Uber

About The Uber Case Study

- **Uber Technologies Inc. is a peer-to-peer ridesharing, taxi cab, food delivery, bicycle-sharing, and transportation network company headquartered in San Francisco, California, with operations in 785 metropolitan areas worldwide. Its platforms can be accessed via its websites and mobile apps.**
- •**Business Understanding:** You may have some experience of travelling to and from the airport. Have you ever usedUber or any other cab servicefor this travel? Did you at any time face the problem of cancellation by the driver or non-availability of cars?Well, if these are the problems faced by customers, these very issues also impact the business of Uber. If drivers cancel the request of riders or if cars are unavailable, Uber loses out on its revenue. Let's hear more about such problems that Uber faces during its operations.
- •**Business objective:**The aim of analysis is to identify the root cause of the problem (i.e. cancellation and non-availability of cars) and recommend ways to improve the situation. As a result of your analysis, you should be able to present to the client the root cause(s) and possible hypotheses of the problem(s) and recommend ways to improve them.
- •**About the dataset:**This data set is a**masked data set**which is similar to what data analysts at Uber handle. Solving this assignment will give you an idea about how problems are systematically solved using EDA and data visualisation.

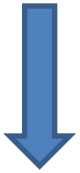
Problem solving methodology

Our problem solving methodology included step by step prosecution of data , as follows:-

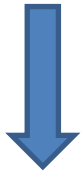
Understanding all the necessary conditions mentioned for the analysis

Cleaning and preparing data

Performing various tasks i.e plotting required on data set.



Finding out the reason for the supply demand gap issue that Uber is facing



Power point presentation

Data Perception

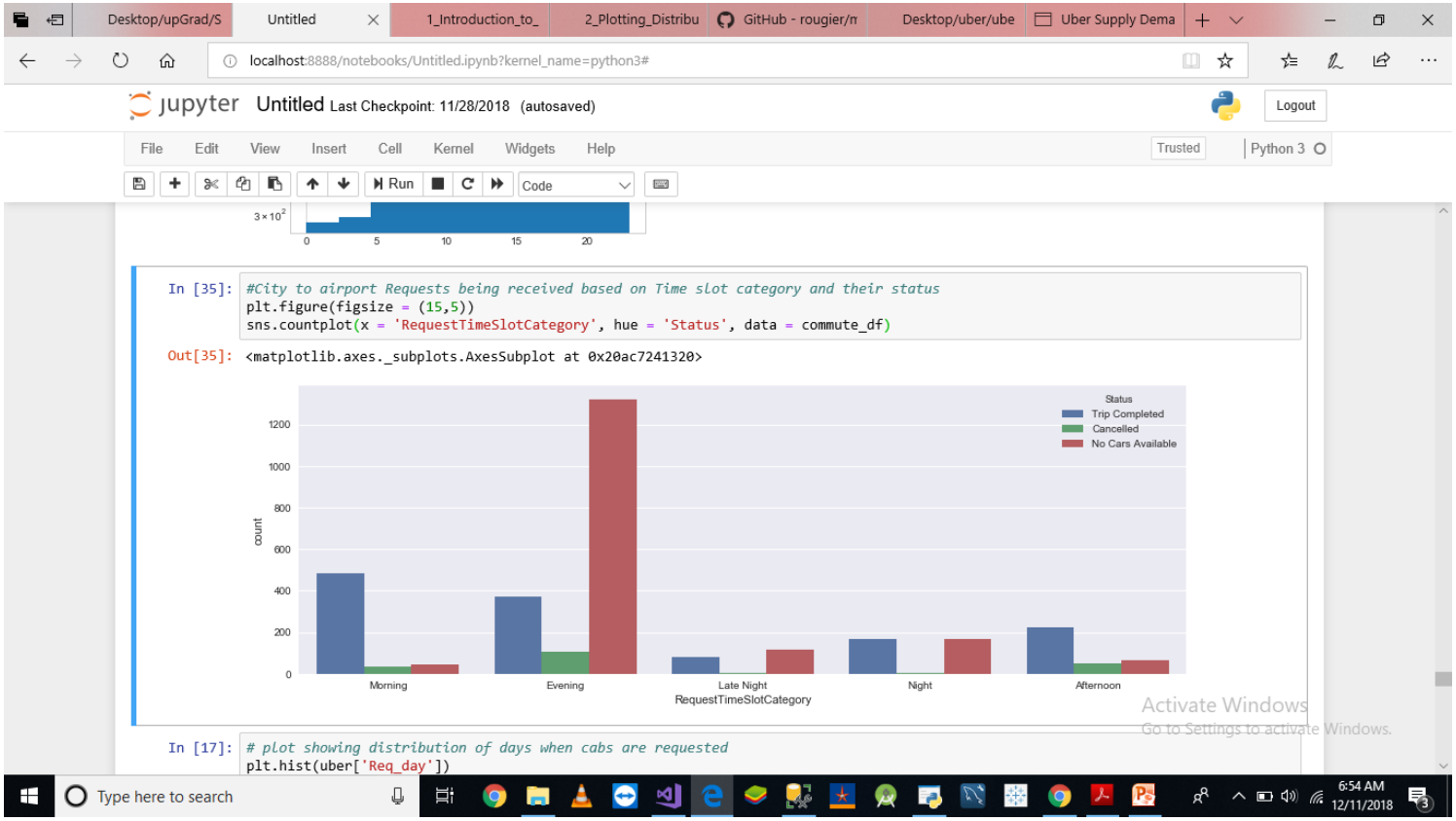
- The data provided was in raw form , so data set was analyzed carefully , based on which further inferences were made.
- Based on the data set the following attributes were given to us, as follows:
- **Request id**: A unique identifier of the request
- **Time of request**: The date and time at which the customer made the trip request
- **Drop-off time**: The drop-off date and time, in case the trip was completed
- **Pick-up point**: The point from which the request was made
- **Driver id**: The unique identification number of the driver
- **Status of the request**: The final status of the trip, that can be either completed, cancelled by the driver or no cars available.
- According to the data set inferences and requirement of the data set analysis ,I have added few new columns also.

