



# UBER SUPPLY DEMAND GAP SUBMISSION

By - Balakrishna Gadiyar





#### **Abstract:**

- Uber wants to understand supply and demand gap, specifically for Airport Taxis, to avoid loss of revenue.
- 2. Uber sees problem in 2 areas.
  - a) Non availability of Cars
  - b) Cancellations from Drivers.

#### **Business objective:**

The objective is to identify the root causes, possible hypothesis of the problems. Recommend ways to improve the situation.





### **Approach**:

- Load the transaction extract from Uber system
- Format the data and make it ready for analysis.

**Data Cleaning** 

#### **Data Analysis**

- Create time slots
- Univariate analysis with request id and slots
- Analysis on ride type, slot and duration of request

- •Generate additional columns based on initial analysis
- Derive subsets of data based on ride type, slots and volume of request

Derive Metrics

#### **Data Visualise**

- •Distribution requests on time plot
- •Distribution of requests based on status
- Distribution of cancelled and non available requests over timescale
- •Derive heatmap to identify drivers cancelling the trips

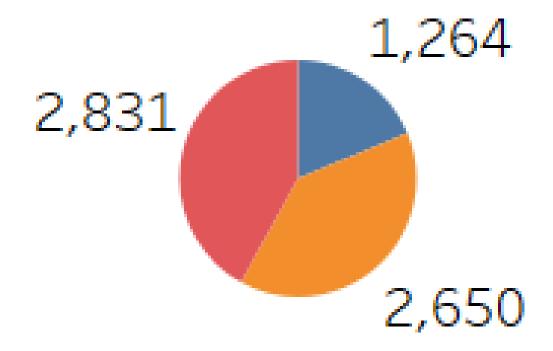
- List the problem points
- Suggest recommended solutions

