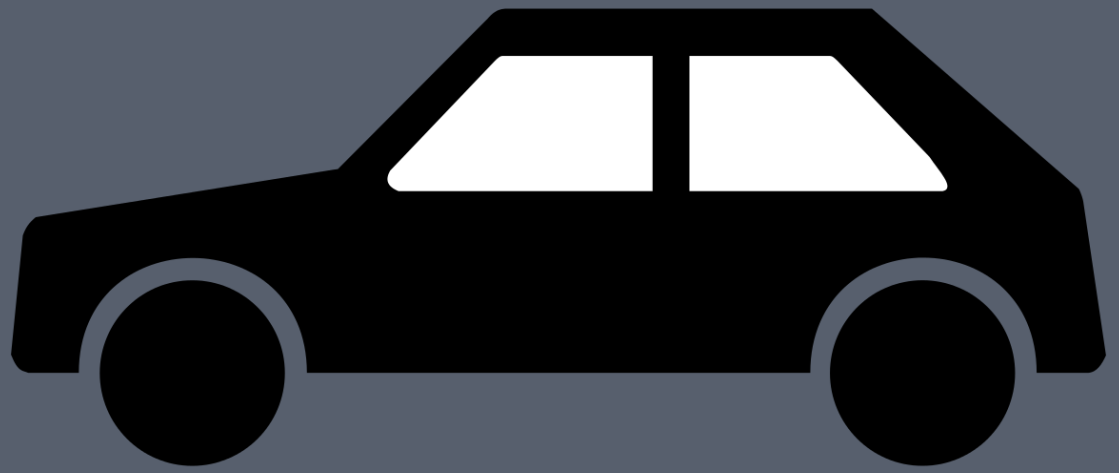


Uber Case Study **Assignment**

Vinutha Nayak

Uber Case Study : Demand Supply Analysis

Abstract:

Uber explored “Demand” and “Supply” pattern across days of week to find out time of day where significant gap exists , so as to improve the success ratio of requests.

The study was conducted on historic data recorded across 4 day in the month of July, ie from :

11/7/2016 to 15/7/2016 for specific drivers for routes From City to Airport and vice versa.

Study aims to find following information from the analysis :

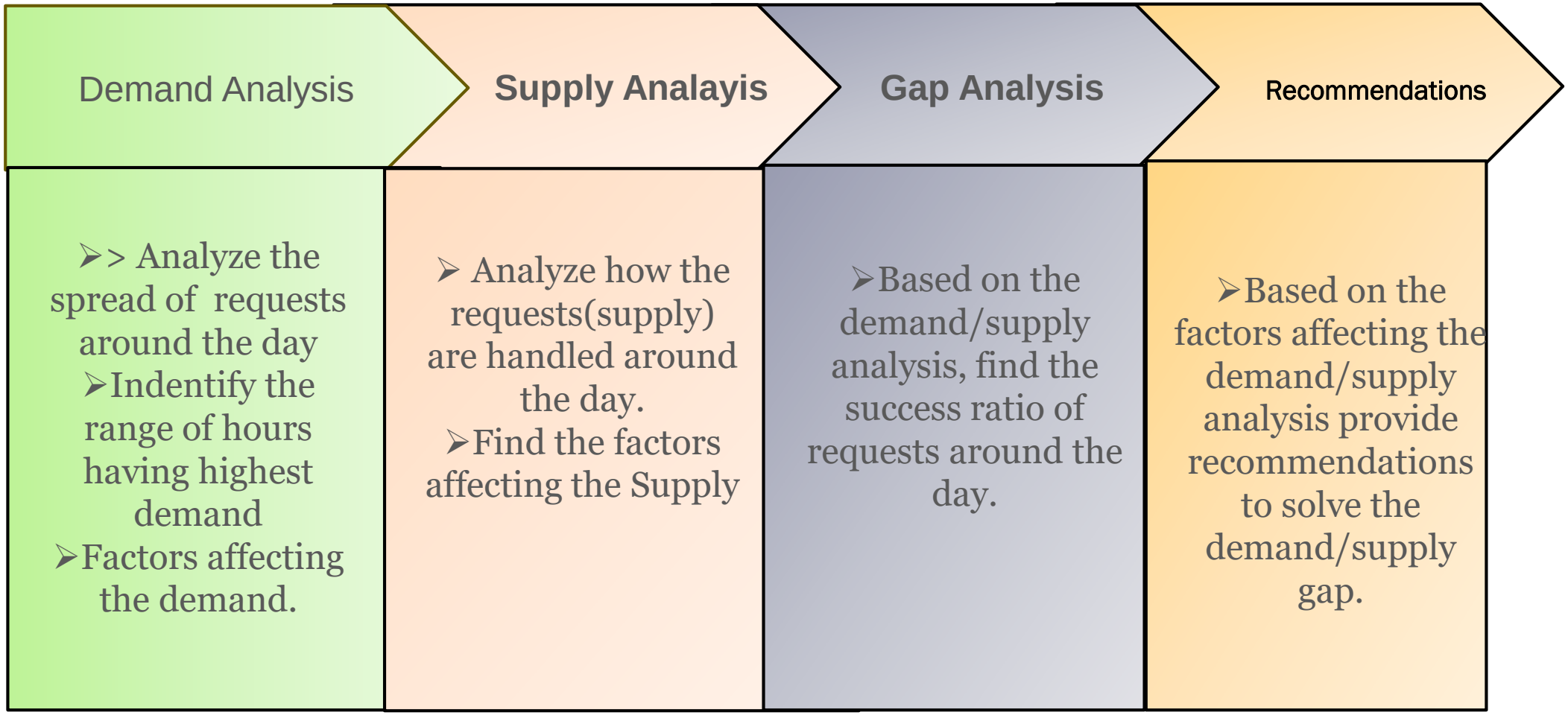
- Time slots where the maximum cancellation happens.
- Routes where success ratio of requests is low.
- Basically analyse routes/timeslots where demand-supply gap is wide.

