UBER CASE STUDY

By

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<Abstract>

1. To understand and analyze the business problems and recommend a solution.

2. Take into consideration any quality issues provided with the data set and clean them accordingly.

3. Analyze the given data visually and find out where the gap between demand and supply lies.

4. Post root cause is identified, provide possible ways to resolve them.

<Analysis>

Analysis of the given data is divided into 2 major sub-parts:

- **Data Cleaning and Manipulation:** Identify the best type of investment from the different types, so that we can further drill down to find suitable investment area.

- **Data Analysis**: From the huge data provided, establish the best country the client could choose based on the investments trend into each country.

\<Analysis>

- **Detailed Analysis:**

- **Data Cleaning:**

- Initial step is to cleanup the given data. I loaded the data into individual data frames.

- Fix any rows and columns : First, I looked to find if we need to fix any rows and columns. There are no missing column names, consistency of names looks good. However, we could see that the Request/Drop date and timestamp is given in the same column.

- Missing Values: Although there are NA values, we don't have to replace/remove them, as they are useful for the analysis for this data set.

- Standardizing Values: Both Request/Drop timestamp columns needs to be standardized as the dates are not in a proper format. Once standardized, I simply pulled out the request hour value, instead of splitting the columns.

- Filtering Data: I also checked for any duplicate values, but found none. Verified the structure of each column and modified accordingly.

