Demand Supply Case Study

Uber

Objective

Business Objective

o   Identify the reasons behind the drivers cancellation and non-availability of cars during trips

between airport and city
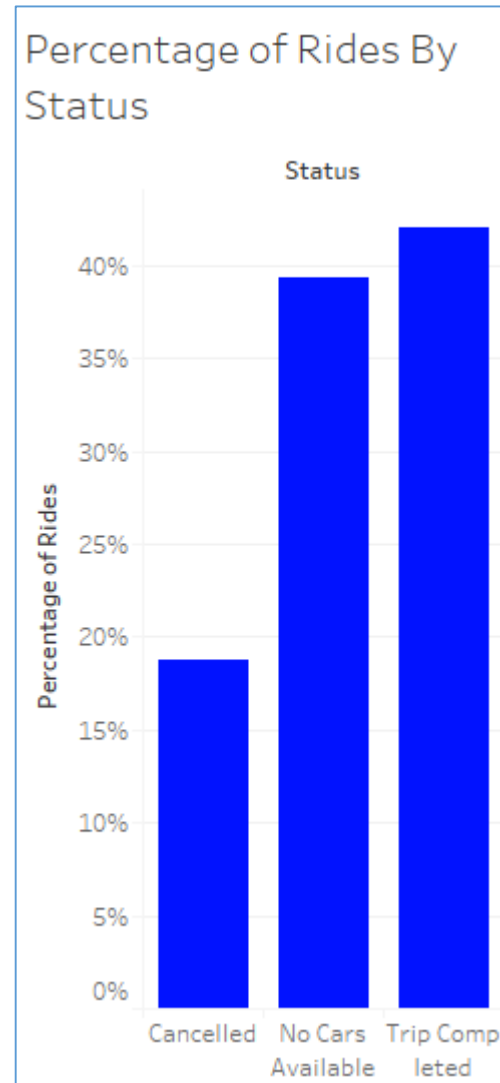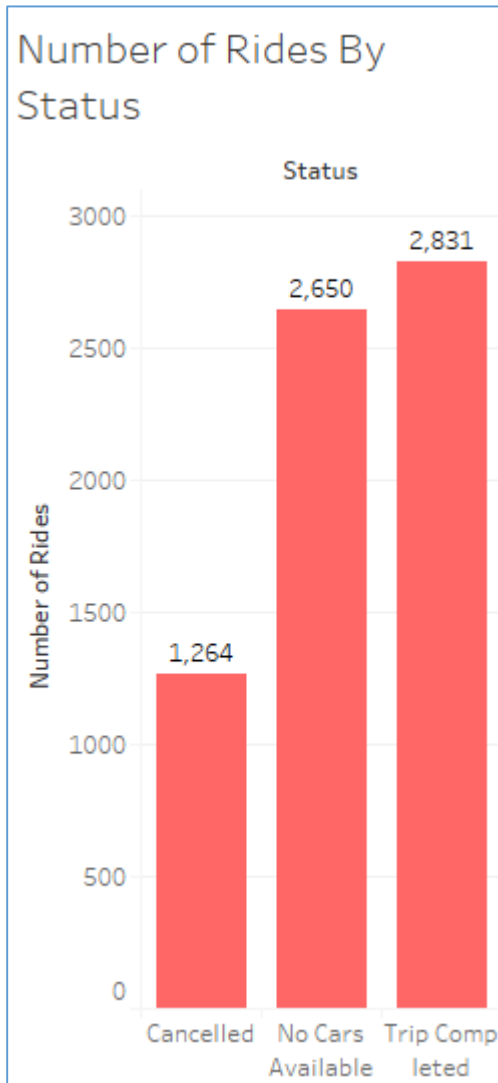
Data - 6,745 Trips Requests & Their Status

Data

o 300 Drivers and 6,745 trips request between Airport and City

o Date Range: Trip request made between 11-07-2016 to 15-07-2016

o 3 Unique Status of the trips: Trip Completed, Cancelled & No Cars Available

Approach

The analysis is divided into 5 steps:

o [Number of Cancellation & No Cars Availability](#)

o [Number of Rides by Hour of the Day](#)

o [Number of Requests by Pick-up Point (City or Airport)](#)