Analysis :-

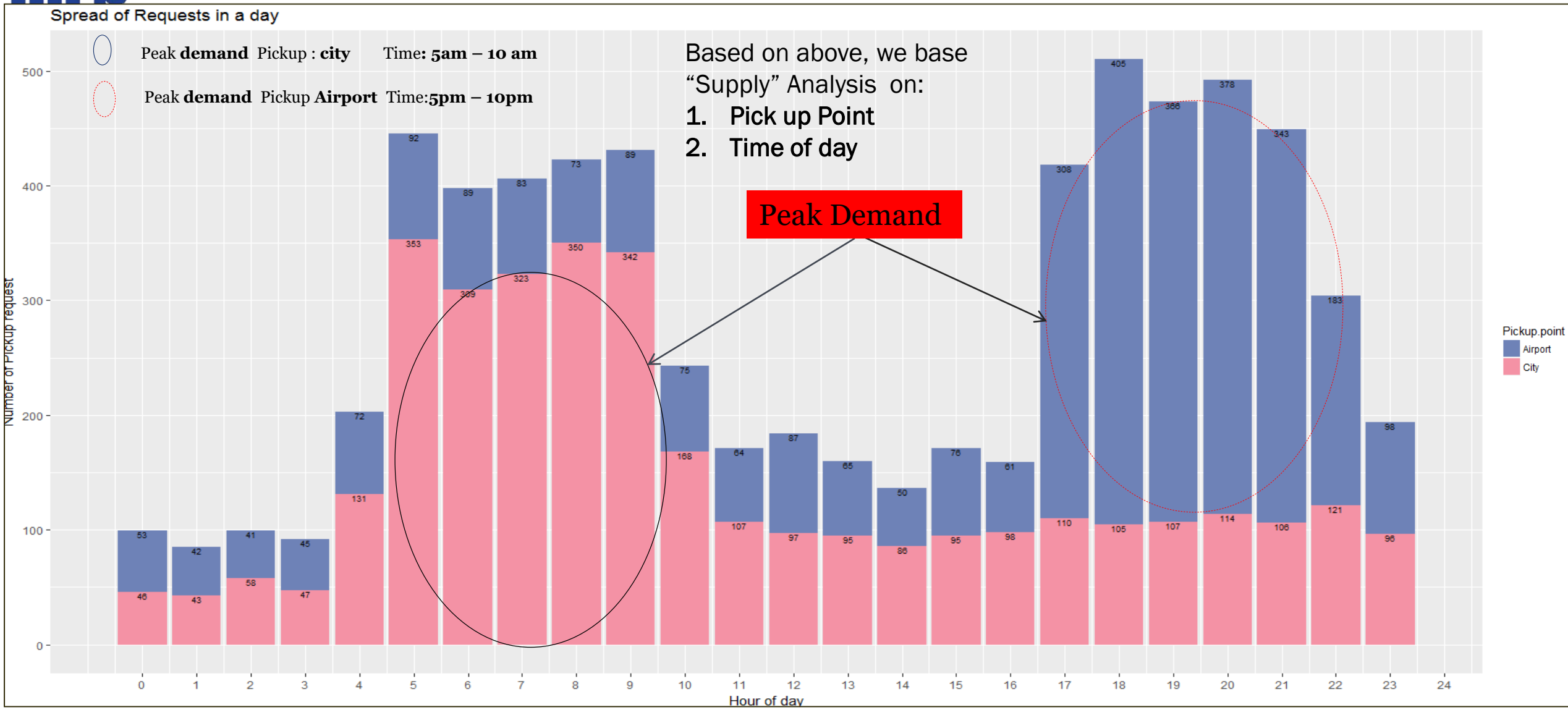
Based on data analysis, Routes and timeslots in a day affect the demand supply gap.