\<Analysis\>

Data analysis: To understand the data, i analyzed and created a plot to identify the frequency of requests.
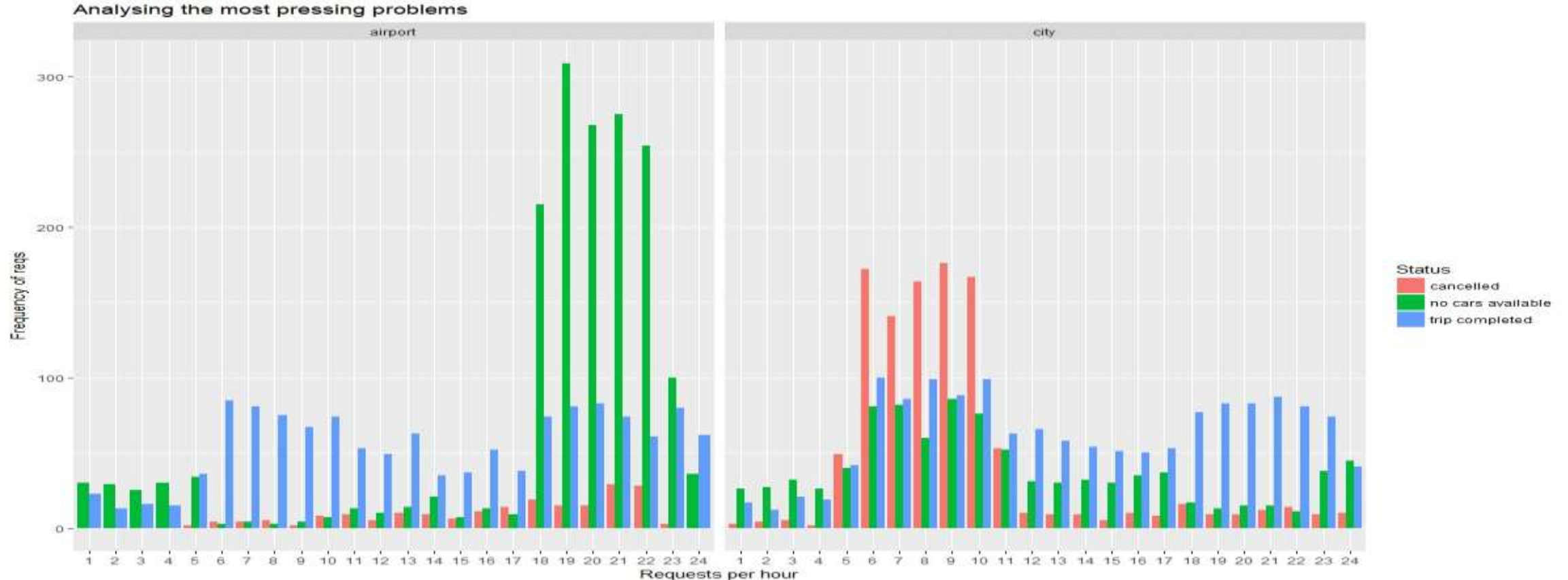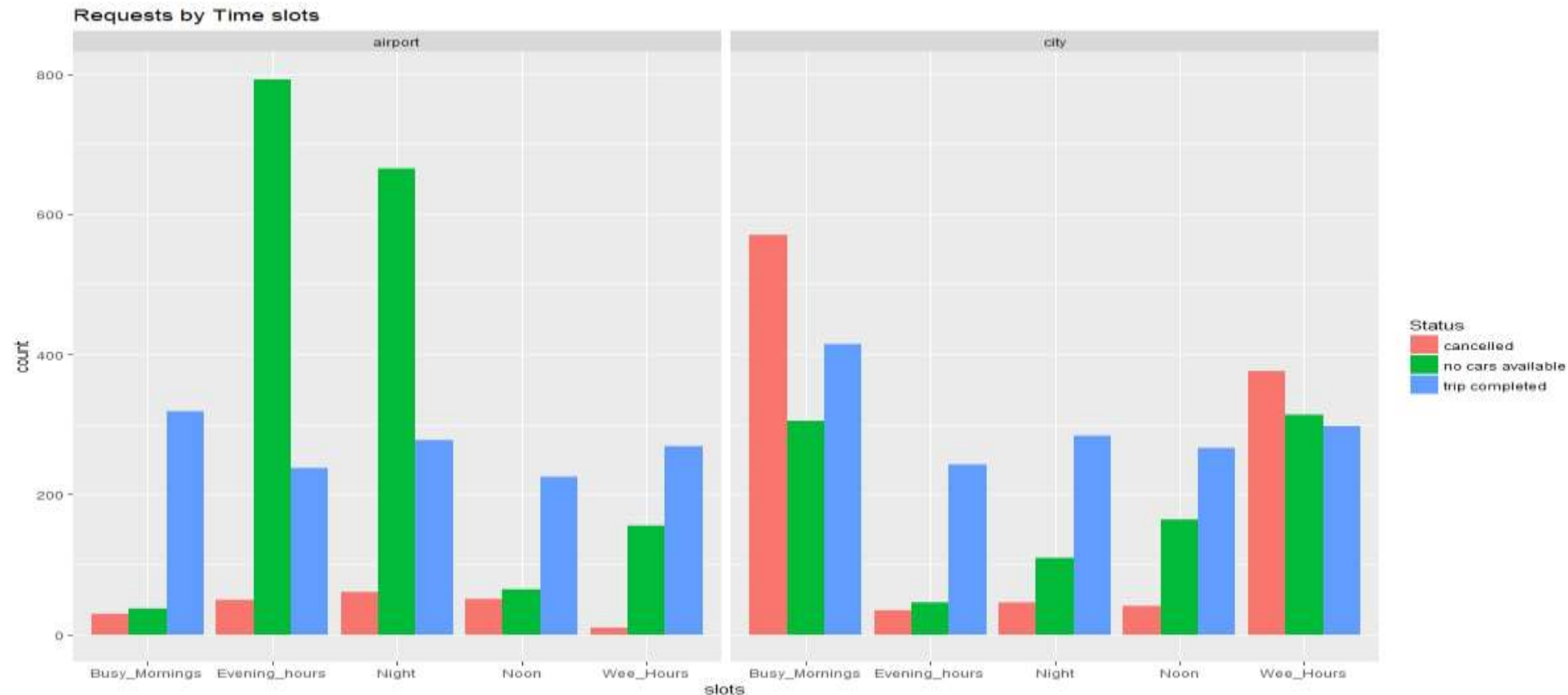

From the plot, we can identify that

• Overall cancellations are more rom the City than Airport. Also, it seems the cancelations are higher during the morning.

• Overall there is a higher rate of "No cars avaialbe" from the Airport than City. Also, we see that there is a huge surge in the evening.

<Analysis>

Analysis by timeslot: I tried to focus on the most problematic type of requests received by Uber.


