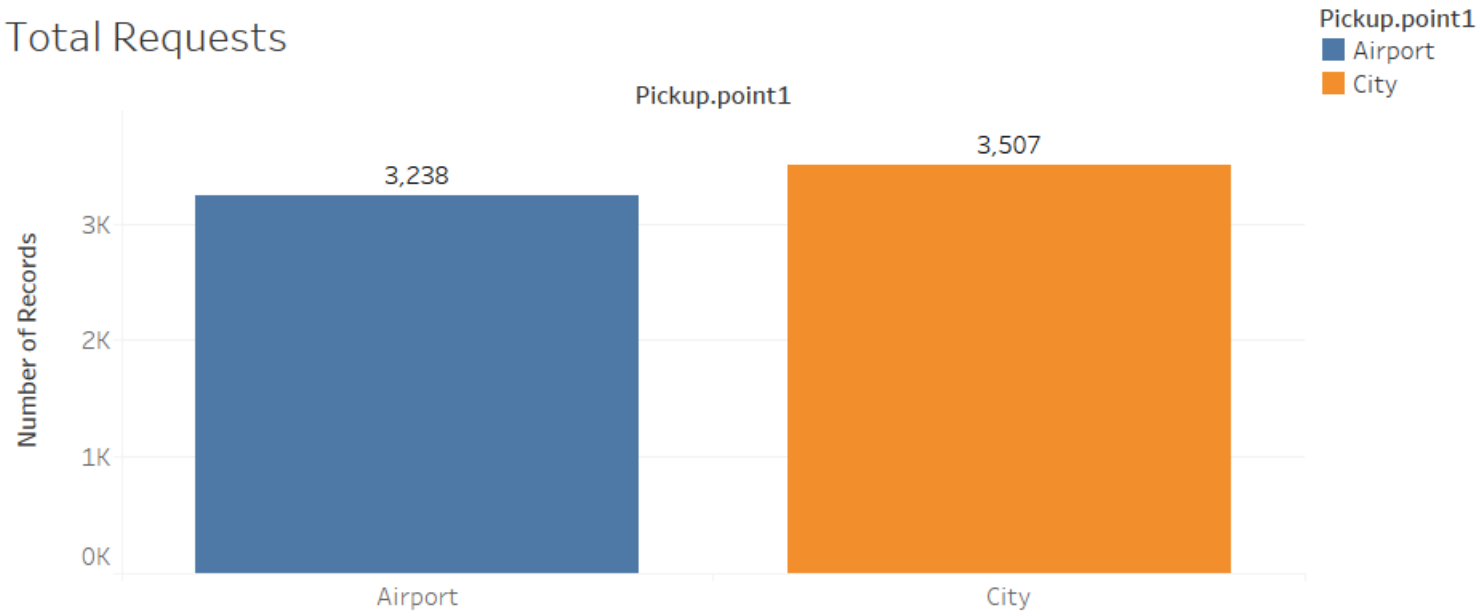
# Abstract

- Uber faces the issue of loss of revenue due to cab cancellations and also non-availability of cabs during peak hours causing inconvenience to the customers.
- So uber is interested to explore new ways to decrease the Supply-Demand Gap.
- For the ease of analysis , only to and from airport and city route is considered.

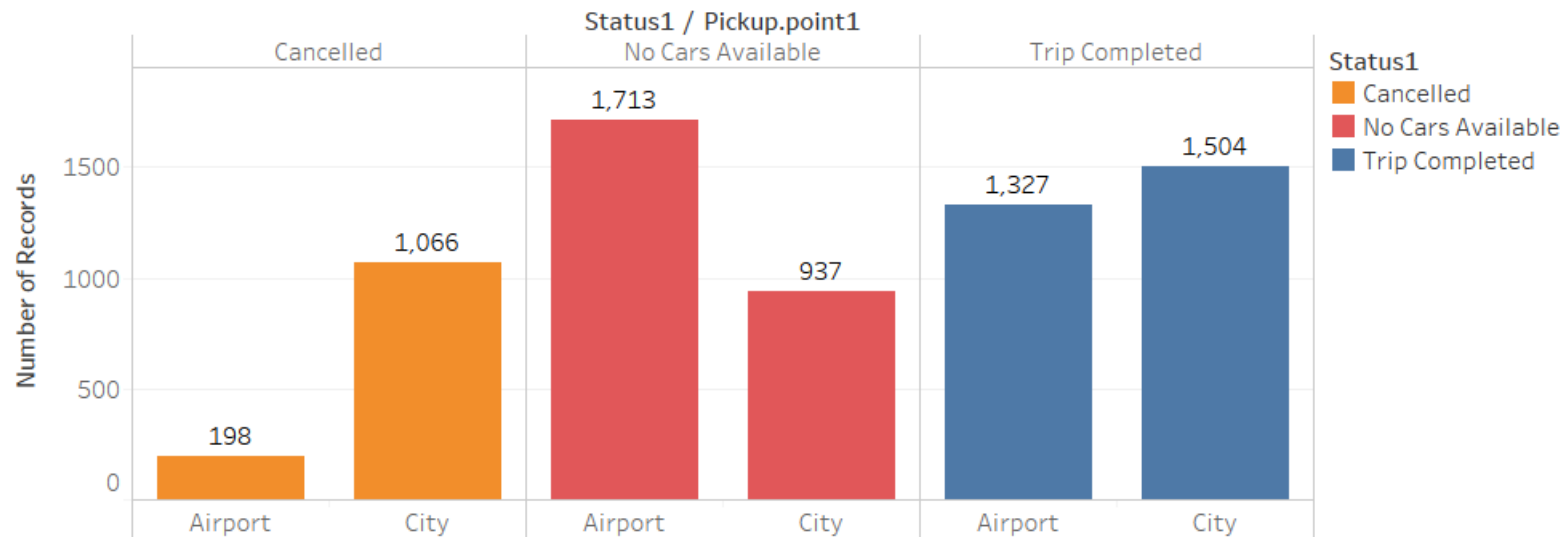
## Business Objective:

- Find the root cause for the problem of Supply-Demand Gap
- Recommend ways to reduce the Supply-Demand Gap and improve the revenue of Uber.

## Total Requests

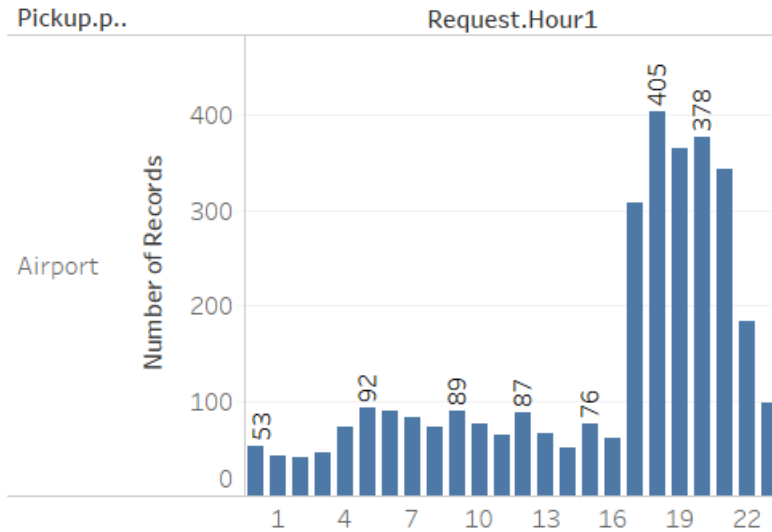


## Status

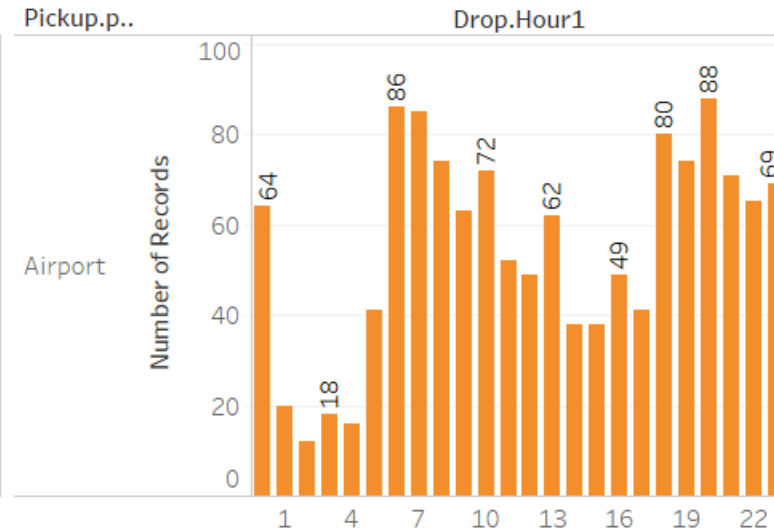


Total Requests:  
 Airport-3238  
 City-3507  
 So there are more number of requests from city as pickup point. We can also observe that overall more cancellations in city and No cabs Available at Airport.