- From Pick up City : 5am-10am timeslot is severly hit with success rate as low as around 29%
- From Pick up Airport : 5pm-10pm lists the lowest success percentage less than 22%.

Analysis Strategy

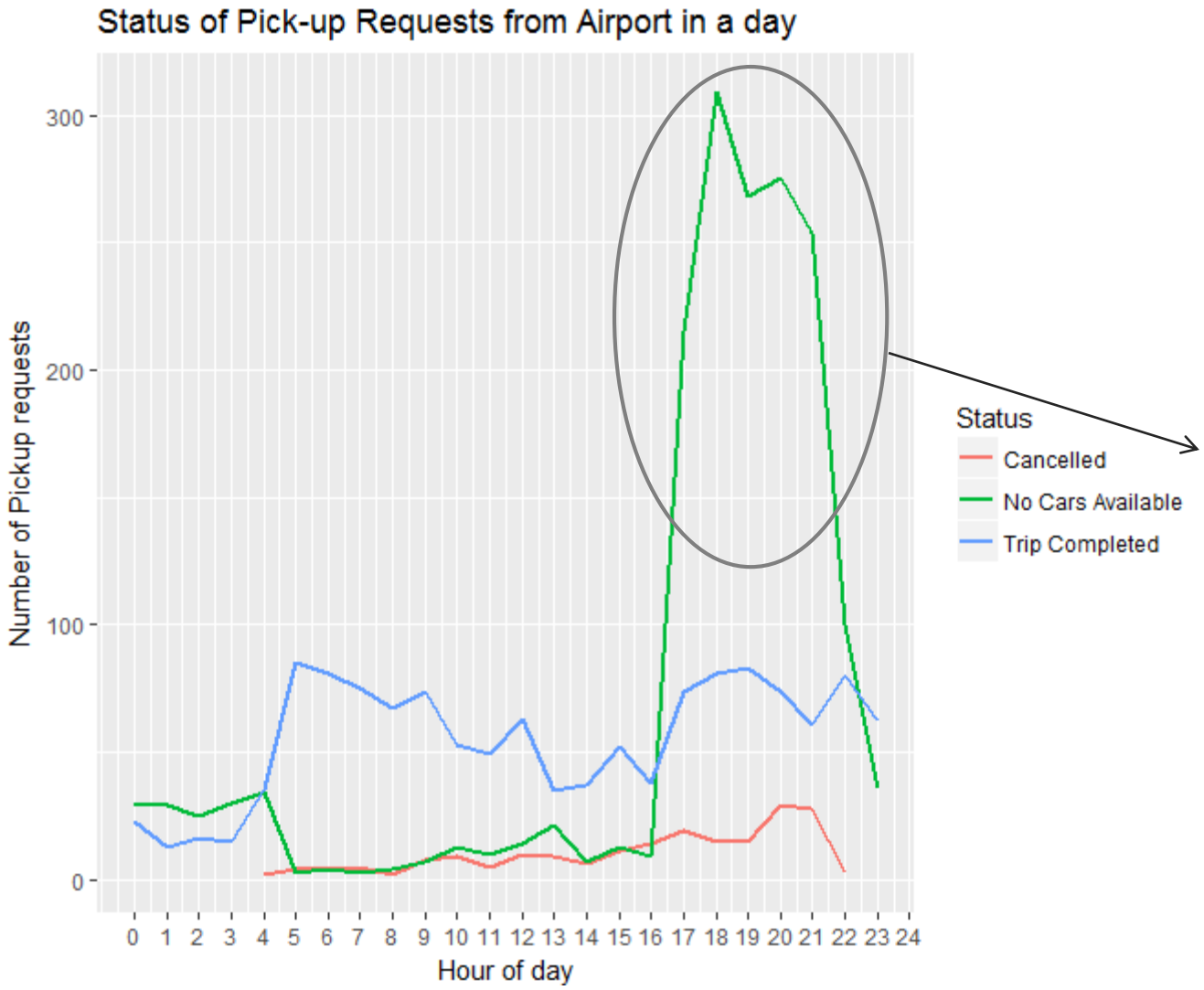


Demand Analysis



Supply Analysis

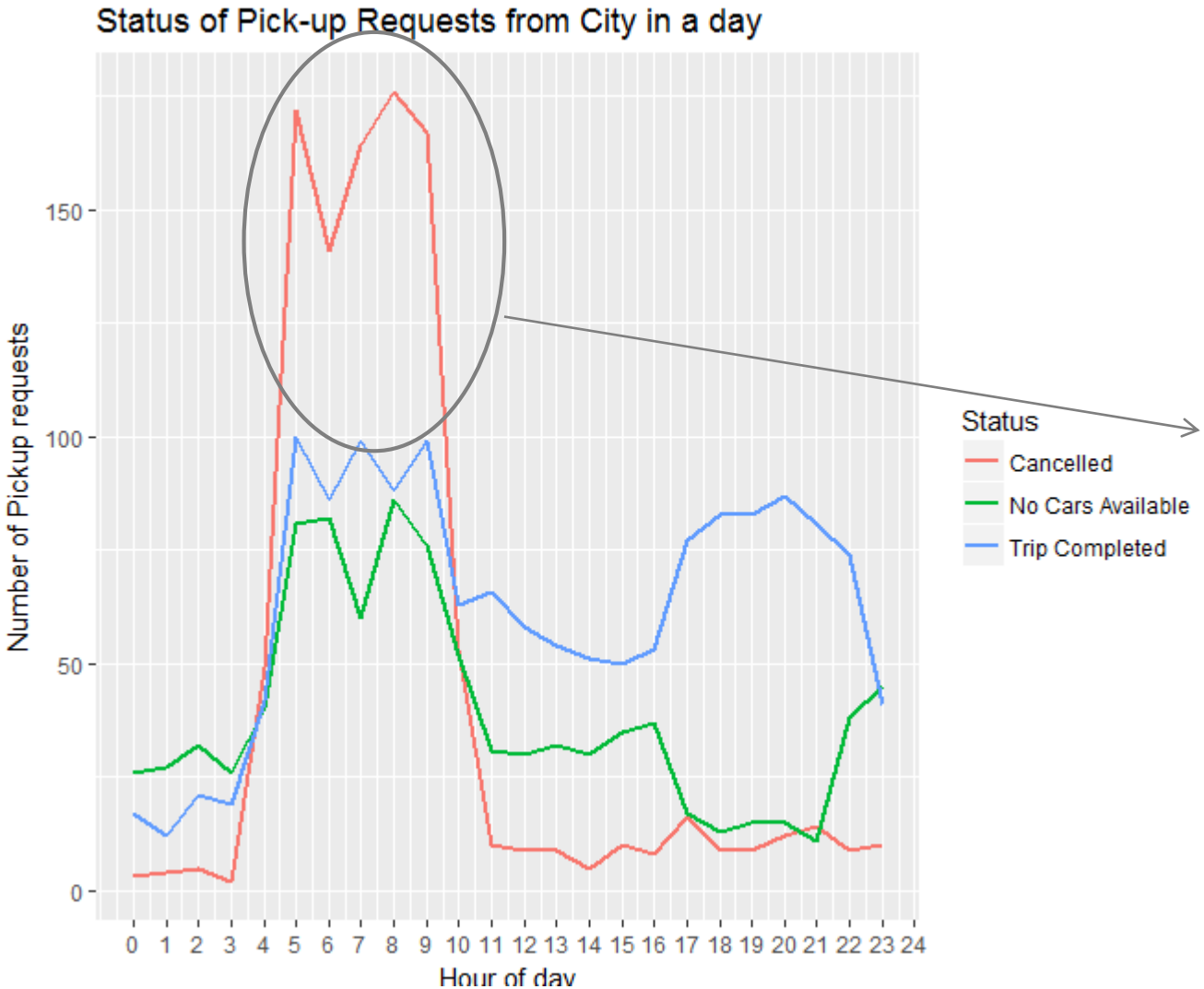
Pick up requests from Airport



- Depicts how different requests are handled
- Severe supply crunch from 5pm to 10pm (exactly when demand is at peak !)
- Cancellations are not too high, and Trip completed seems uniform.
- **Clear Demand – supply gap, caused by scarcity of cars !**
- During night around 10 to 4, Although cancellation are very minimum, number of No cars is more than the trips, so there is slight demand supply gap there as well.