From the plot, we can identify that

• From the Airport to City, There are no cabs available in the "Night" slot, i.e, between 7PM to 12 PM.

• From the City to Airport, There are cancellations happening in the "Busy_mornings" slot, i.e, between 6AM to 11AM.

<Analysis>

Problem1: From the #Problem1, we see there is a 51% Non-Availabilty of cars from the airport in the Evening and Night time slots, though there is a demand.
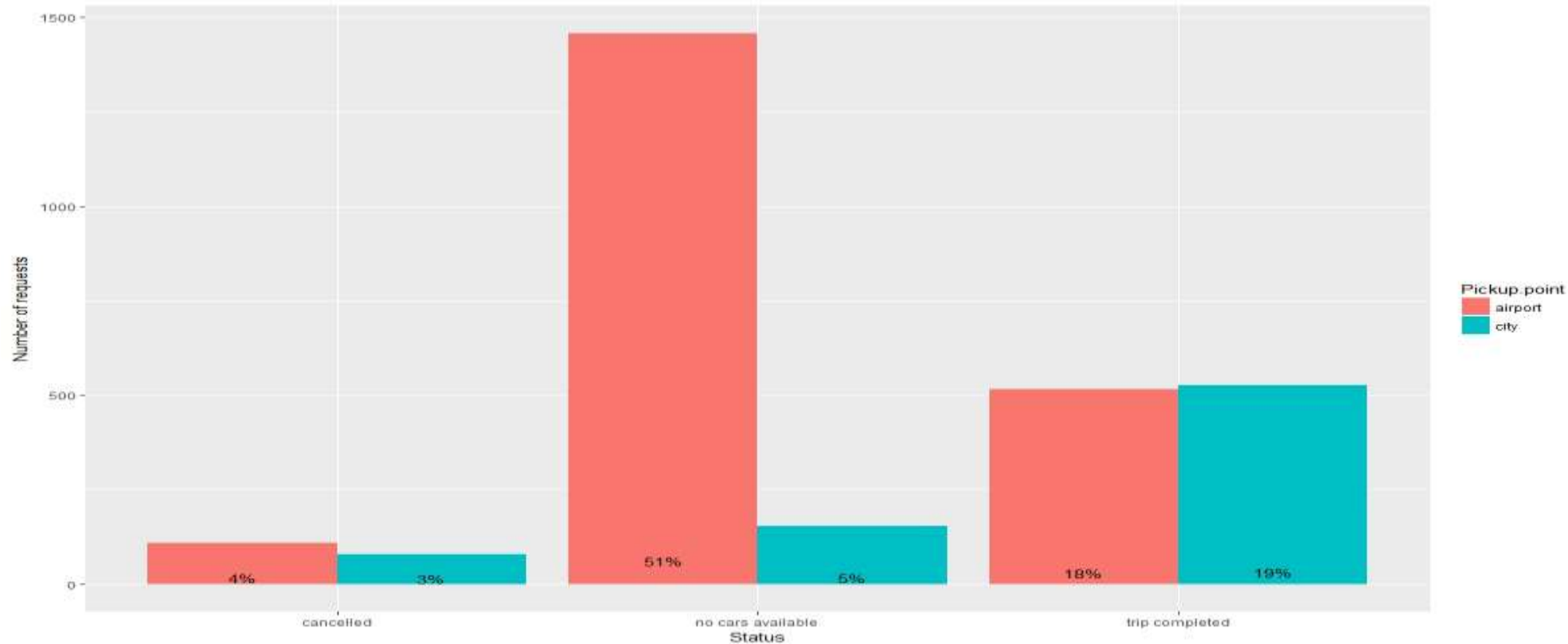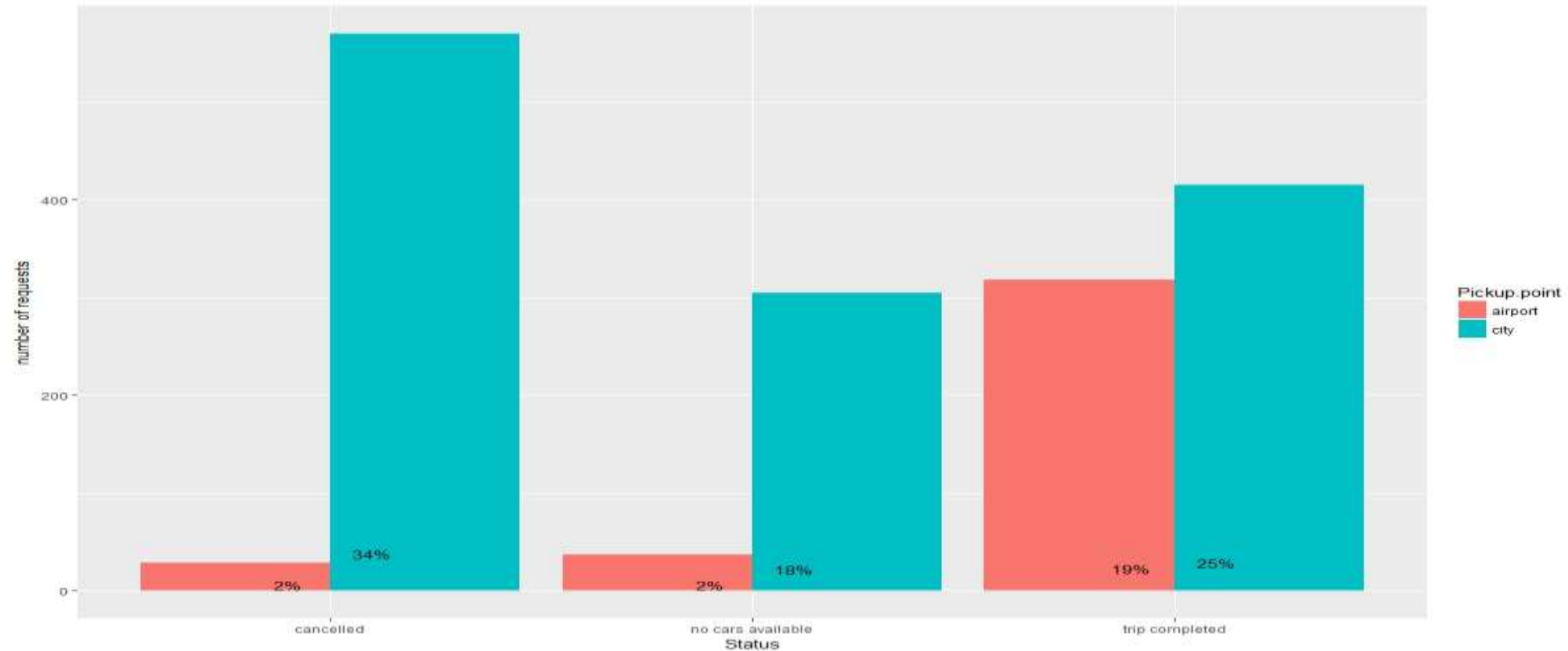