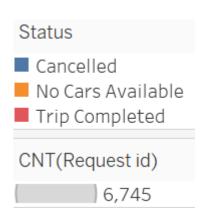
Hypothesis and Solution





## **Request Processing Distribution**



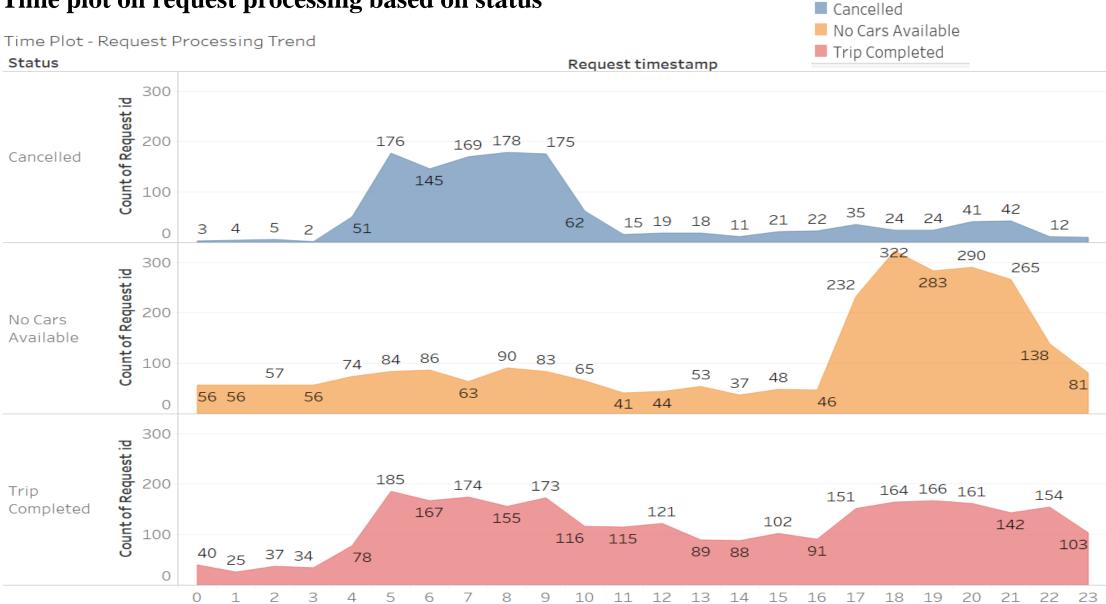






Status

### Time plot on request processing based on status







## Time Slot Vs Requests Vs Status Vs Riding Direction



■ Towards Airport

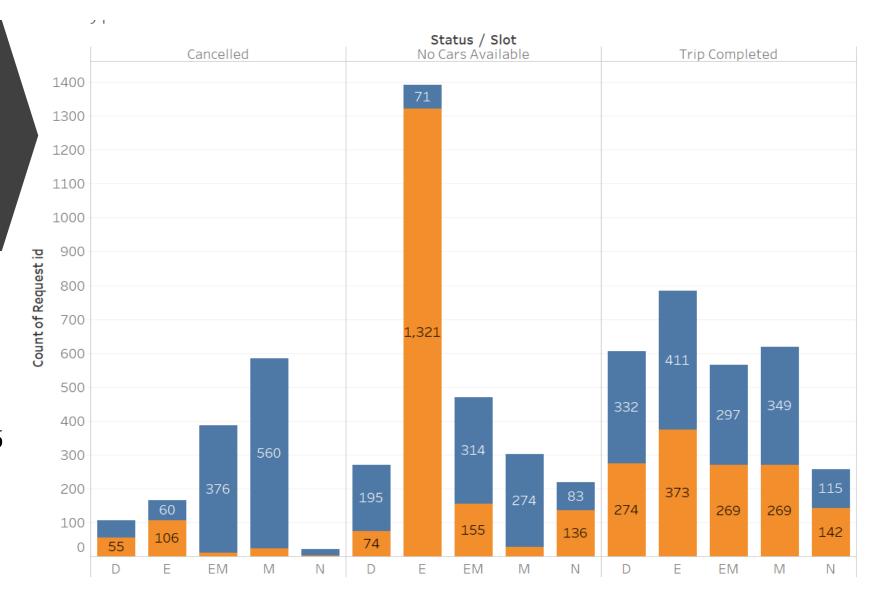
Towards City

E- Evening, till 9 pm
EM – Early Morning, till 6
Am

**D** − Day Time, till 6 pm

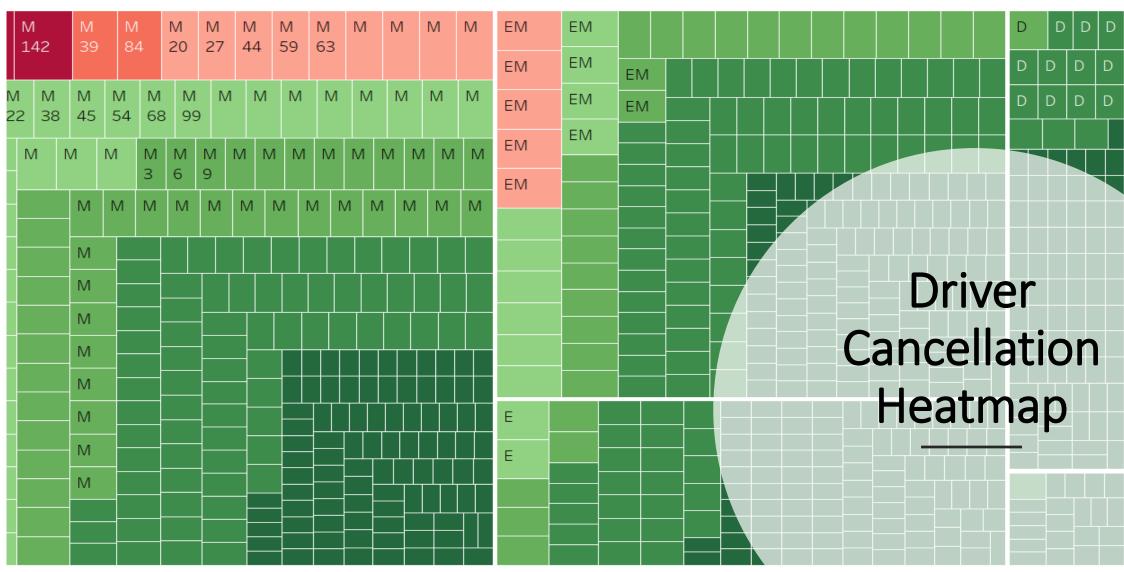
N – Night, till midnight

M- Morning, till 10 Am













## **Conclusions:**

#### Root cause

- High demand of cars at airport during evening hours (5-9 PM), but no cabs are available to serve
  the customers
- Cancellation of requests are high in the morning hours (5-10AM)

#### Hypothesis

- More arrival at airport in the evening and cabs routed towards airport are also less
- High international departure in the morning hence high demand. But driver is reluctant to go to airport could be due to idle time after drop
- More rejections from specific set of drivers, during the morning hours.

#### Solution

- Provide surge price feature in high demand slot
- Provide more incentives for time slots where demand is more
- Provide self driven vehicles with higher premium rates
- Include other means of transport such as auto rikshaws