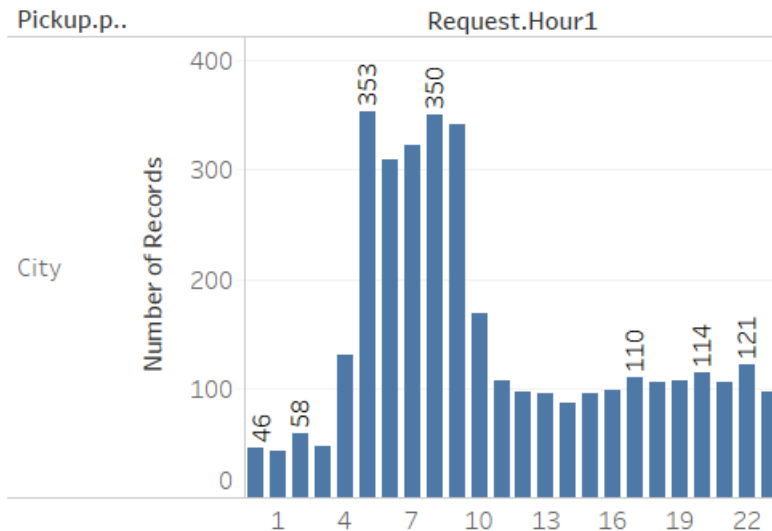
### Demand At Airport Hourwise



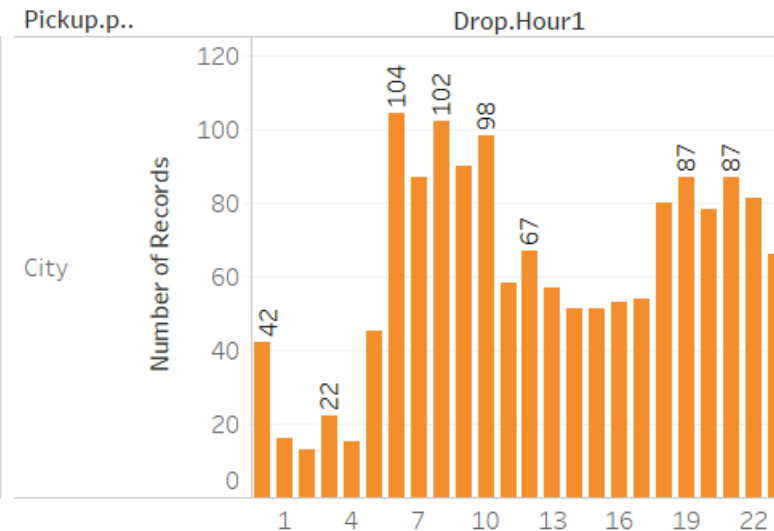
### Supply At Airport Hourwise



### Demand in city Hourwise

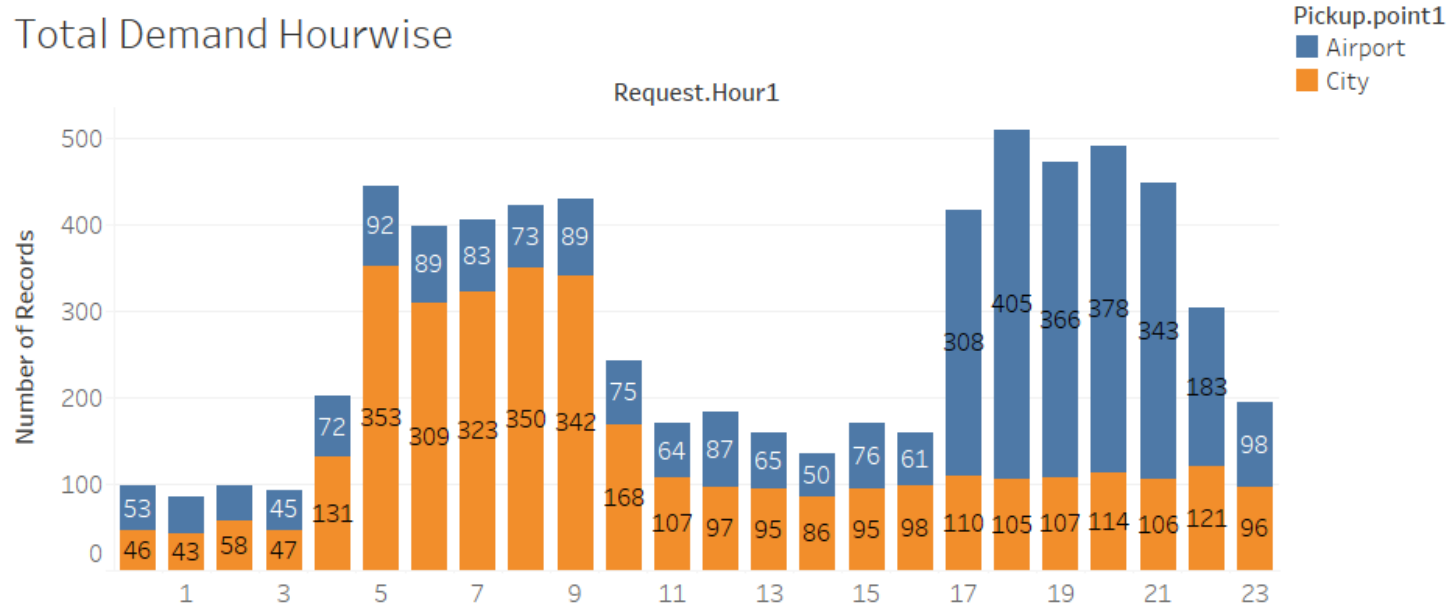


### Supply in city Hourwise

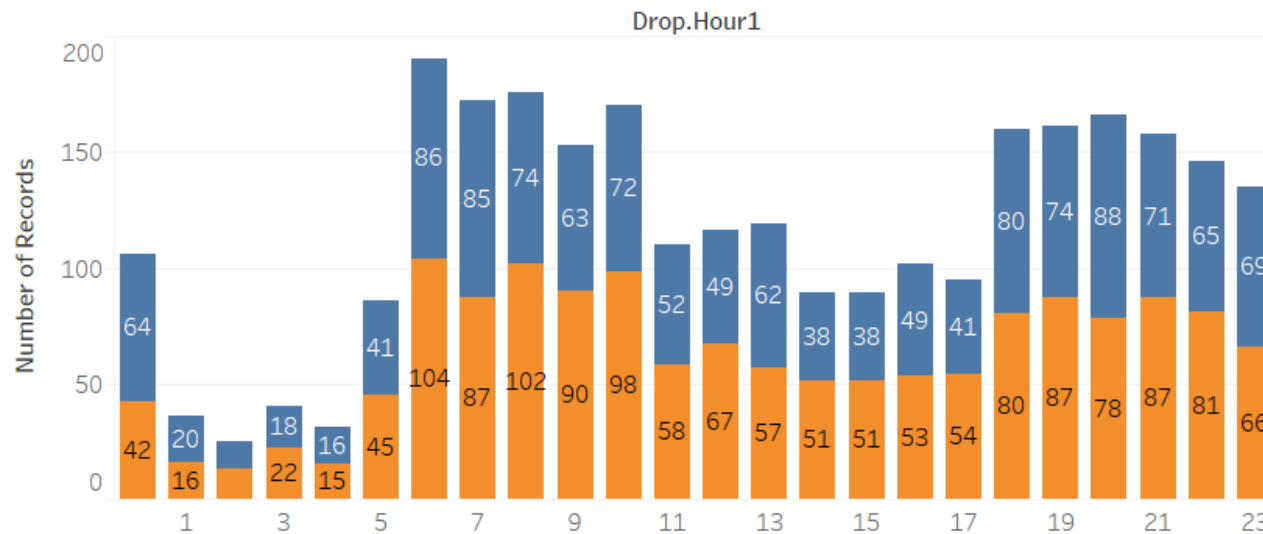


We can clearly see that demand is very high and supply is very low both at Airport and In city in almost all the hours which shows that Uber has to employ more drivers to meet the demand.

## Total Demand Hourwise

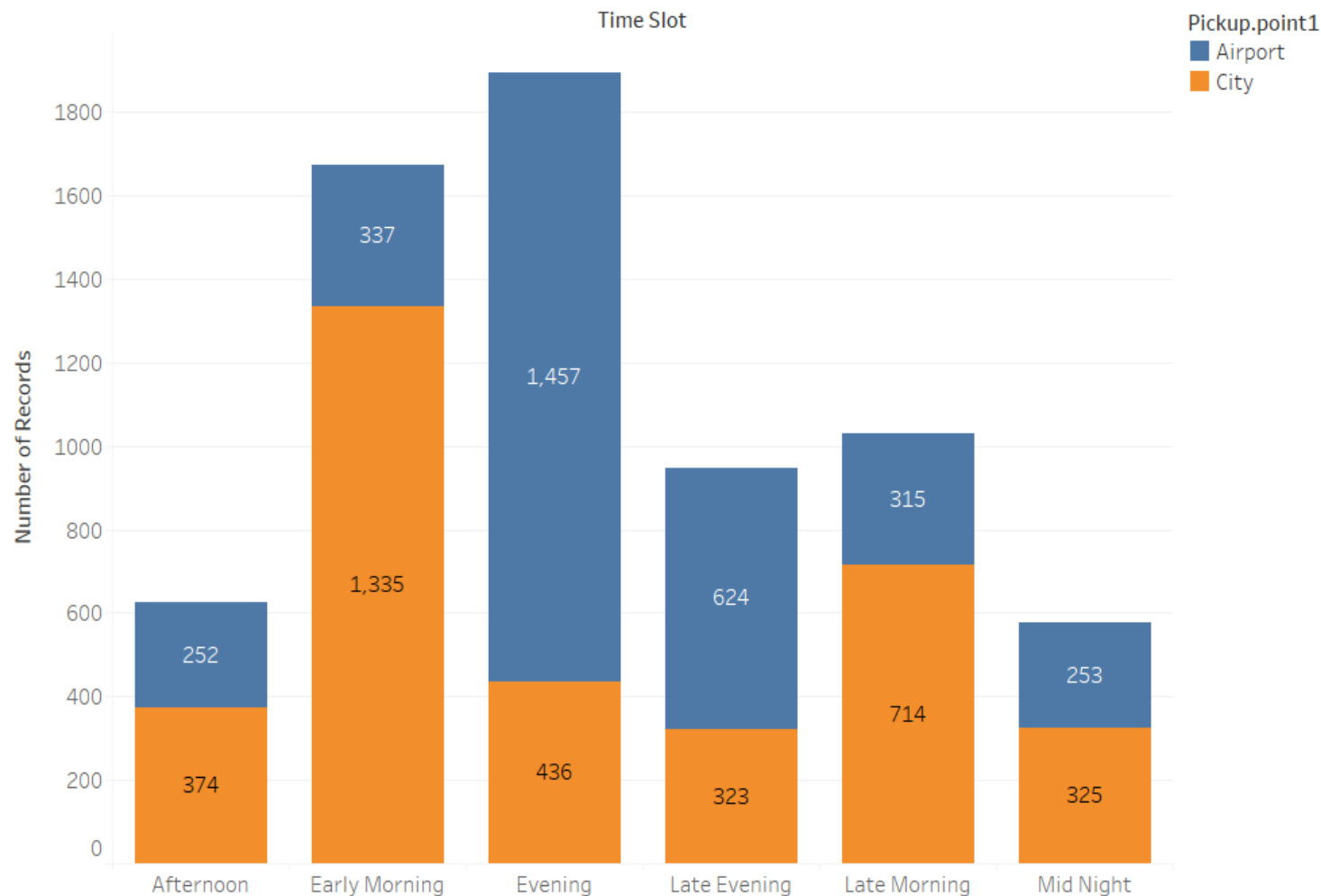