As the numbers speak,

Out of total 2081 requests for car bookings, only 515 trips were completed. Staggering amount of 1457 Requests for car bookings were not met, since there were no cars available in the Evening and Night time of the day.

<Analysis>

Problem2: From the #Problem2, we see there is a 34% Cancellation of cars from the City in the Busy Morning time slot, though there is a demand.

As the numbers speak,

Out of total 1290 requests for car bookings, only 415 trips were completed. 570 Requests for car bookings were not met, since there were cancelled during the Morning time of the day.

<Hypotheses and Recommendation>

Reason for Problem1: The main reason we see for the non-availability of cabs is, there are very less bookings from the city to the airport in the Noon and Evenings. As there are no cars at the moment at the airport and also no one from the city is interested to go empty one side of the trip, hence the issue of cars availability is arising.

Reason for Problem2: Cancellations are happening because though the driver drops someone all the way to the airport, they are unable to find a pickup request while coming back to the city from the airport.

Recommendation: Uber Management should encourage drivers who are interested to drive who have to come empty one-way with some Incentives such as a discount or adding 'Virtual Money' to their E-wallet. Also, there should look to tie-up with the Airlines to drop/pickup passengers and the fare could be included with the Air ticket with a discount or E-money which can help increase Repeat customer business. This way, we could even reduce the hassle of cab cancellation or no availability and make the customer happy.