Supply Analysis

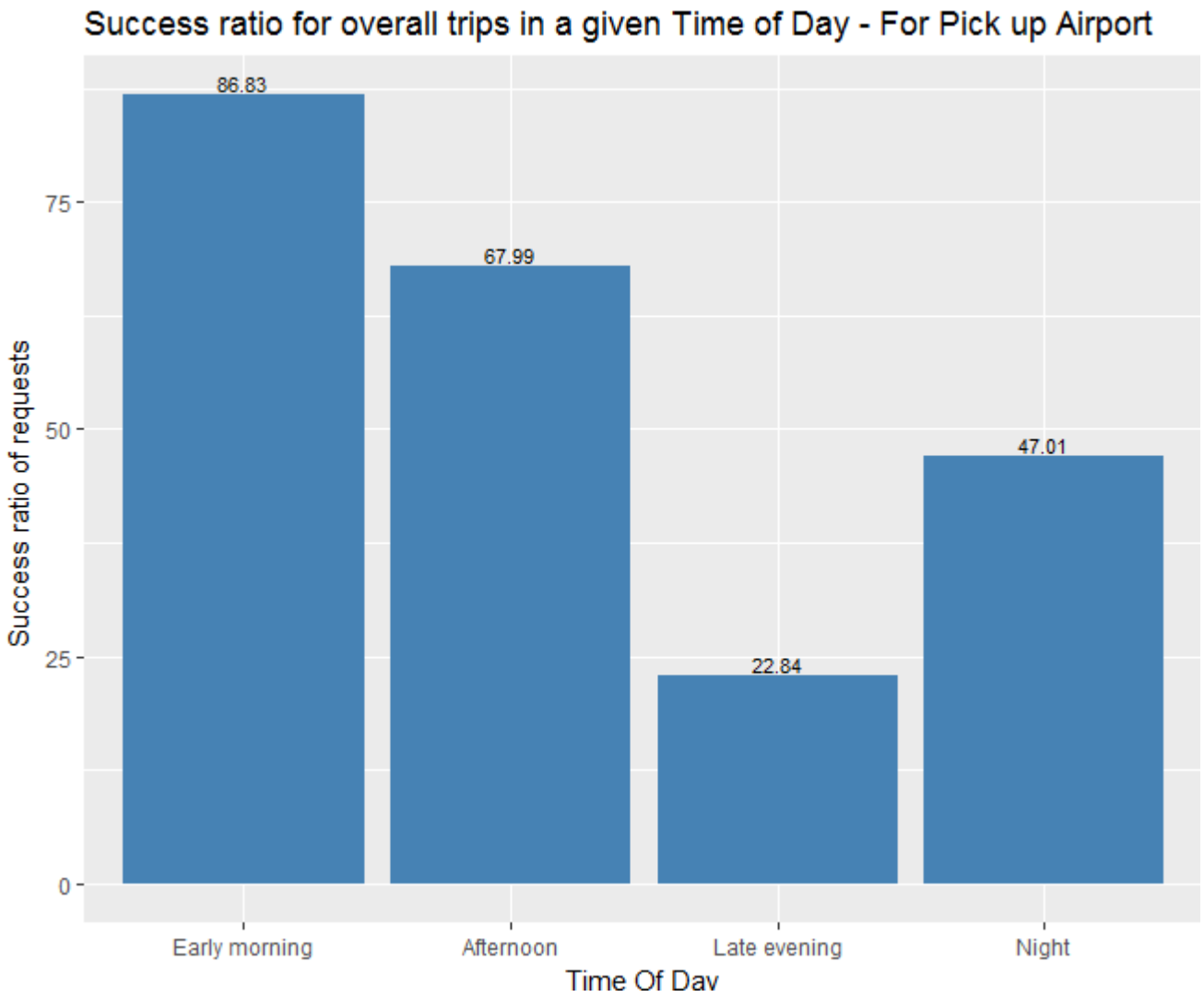
Pick up requests from City



- Heavy cancellations from 5am to 10am (exactly when demand is at peak !)
- Increase in Number of Trips being completed due to increased demand.
- **Clear Demand – supply gap, caused by cancellations !**
- During night around 10 to 4, Although cancellation are very minimum, number of No cars is more than the trips, so there is slight demand supply gap there as well.

