

UBER Supply-Demand Gap

CASE STUDY

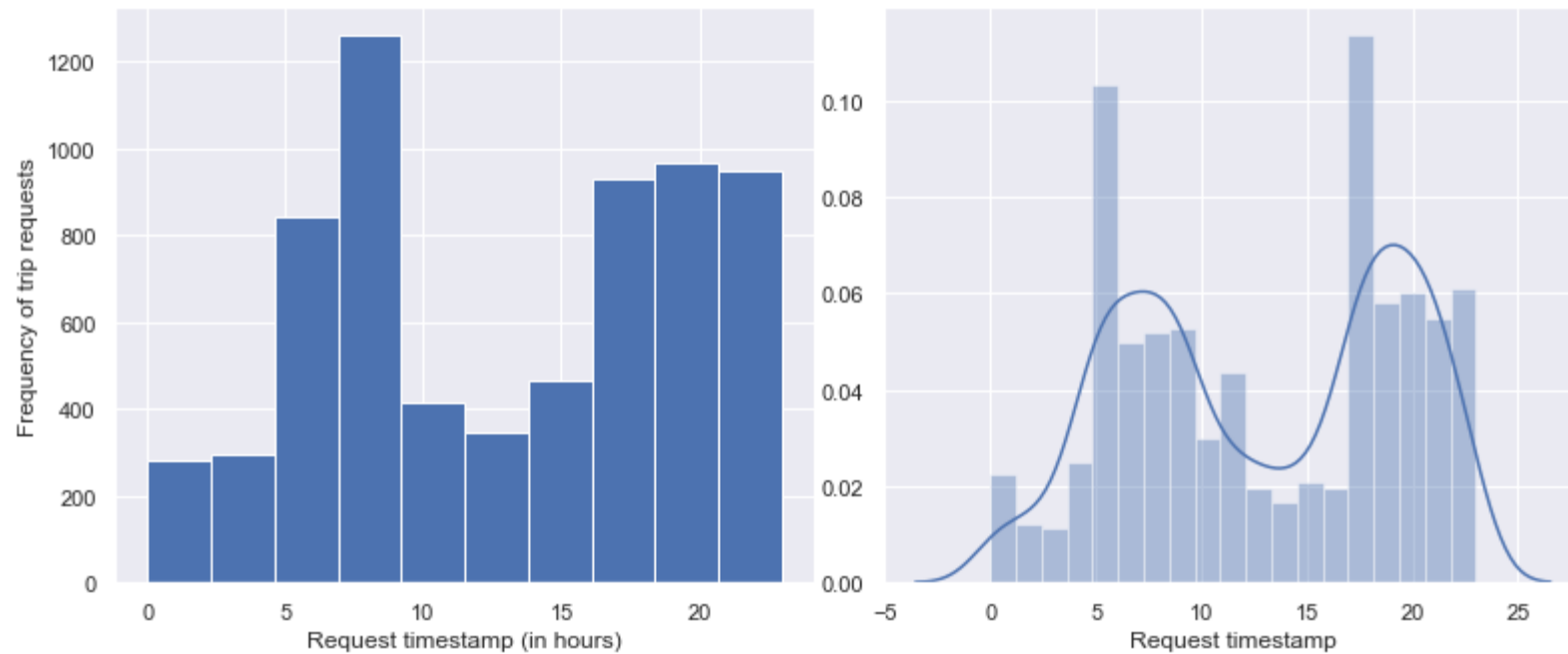
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Business Objectives:

- Understand how market health plays from demand and supply working at Airports
- Identify the root cause of the problem
- Key metrics to be considered for analysis
- Possible recommendations to sort out the problem and help business grow better