Date perception Continued….

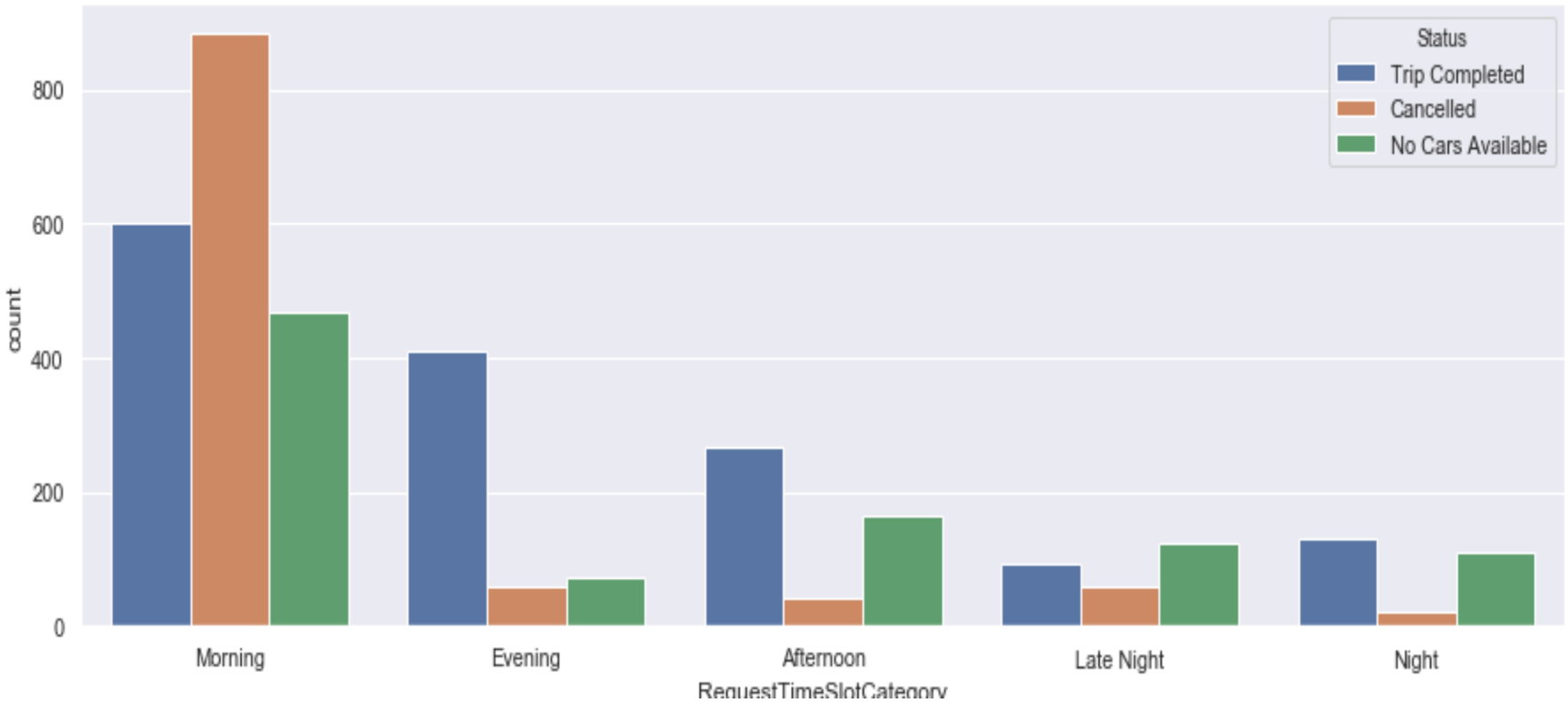
- Request ID has found to be unique which is the ideal case
- I have added a column to separate out time zones as :
- 1.Morning - 05:00:00 to 11:59:59
- 2.Afternoon - 12:00:00 to 16:59:59
- 3.Evening-17:00:00to21:59:59
- 4.Night-10:00:00 to 12:59:59
- 5.LateNight-01:00:00 to 04:59:59