Gap Analysis

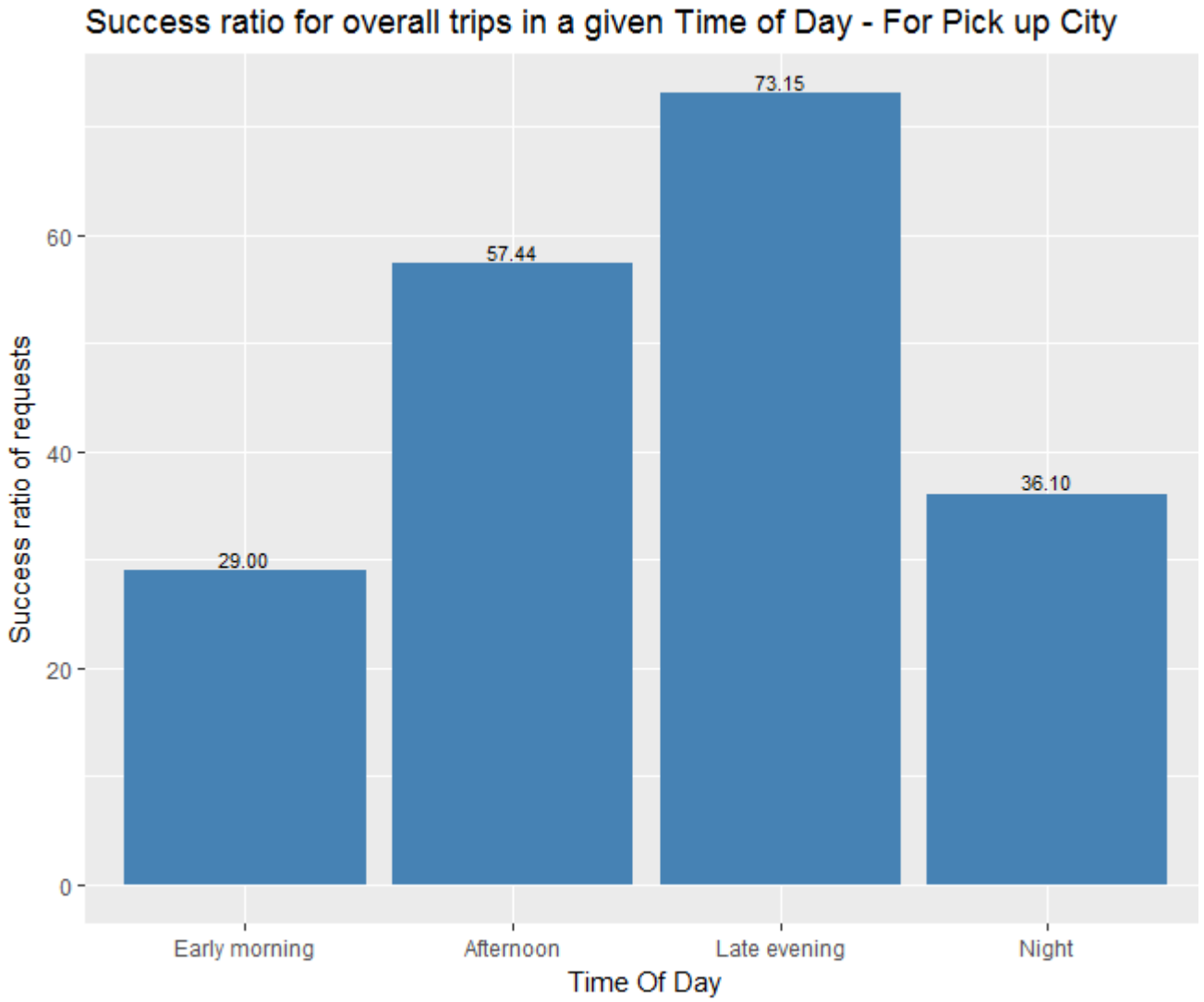
Pick up requests from Airport



- From Airport , the deficiency in number of cars is a major bottleneck
- Success ratio of requests is as low as 22.84 around Late evening (5pm – 10 pm)