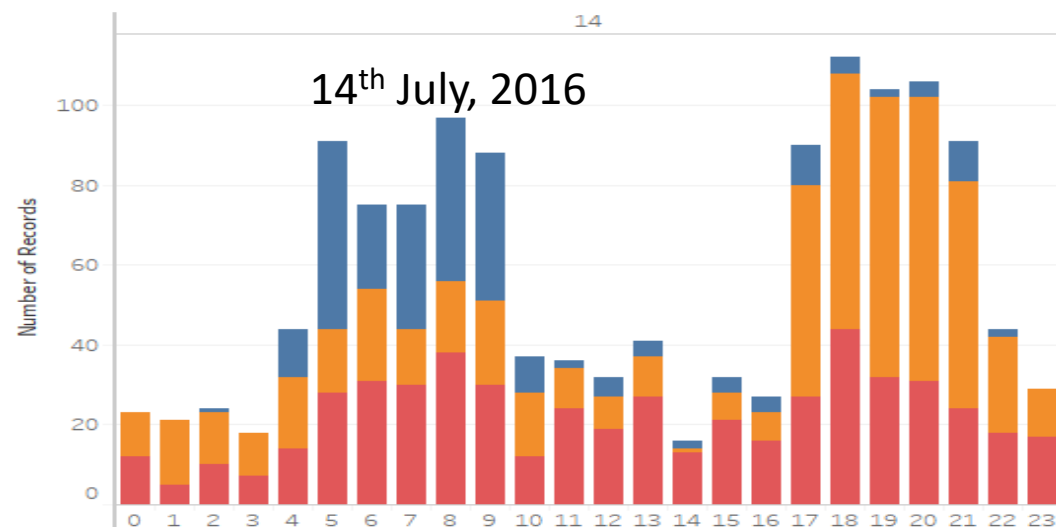
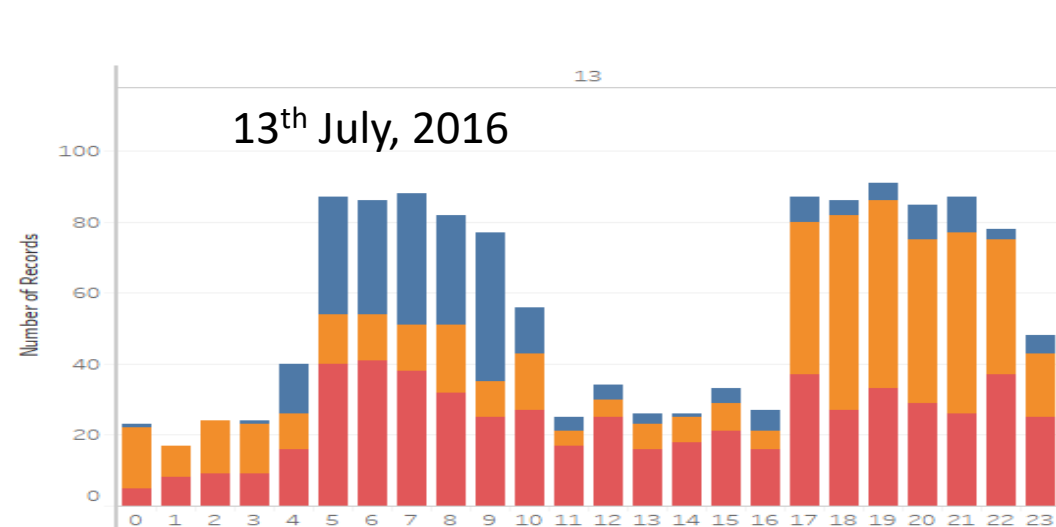
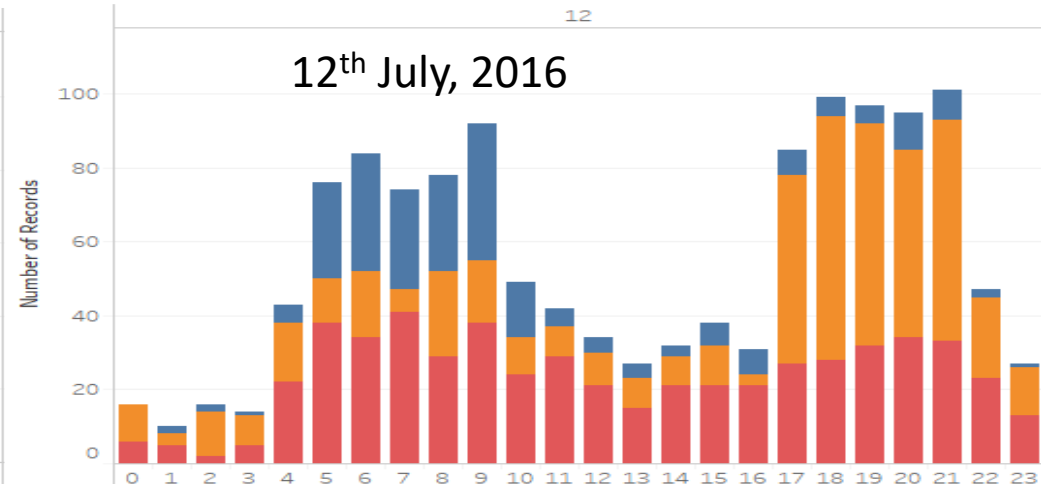