- New columns also includes columns as :-
- Drop and Request time columns , which are corrected according to the requirement
- Request and drop time hours , separate columns
- Request time slot categories as mentioned above.

Plots description

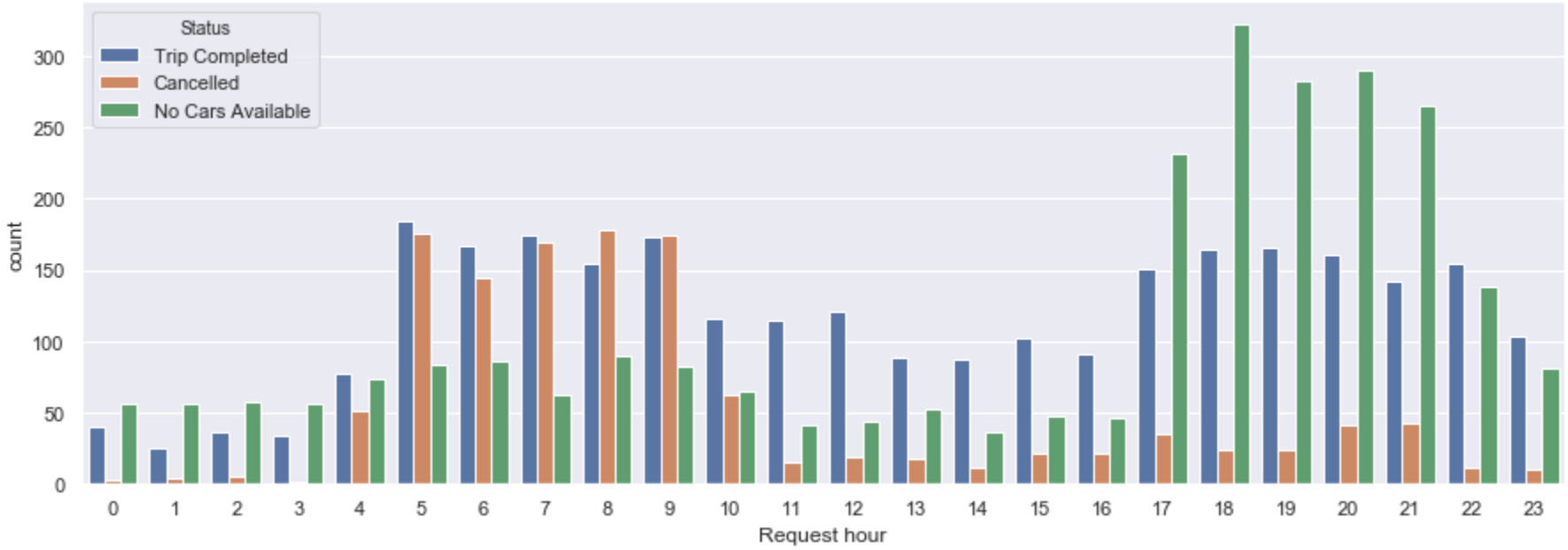
Airport to City Requests being received based on Time slot category from city to airport