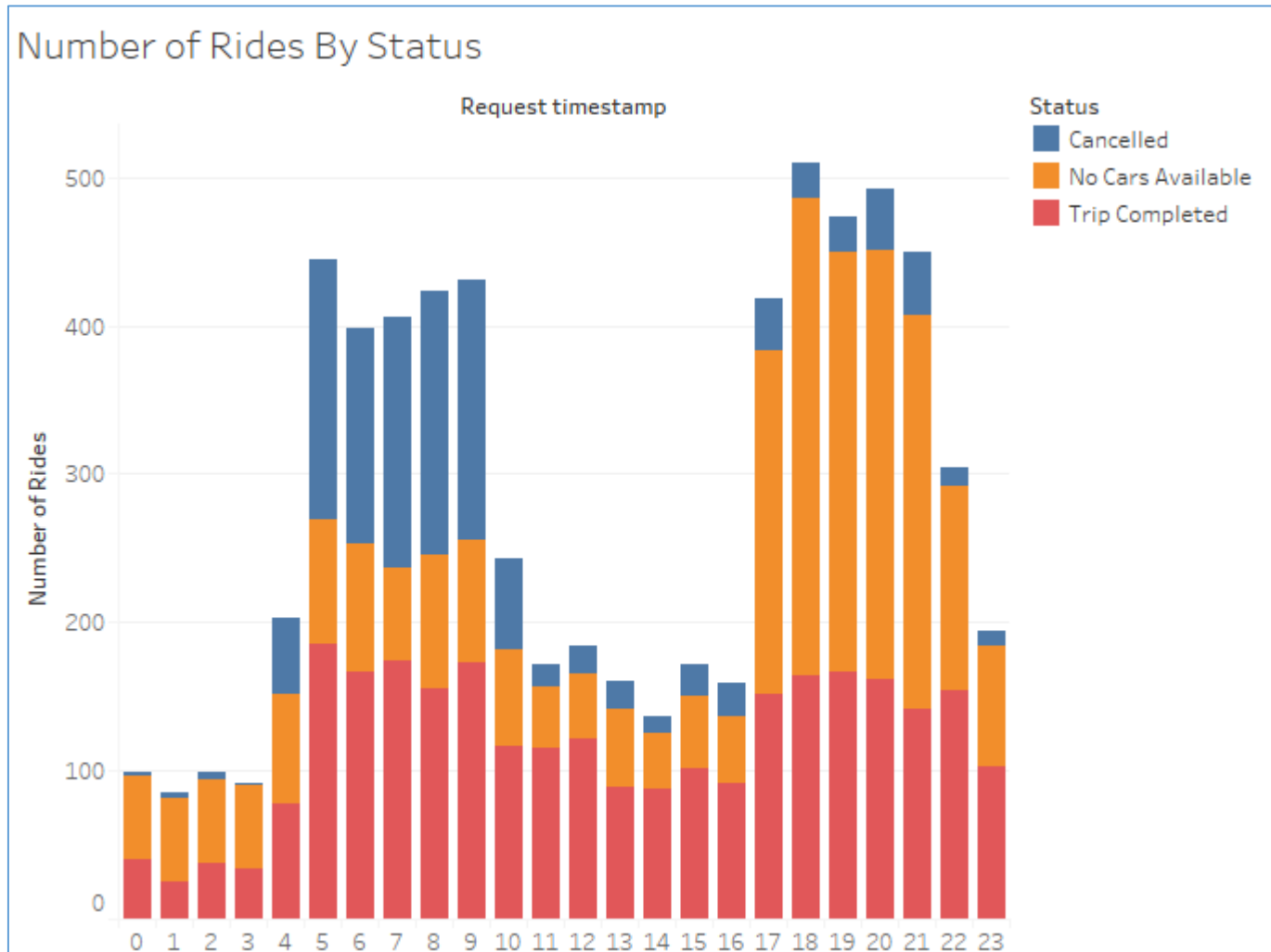o [Pick up Point: Airport vs. City (Hour of the Day Status)](#)

Number of Cancellation & No Cars Availability

Number of Rides By Status

Percentage of Rides By Status

Observations:

1. **58%** of the time the trip is either cancelled or there is a shortage of supply. This means Uber is **losing out of revenue on 58% of the times**