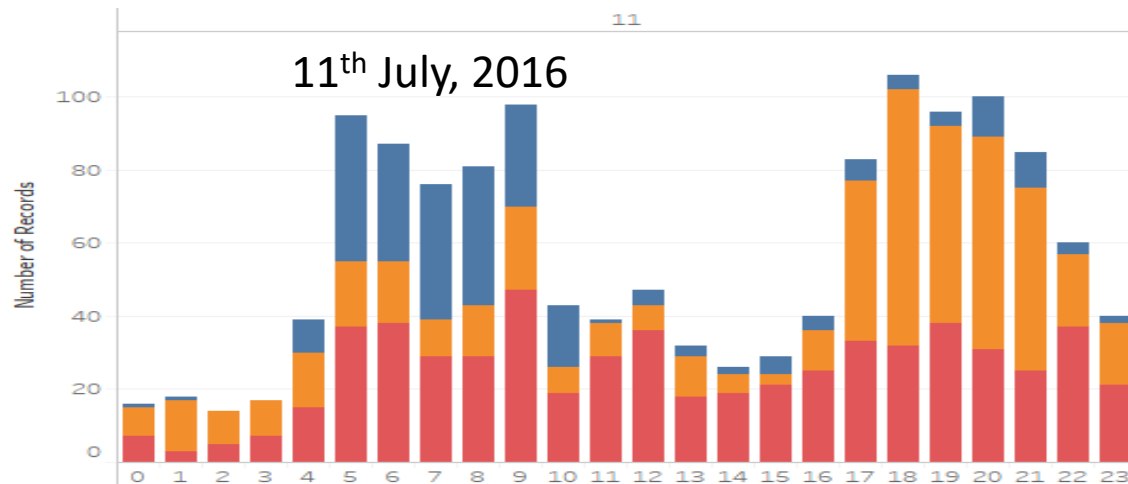
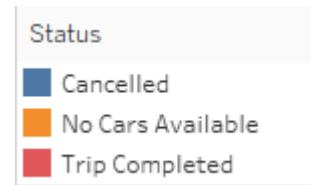
Data Insights:

- Below plot shows the Univariate analysis of the Customer requests obtained in a day(Hour wise)
- Most of the requests are obtained in the mornings and evenings.



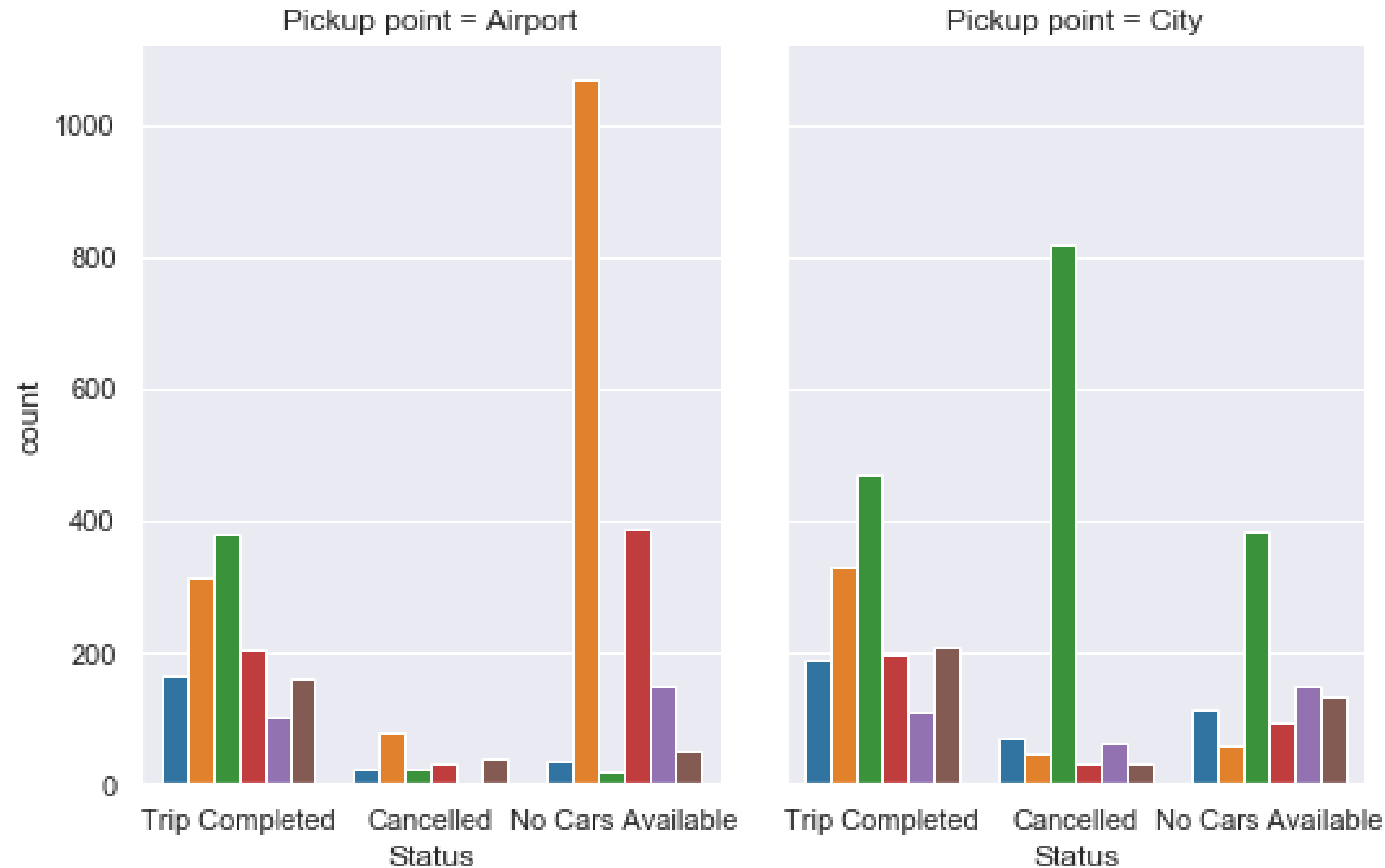
Bivariate Analysis:

Similar Pattern Observed Everyday



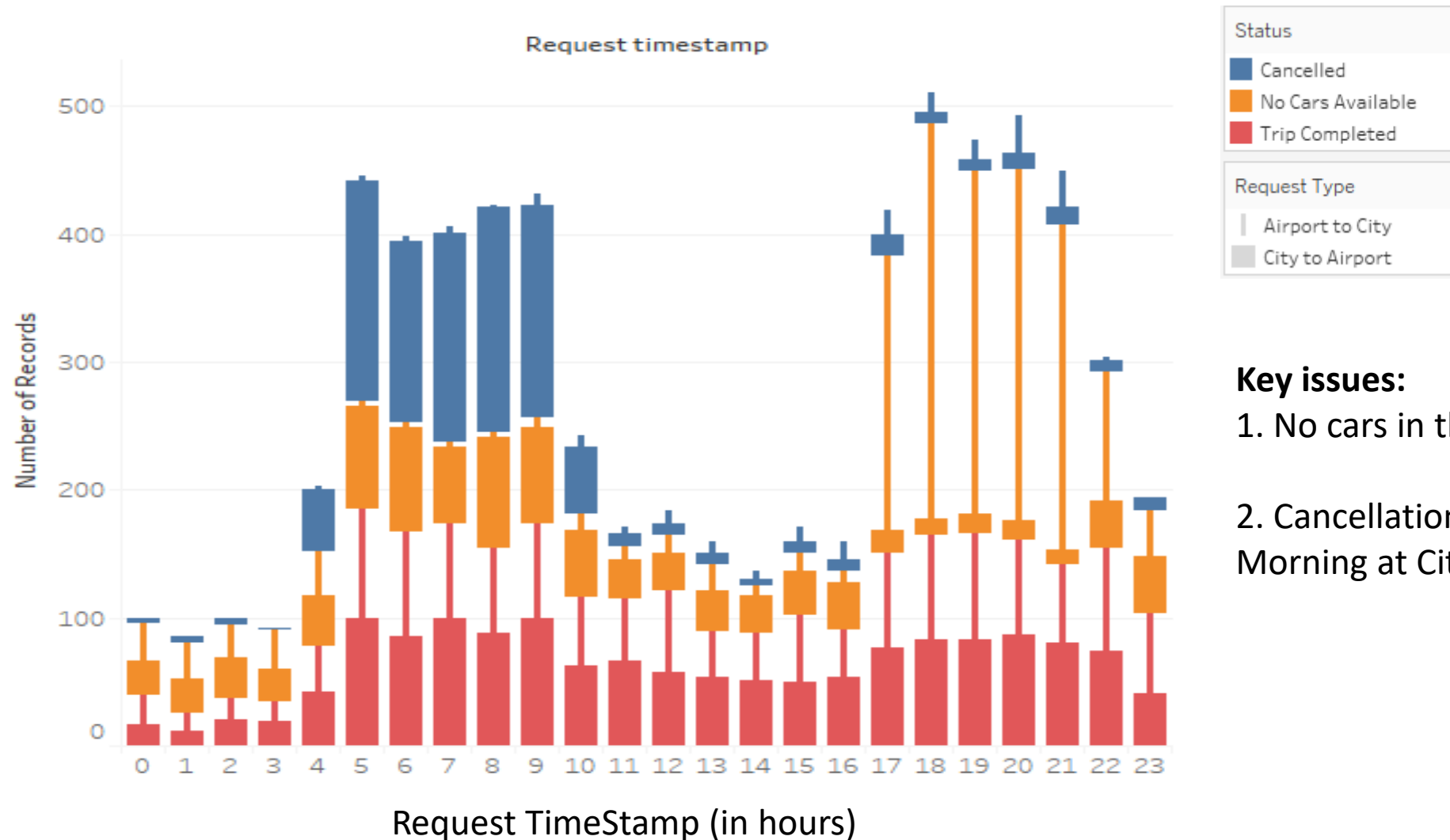
----- Frequency of Request TimeStamps ----->

Segmenting Trip Requests:



- Distribution of Trip Requests wrt Pickup point of the Trip

Stressing Issues:



Key issues:

1. No cars in the Evening at Airport.
2. Cancellation of booking in the Early Morning at City.

Quick View of the Data:



Status, Type of request and Time Slots. Color shows sum of Number of Records. Size shows sum of Number of Records. The marks are labeled by Status, Type of request and Time Slots. The view is filtered on Status, which keeps Cancelled and No Cars Available.

		Status		
		Pickup point	Airport	City
		Time Slots		
		Afternoon	252	374
		Early Morning	426	1677
		Evening	1457	436
		Late Evenings	624	323
		Late Night	253	325

Morning Rush Hours(10:00 to 12:00)

Evening(17:00 to 20:00)

Early Morning(5:00 to 9:00)

Late Evenings(21:00 to 23:00)

Late Night(00:00 to 4:00)

Afternoon(13:00 to 16:00)

		Pickup point		Supply	Demand	Gap
Status	Cancelled	No Cars Available	Trip Completed			
Time Slots						
Afternoon	72	184	370	626	256	370
Early Morning	843	406	854	2103	1249	854
Evening	124	1127	642	1893	1251	642
Late Evenings	64	484	399	947	548	399
Late Night	65	299	214	578	364	214