## Total Supply Hourwise



We can see that highest demand is during 18<sup>th</sup> Hour which is at 6PM with 405 requests but Uber has supply of only 80 at Airport which is a huge gap. Similarly during Early Hours (5AM to 10AM) demand is high In City and supply is unable to meet the demand.

## Timeslot wise status

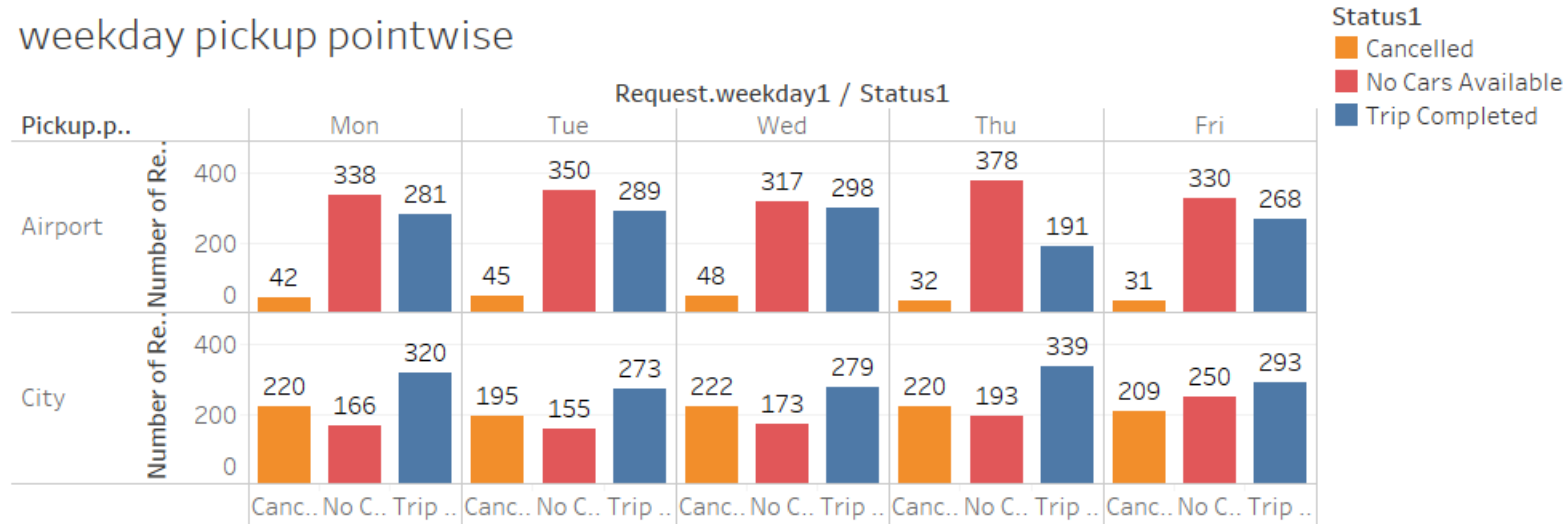


Sum of Number of Records for each Time Slot. Color shows details about Pickup.point1. The marks are labeled by sum of Number of Records.