Gap Analysis

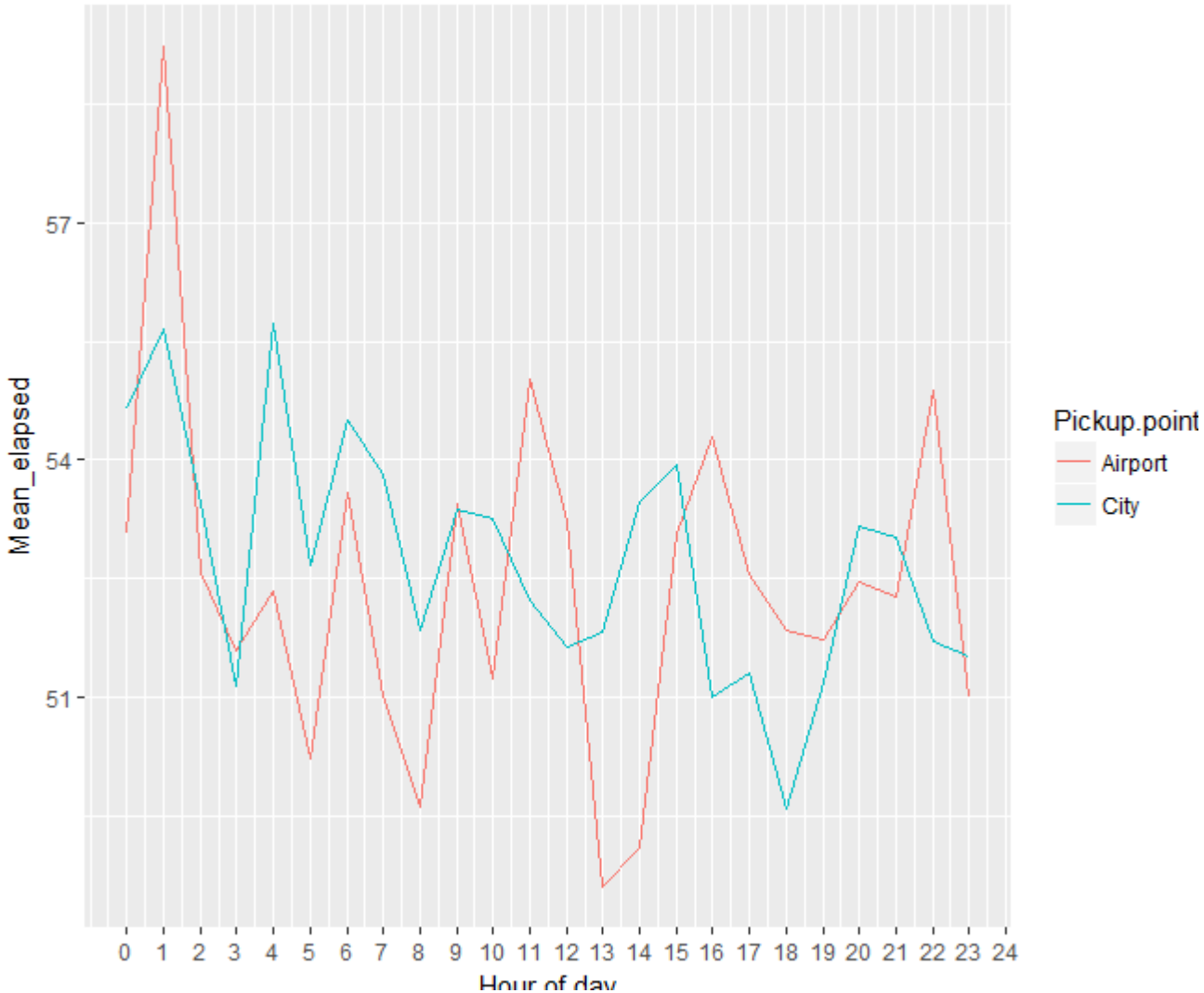
Pick up requests from City



- From City, the scarcity in number of cars is a major bottleneck
- Success ratio of requests is as low as 29.00% around Late evening (5am – 10 am)

Gap Analysis

Mean of Elapsed time of requests across different hours in a day.