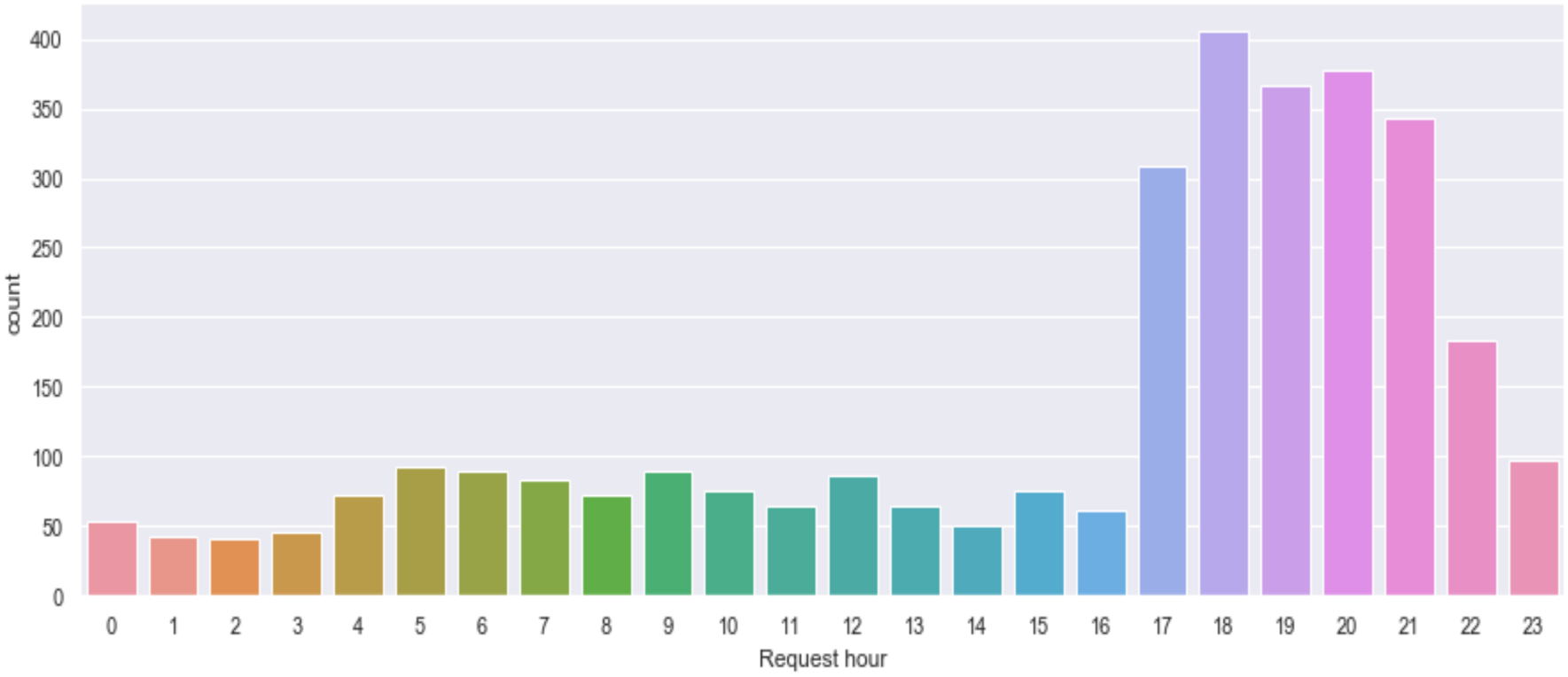
City to airport Requests being received based on Time slot category and their status