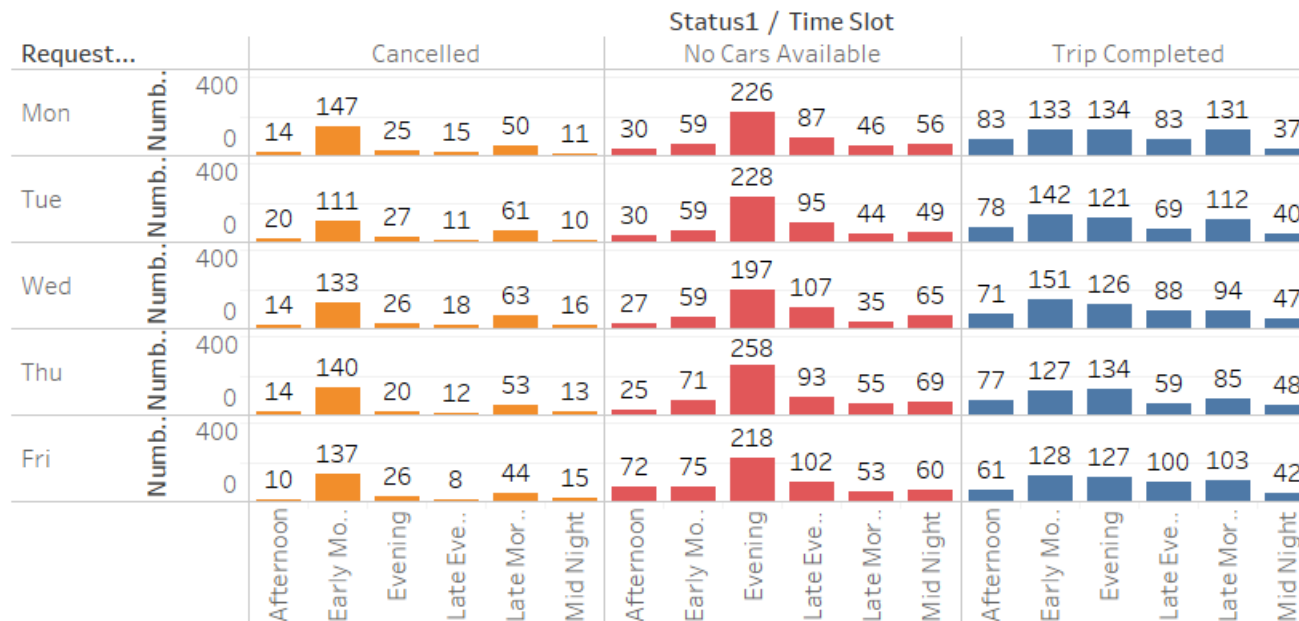
Early Morning- 4AM to 8AM  
 Late Morning- 8AM to 12AM  
 Afternoon- 12AM to 4PM  
 Evening- 4PM to 8PM  
 Late Evening- 8PM to 12PM  
 Mid Night- 12PM to 4AM.

Early Morning:  
 Requests are high in City.  
 Evening:  
 Requests are high At Airport.

## weekday pickup pointwise

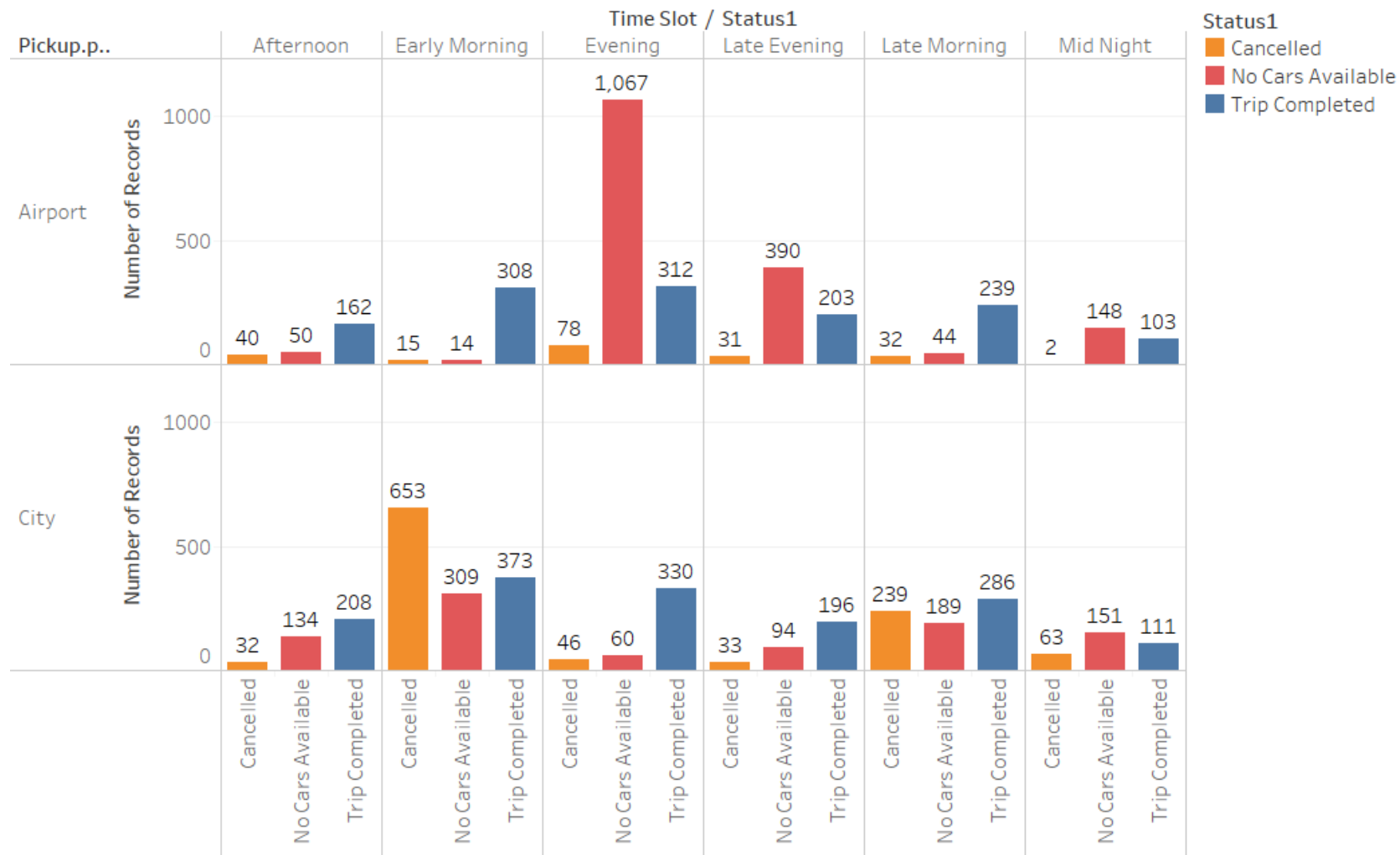


## weekday Timeslotwise status



Here is the complete weekday analysis. In City: During Thursday and Friday Requests are high- 752. At Airport: During Tuesday there are high number of Requests-684.