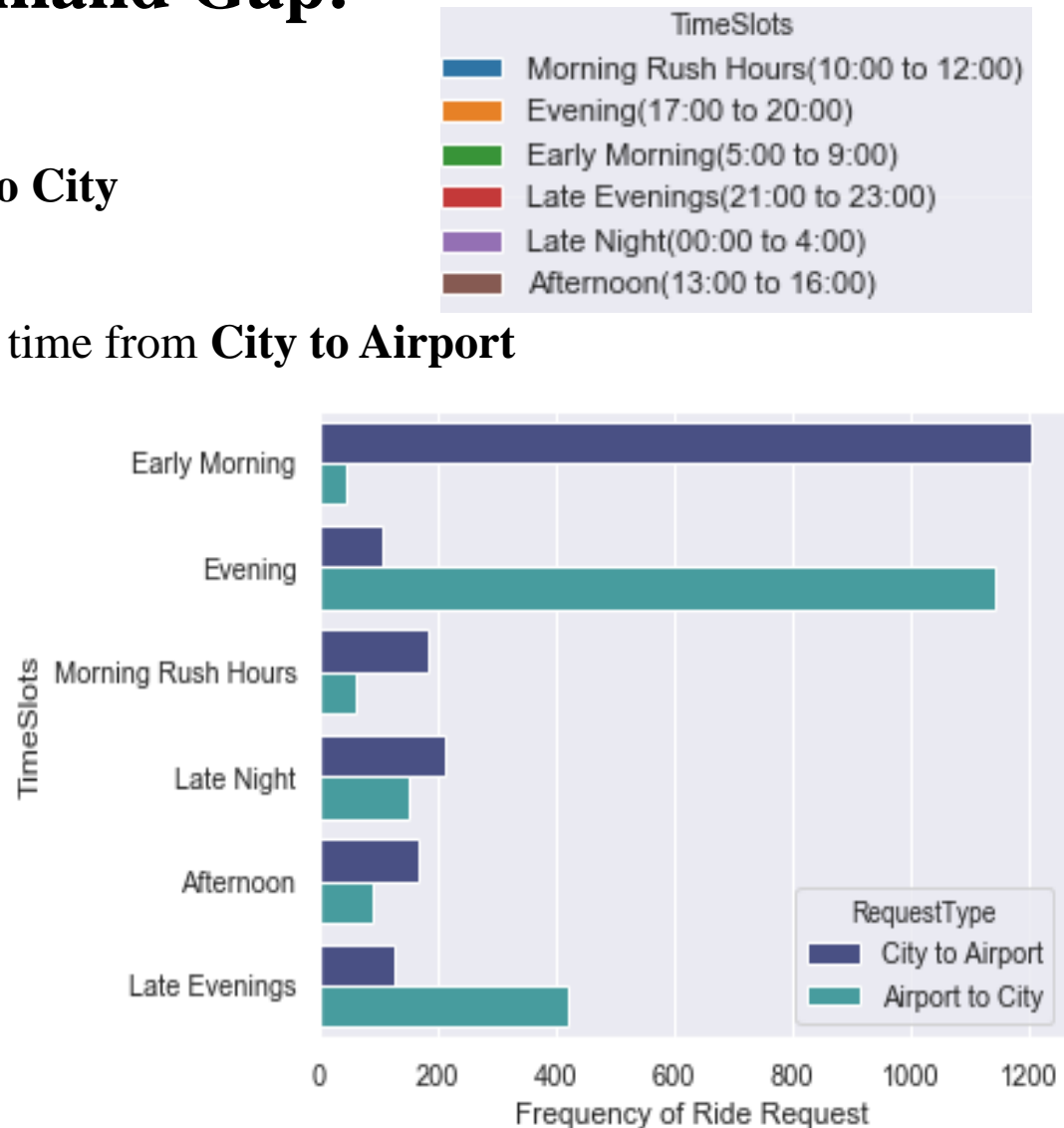
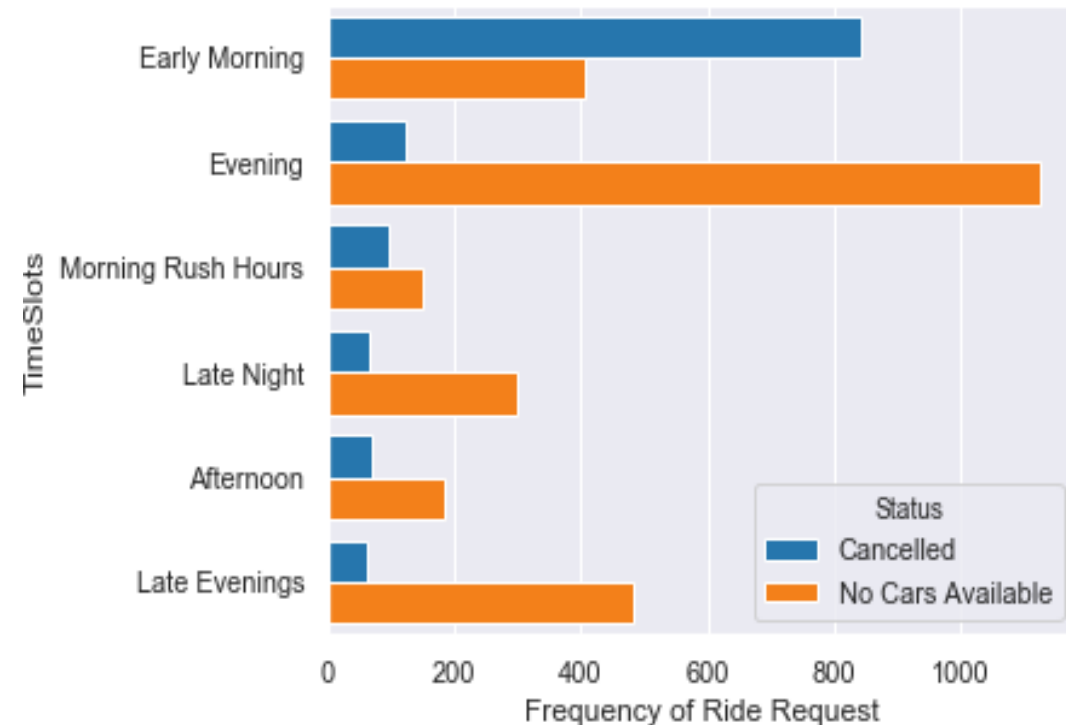
Plot to Visualize Supply – Demand Gap:

Surplus demand:

- In the evenings, **No Cars** are available from **Airport to City**

Deficit Supply:

- Most **Cancellations** are observed during early morning time from **City to Airport**



Reasons for the Gap:

➤ Cancellation of Bookings at City in the Morning:

Driver's point of view:

- The income earned by cab driver is more in the city during morning rush hours as many would book cabs for office
- Each driver wants to go to airport only once a day and cancelling the requests
- Idle waiting time is higher at the airports to get a request
- Possible resting hours for a typical cab driver

Customer's point of view:

- Fare of local transport is relatively lower
- Too much waiting time as the driver may get stuck in traffic.

➤ No cars available at Airport in Evening:

- Possible resting hours for a typical cab driver
- More inflow of cabs and lower frequency of flight arrivals

Feasible Strategy and Solutions:

- ❖ Accompanying UBER Station at the airports and within the city which can be operative during ‘No Cars available’ in the evenings
- ✓ Strategy: Pool of CABs or Motor Bikes can be maintained at the UBER Station so that Customer can avail those self-driving cars/bikes from the Airport to the next UBER Point near to the City during ‘Cancellations’ and ‘No Cars available’
- ❖ Lucrative bonus for the drivers who takes more than n rides in a month for round trips to Airport-City in a constrained/peak time slots(early mornings and evenings)
- ❖ Interactive ride sessions which indicates the driver for a possible ride based on the flight arrival and take off patterns

Thank You