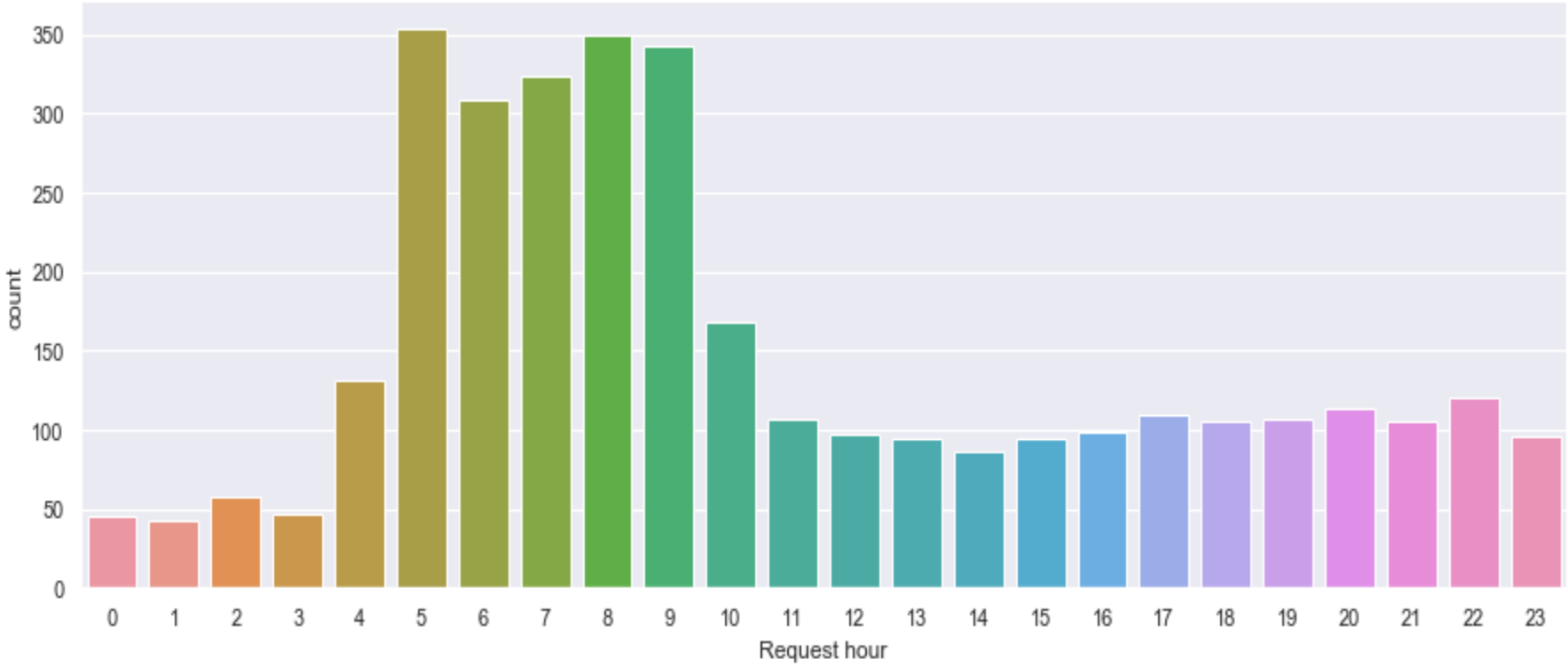
The below plot shows the number of requests received every hour and their corresponding status.