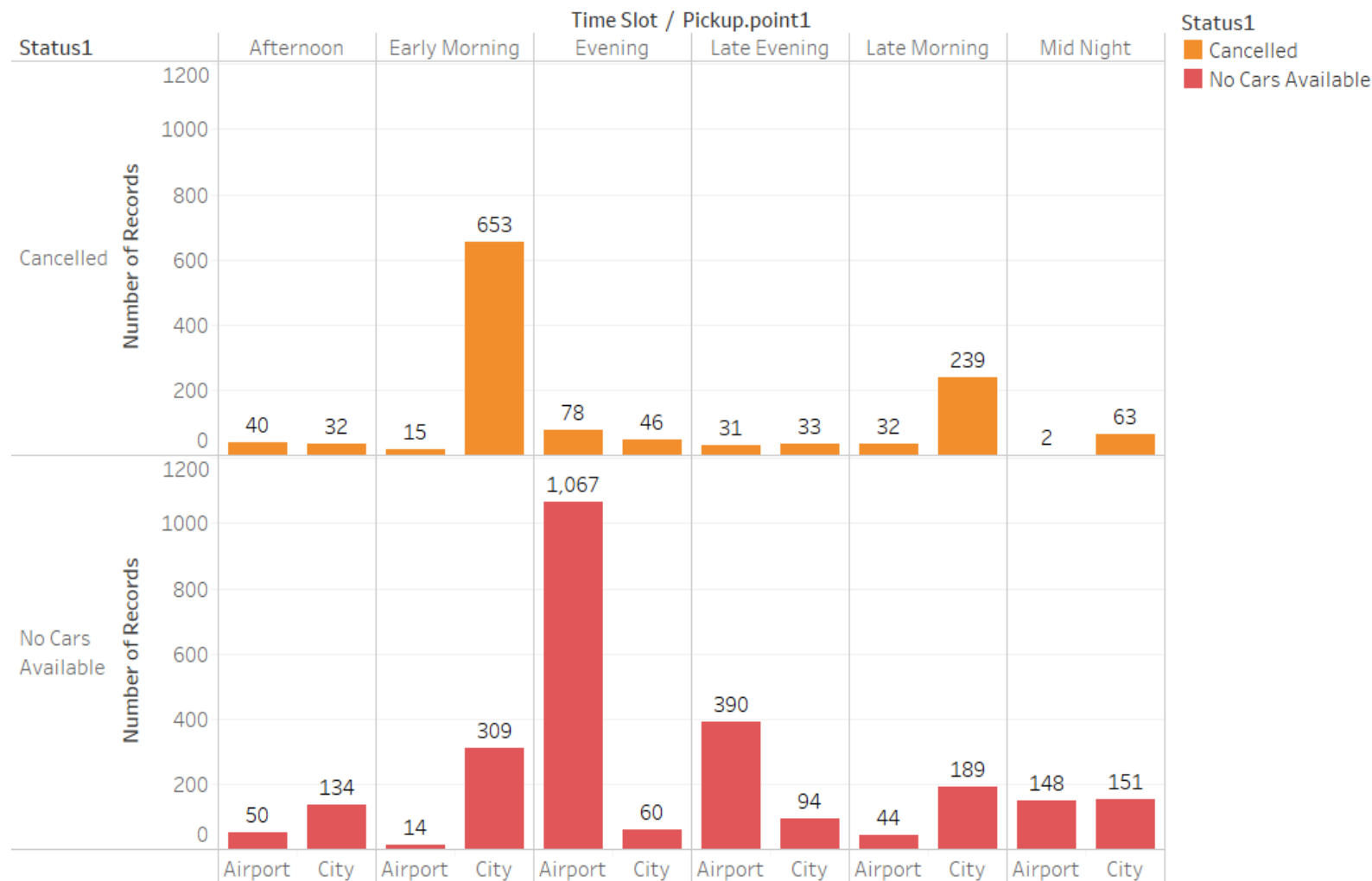
## Total Uber Stats



Sum of Number of Records for each Status1 broken down by Time Slot vs. Pickup.point1. Color shows details about Status1. The marks are labeled by sum of Number of Records.



## Most pressing problems for Uber

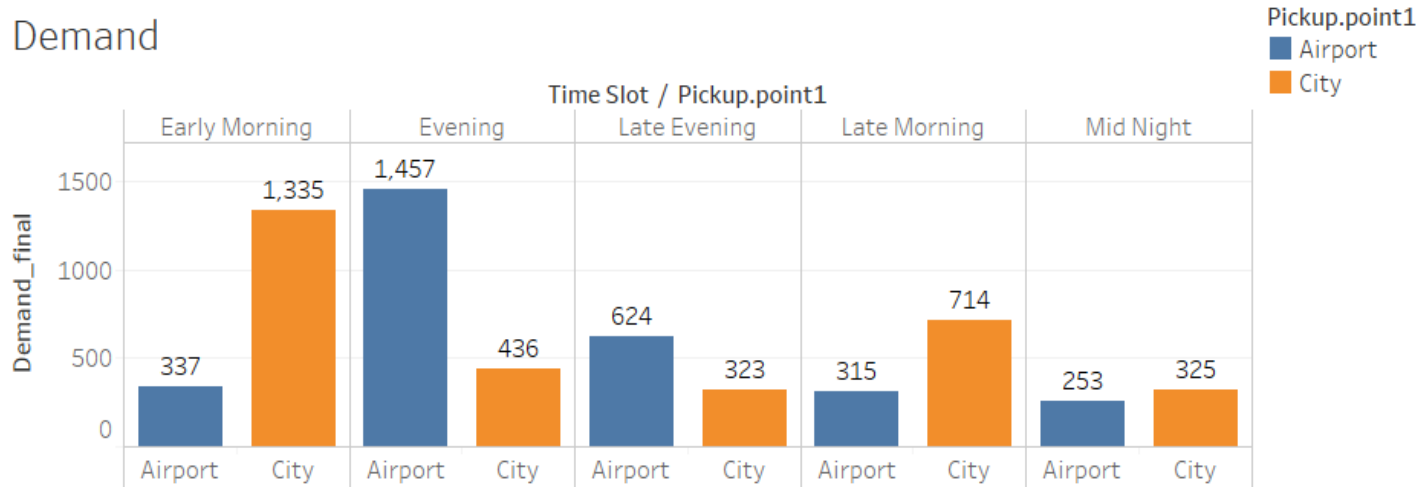


Sum of Number of Records for each Pickup.point1 broken down by Time Slot vs. Status1. Color shows details about Status1. The marks are labeled by sum of Number of Records. The view is filtered on Status1, which keeps Cancelled and No Cars Available.

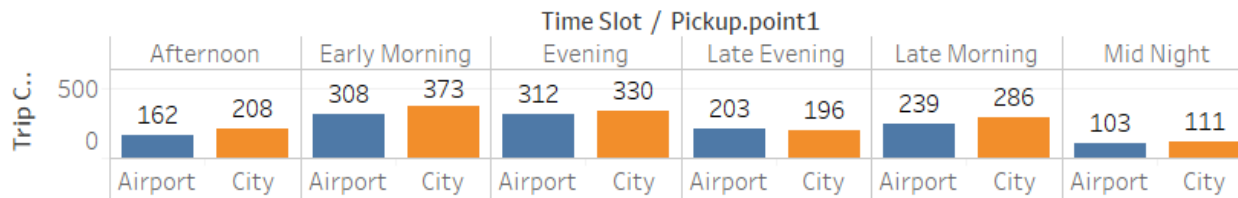
Uber Loses Revenue mainly because of 2 Problems:

- Cancellations
- No cars Available
- We can see that cancellations are high in City during Early Morning.
- Similarly No cabs Available Status is high At Airport during Evening.