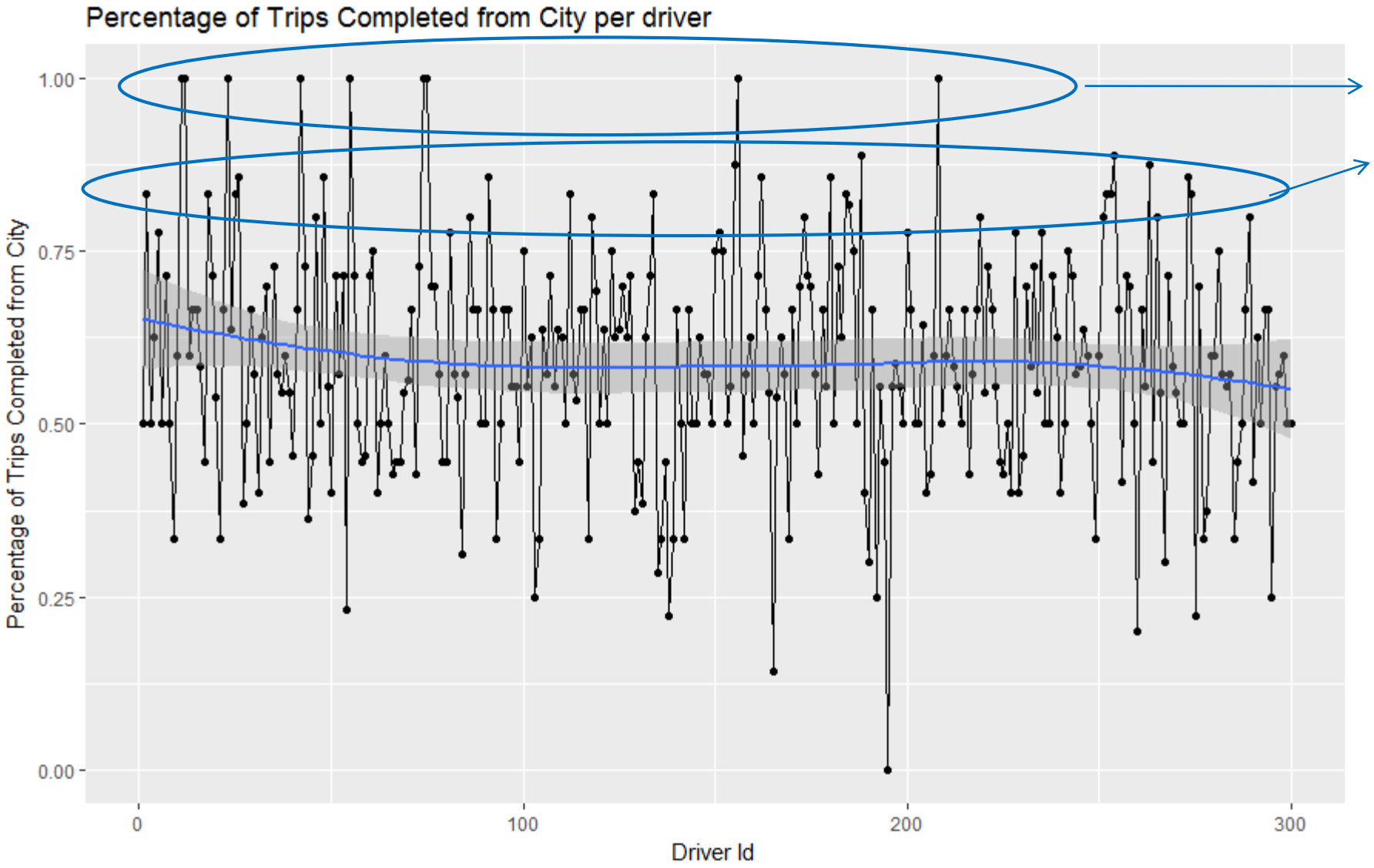


- The elapsed time increases from 10 pm to 4 am
- During 5 am to 10 am , the elapsed time is high on an average from city , which can be probable reason for cancellation

Gap Analysis

Success ratio of each driver from City

(Total number of requests completed/Total incoming requests)



- Only around 3% of drivers have 100% success ratio
- There is around 16% drivers who range from 75% to 100% success rate
- Success share of 81% of drivers rests below 75%

Recommendation

- Provide incentives for Airport pickup’s to minimize any cancellations during peak hour.
- Identify drivers with 100% success ratio and provide bonus to motivate other drivers .
- Varying the amount of penalty to drivers with high penalty if cancelled during peak hour.
- Promote car pooling (Probably with increased fare during peak hours), which would compensate for high demand.