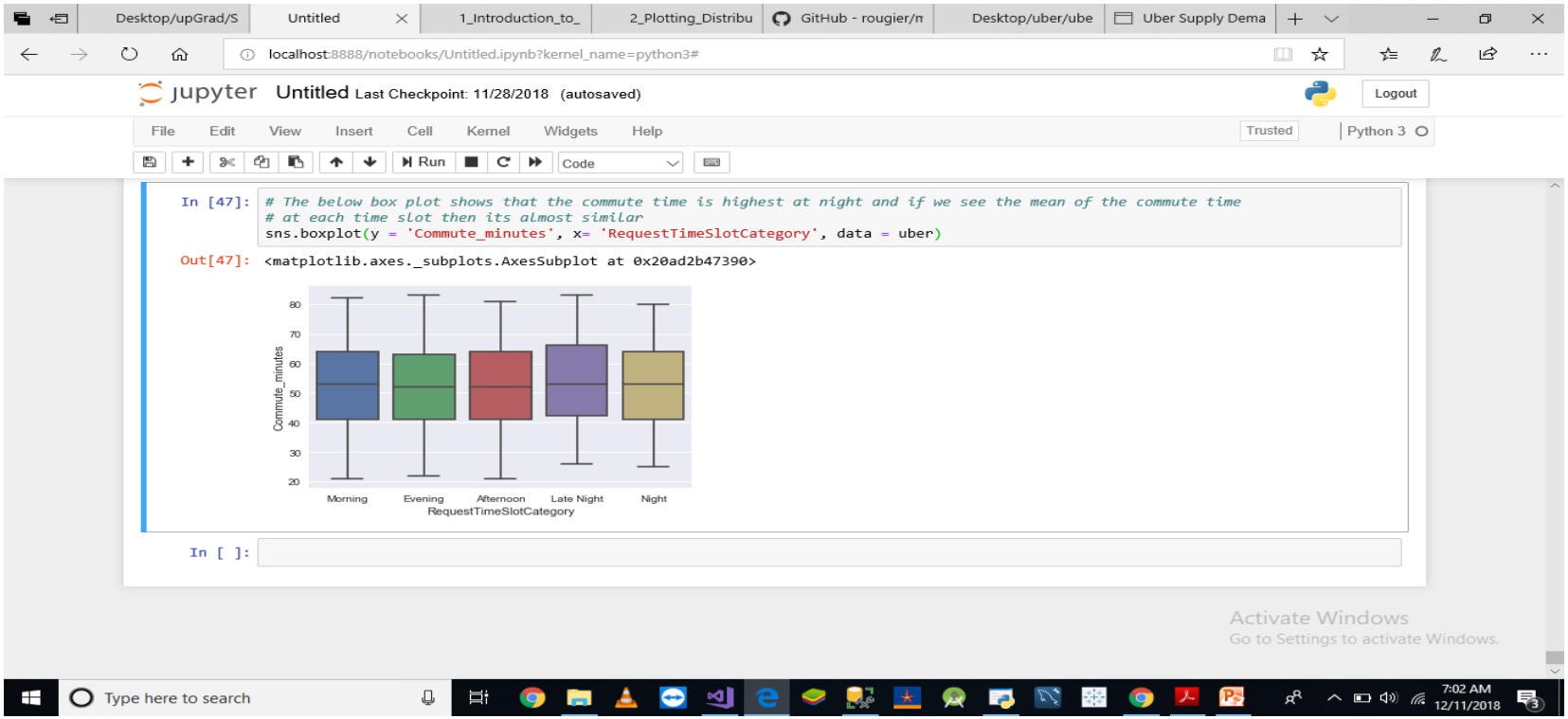
Hourly request rate to go from airport to city



Hourly request rate to go from city to airport



Box plot describing the commute time durations



Conclusion

Reason for non-availability of cars during night:

- Drivers must be busy in the city serving other request
- More rush of people due to more flights coming in at evening time
- More rush of people leaving from offices to home

Reason for cancelled trips in morning:

- Drivers don’t get passengers from airport to city easily in morning
- Lesser number of flights
- They can make more money by working within city in the morning completing more rides within same time