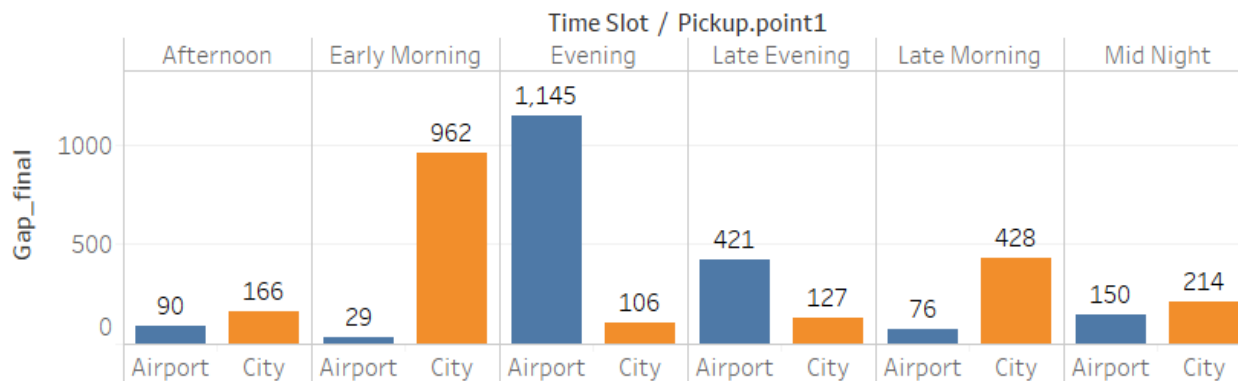
## Demand



## Supply



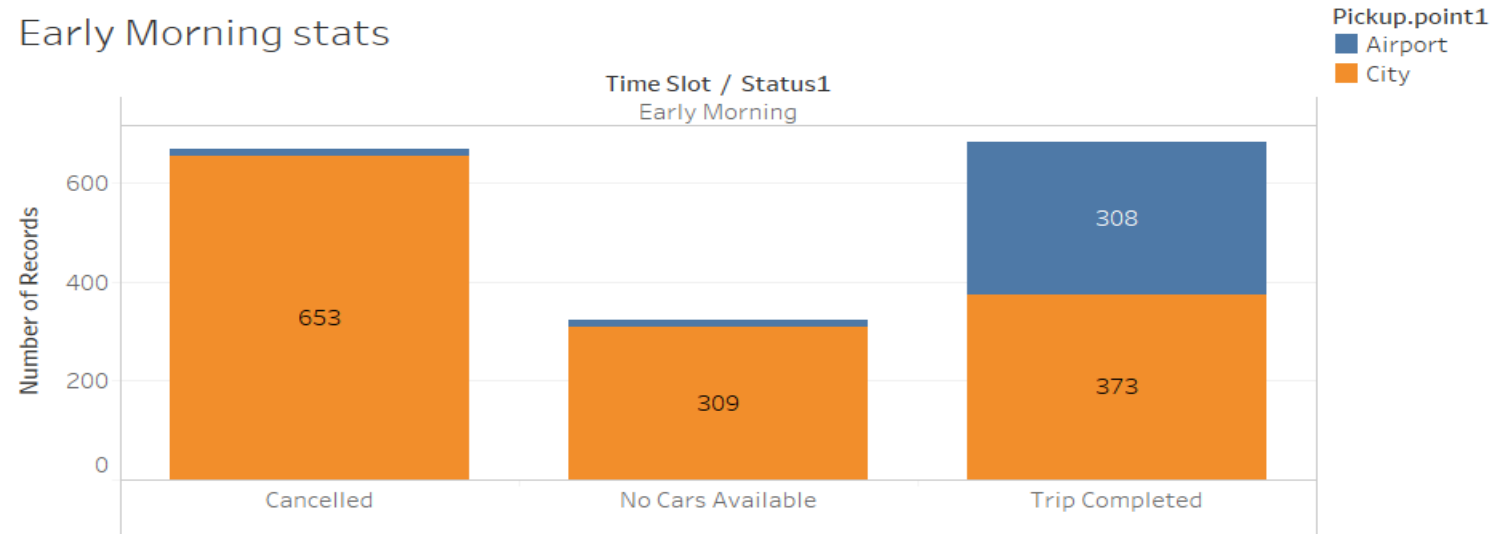
## Gap



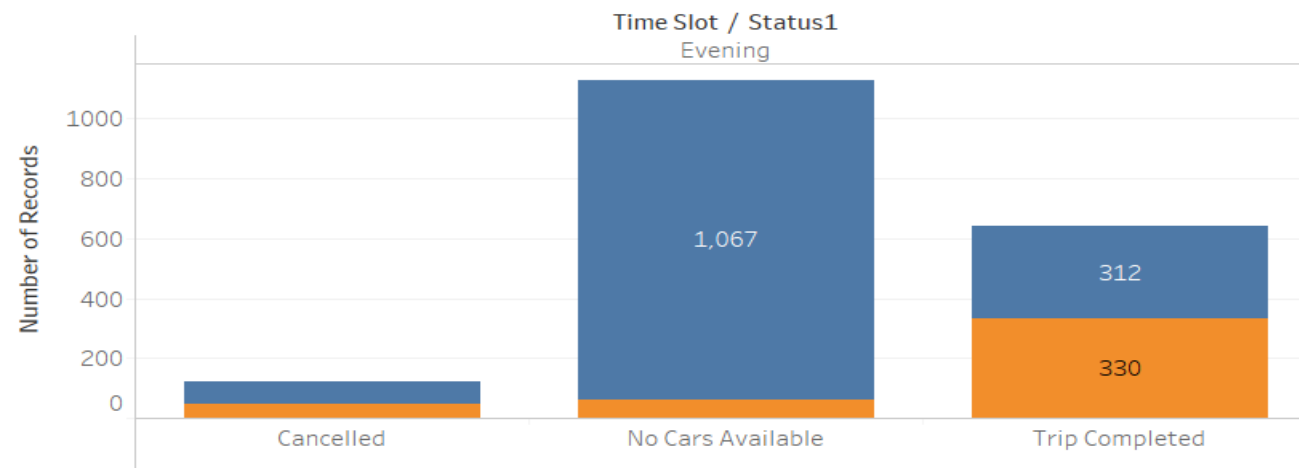
- Demand=Cancelled+ Trips Completed + No Cars Available
- Supply=Trips Completed
- Gap=Demand-Supply
- If Gap is High it means we are loosing revenue.
- We can see that Gap is high during **Evening At Airport** and during **Early Morning in City**.
- Demand-Supply Gap should be made less to improve the revenue.
- We need to analyse and reduce the gap in Early Morning and Evening Timeslots.

## Problematic Timeslots Analysis

### Early Morning stats



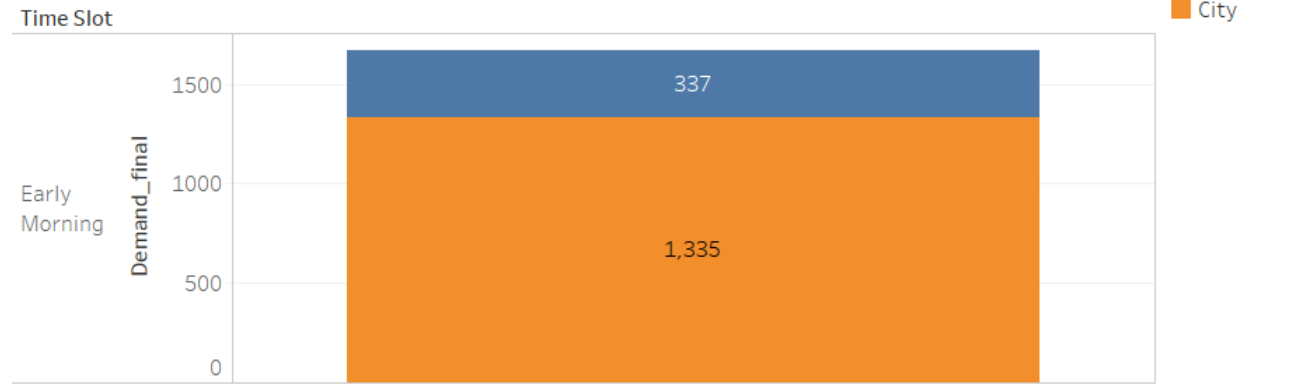
### Evening stats



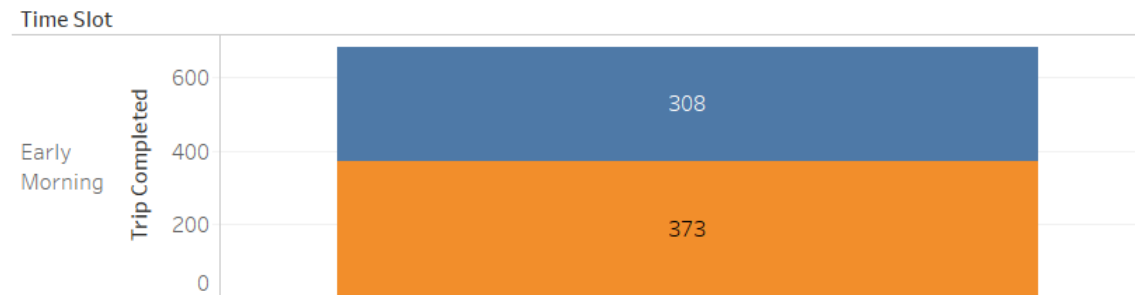
- During **Early Morning** the Demand-Supply Gap is high because of **more cancellations**.
- During **Evening** the Demand-Supply Gap is high because of **No cars Available** to meet the demand.