2. Out of these 58%, **39% of the times** there is shortage of cabs. This means there is a huge lag in supply vs. demand
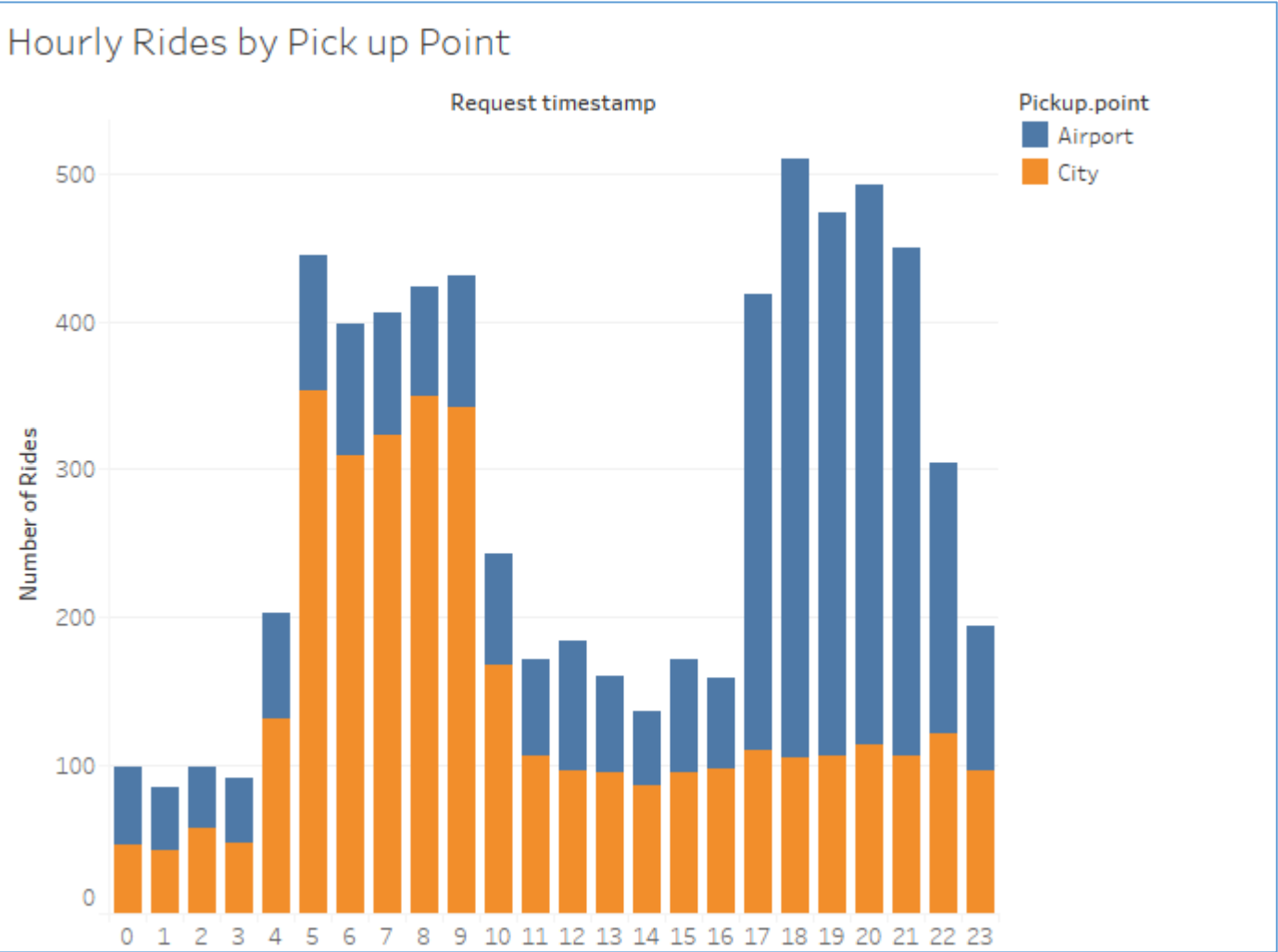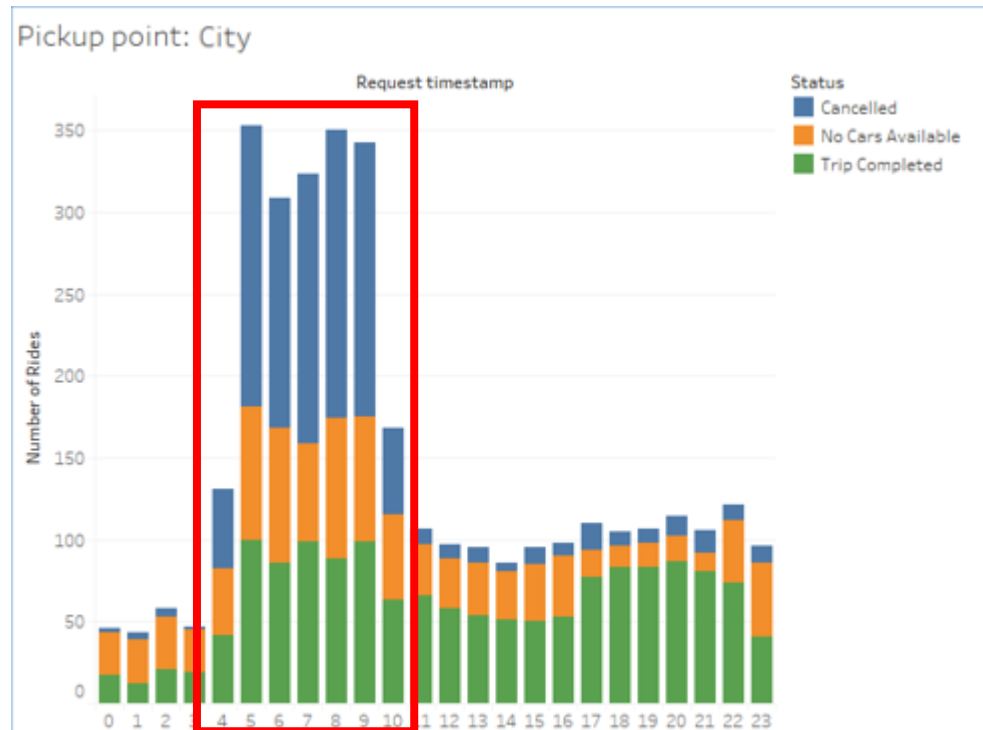
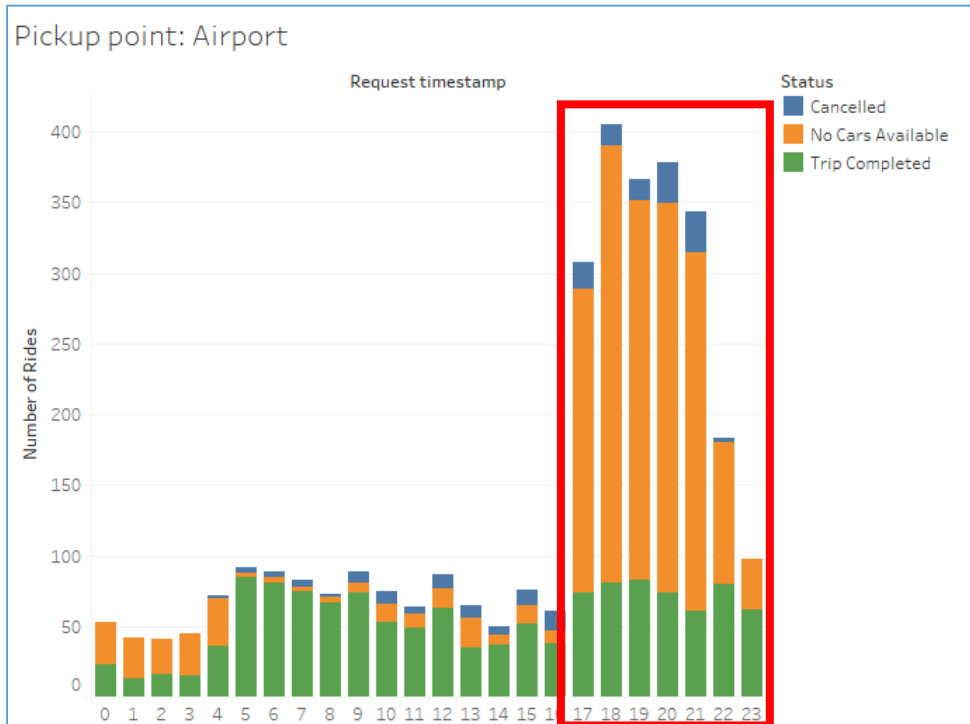Number of Rides By Status