## Demand -Supply Gap In Early Morning

### Early Morning Demand



### Early Morning Supply

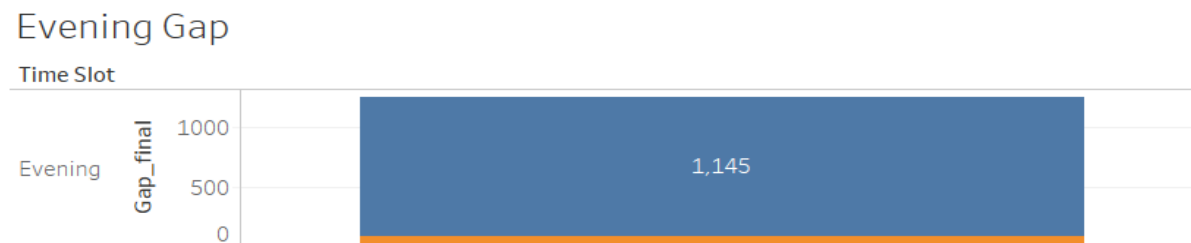
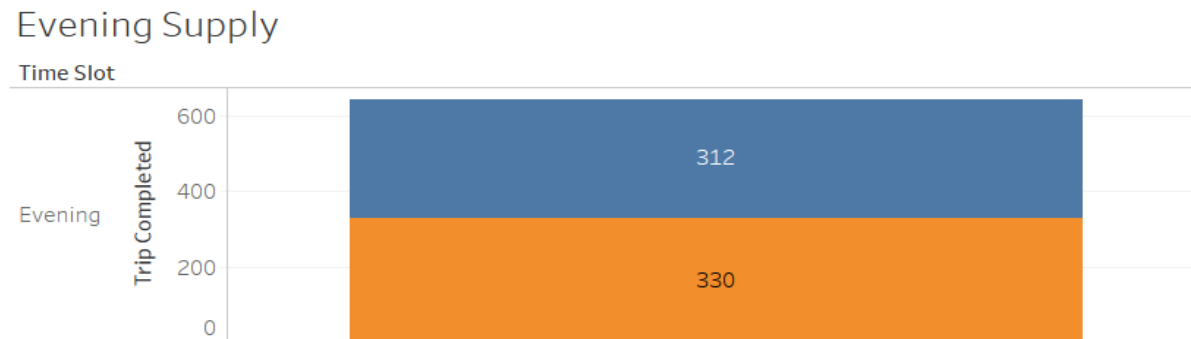
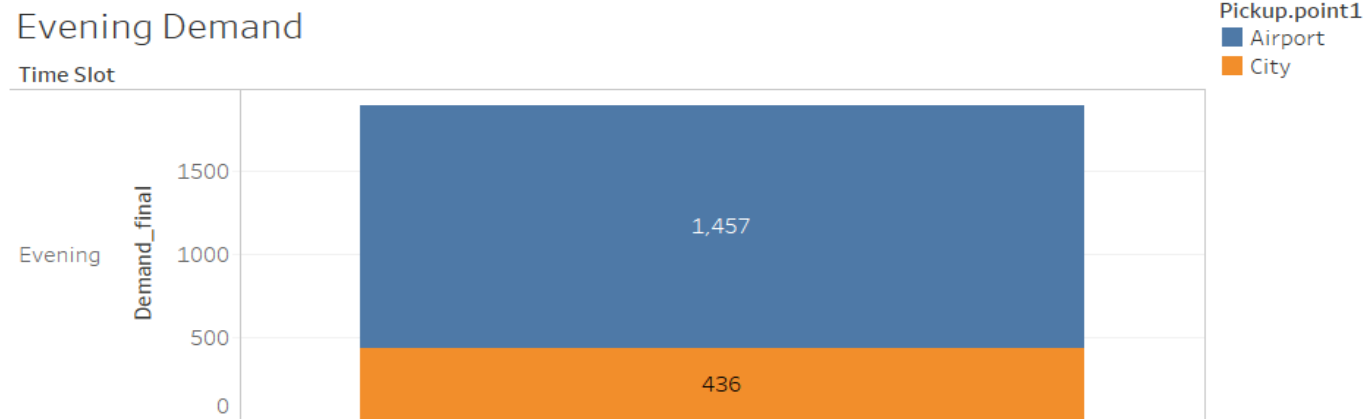


### Early Morning Gap



- Demand in city =1335
- Supply in City = 373
- Gap in City=962

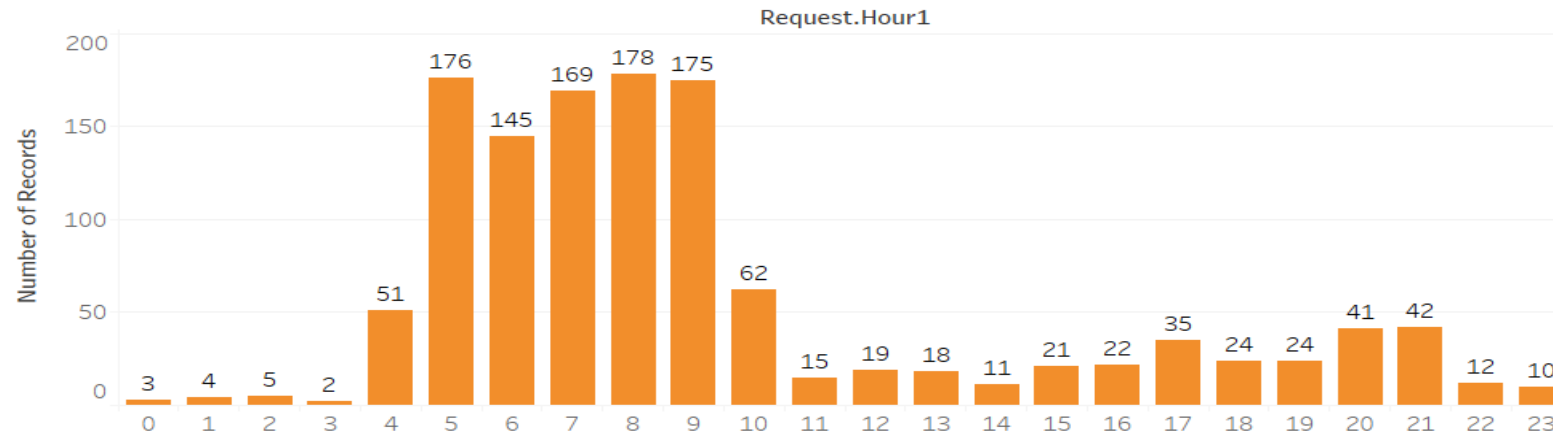
## Demand-Supply Gap In Evening



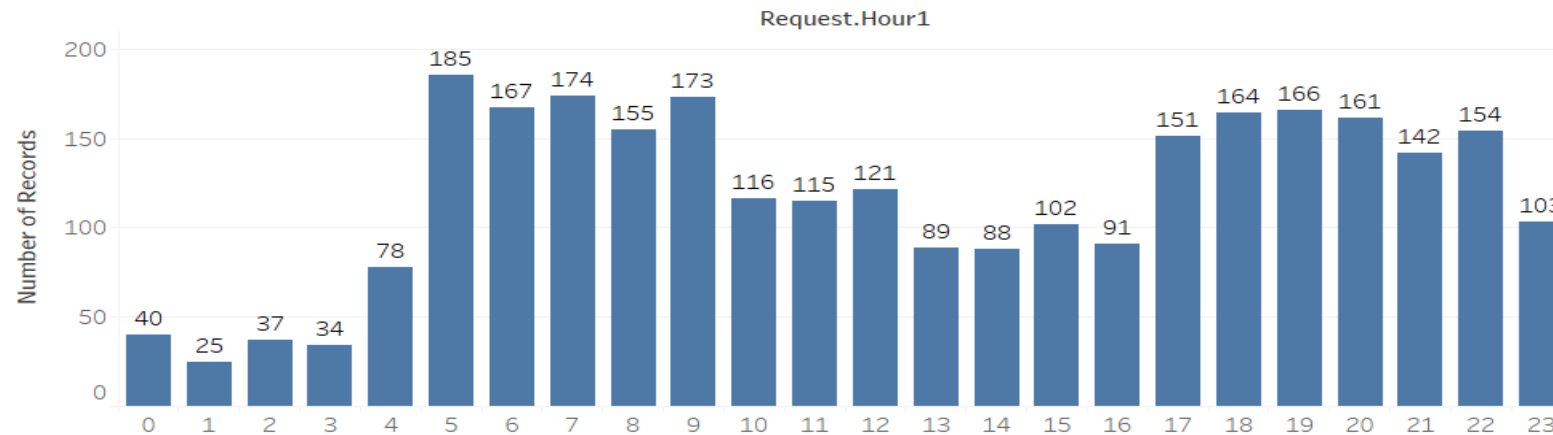
- Demand At Airport =1457
- Supply At Airport = 312
- Gap At Airport = 1145

## Reason For Cancellations

cancelled



Trips Completed

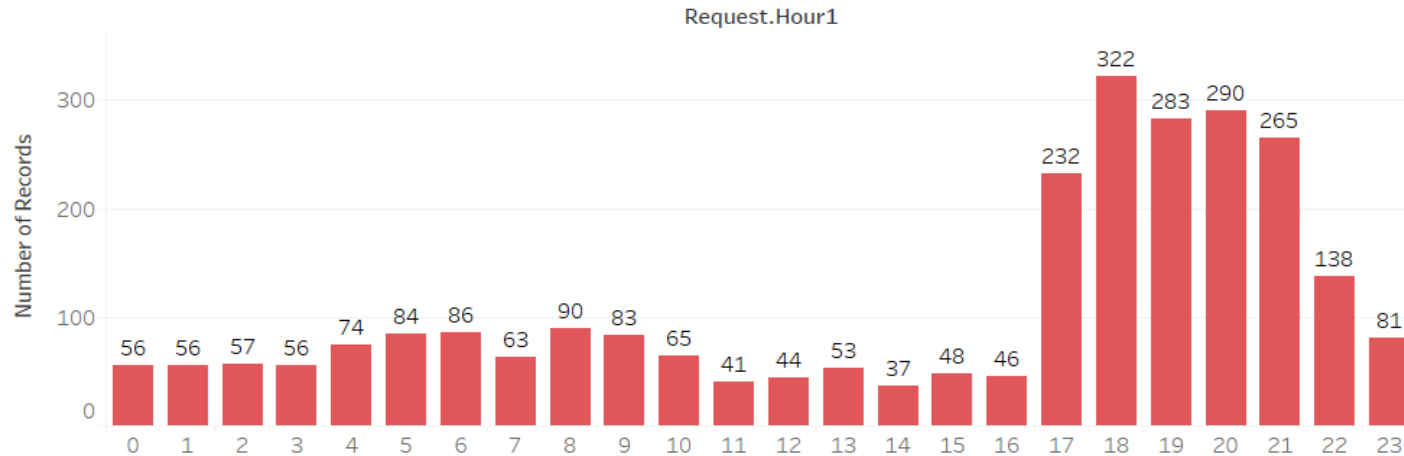


Possible Reason for Cancellations in Early Morning(4AM-8AM):

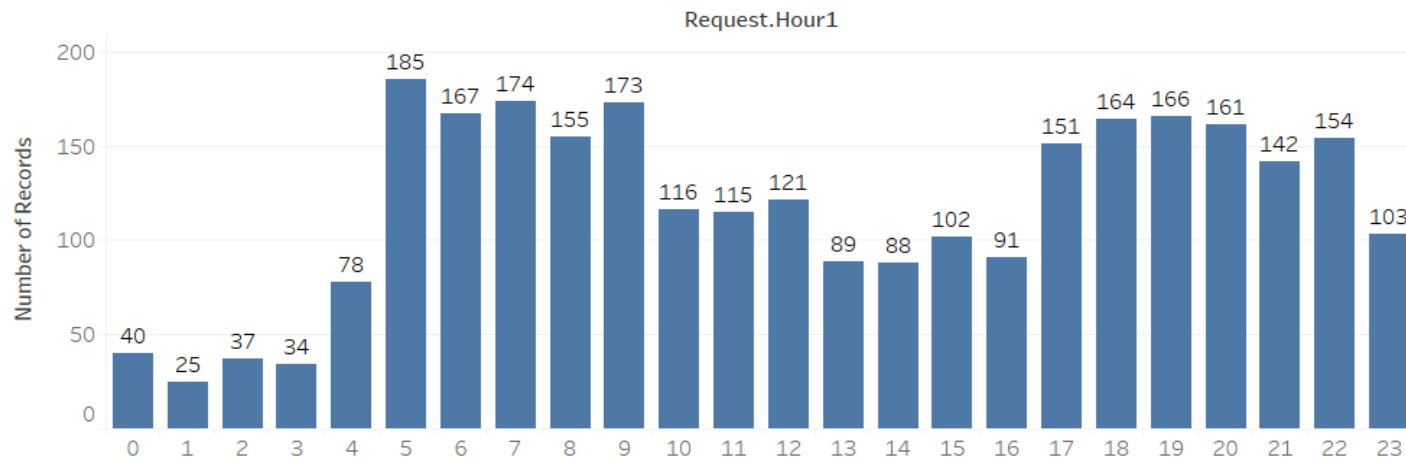
- Flights leaving the airport are more compared to the less incoming flights.
- The driver who reaches the airport during this time either has to spend ideal time to drop a customer back to city or return empty seated which will result in loss for drivers.
- So most of the drivers are cancelling the requests which results in the huge Demand-supply gap.

## Reason for No cabs Available

No Cabs Available



Trips Completed



Possible Reason for No Cabs Available status in Evening(4PM to 8PM):

- Incoming flights are more and outgoing flights are less because of this the cabs coming to the airport are very less.
- More incoming flights during Evening results in more passengers demand for cabs but there are no sufficient cabs to meet the demand which results in huge Demand-Supply gap.

## Recommendations

- Employ more number of drivers to meet the demand as we have seen that supply is very less.
- Work shifts- Hire drivers for 8 hour workshifts and rotate the shifts at regular intervals.
- Inform drivers regarding arrivals and departures of flights in-advance.
- Allow passengers to pre-book taxis for airports and if it is in the timeslot where there are no other flights then increase the cost of the trip not too high but in such a way that both passengers and cab drivers are benefitted.
- Educate the drivers and give notifications regarding demand during timeslots.
- Announce some points for the drivers who makes more trips during Early Morning from City to Airport and during Evening from Airport to city and give incentives as per the points earned.