Observations

1. There is always a demand supply gap for trips to and from airport throughout the day. The demand supply gap is highest in between 5 PM to 10 PM.

2. Number of cancellations increases between 4 AM to 10 AM. Between 5 AM to 9 AM the number of cancellations are the highest

Number of Requests by Pick-up Point (City or Airport)

Hourly Rides by Pick up Point

The number of request from city is higher in morning hours and number of request from Airport is higher in evening and late night hours

Pick up Point: Airport vs. City (Hour of the Day Status)

Observations:
At the Airport, there is an increase in non-availability of cars during evening & late night hours and at the city there is increase in the cancellations of trips in the early morning hours.

Back

Possible Reasons & Recommendations

Possible Reasons:

The request pattern to and from Airport & City clearly states that

- There is a lot of incoming flights in the city at the evening time and outgoing flights in the morning hours. So, the request for cabs is high in the morning from city and in evening from the airport

- This results in low demand of rides from Airport in the morning resulting in high idle time at the airport for the drivers coming from city. This results into cancellations from trip to city to airport.

- Since the days ends for most of the driver at the 6 PM, there is a lack of supply for the demand at the airport for the incoming flights in the evening which results in non-availability of cabs.

Recommendations:

- Offering incentives like 25% more per KM for trips to & from Airport

- Increasing the request of trips from Airport and nearby areas in the morning hours. This can be done by offering discounts when they book cabs to city from Airport or nearby areas in the morning hours. **This is based on assuming the fact that all customers do not opt for Uber from Airport or nearby locations.**

- Offering incentives like 25% more per KM for night trips from Airport