



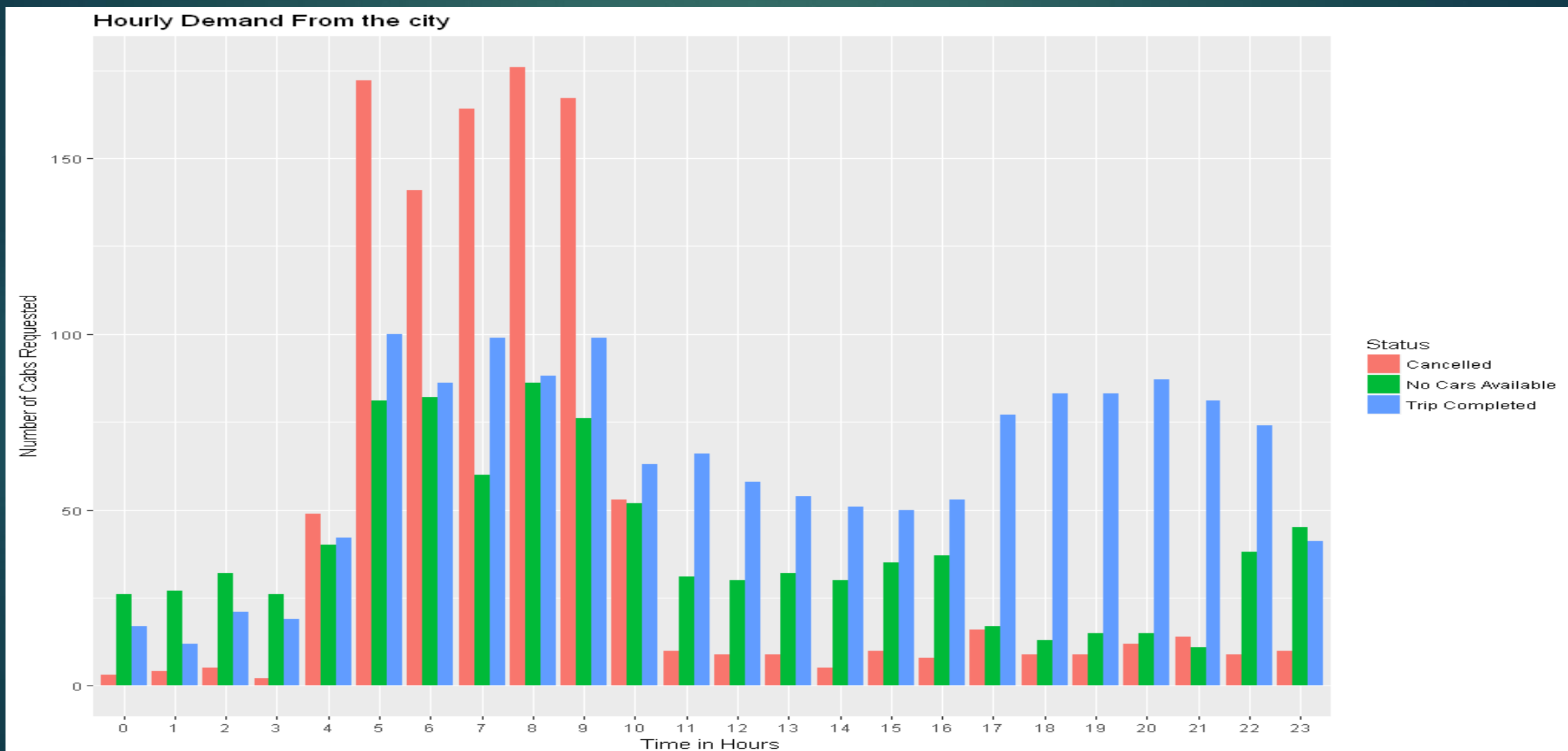
Uber Supply- Demand Gap

ANALYZE THE DATA TO FIND THE MAJOR GAP

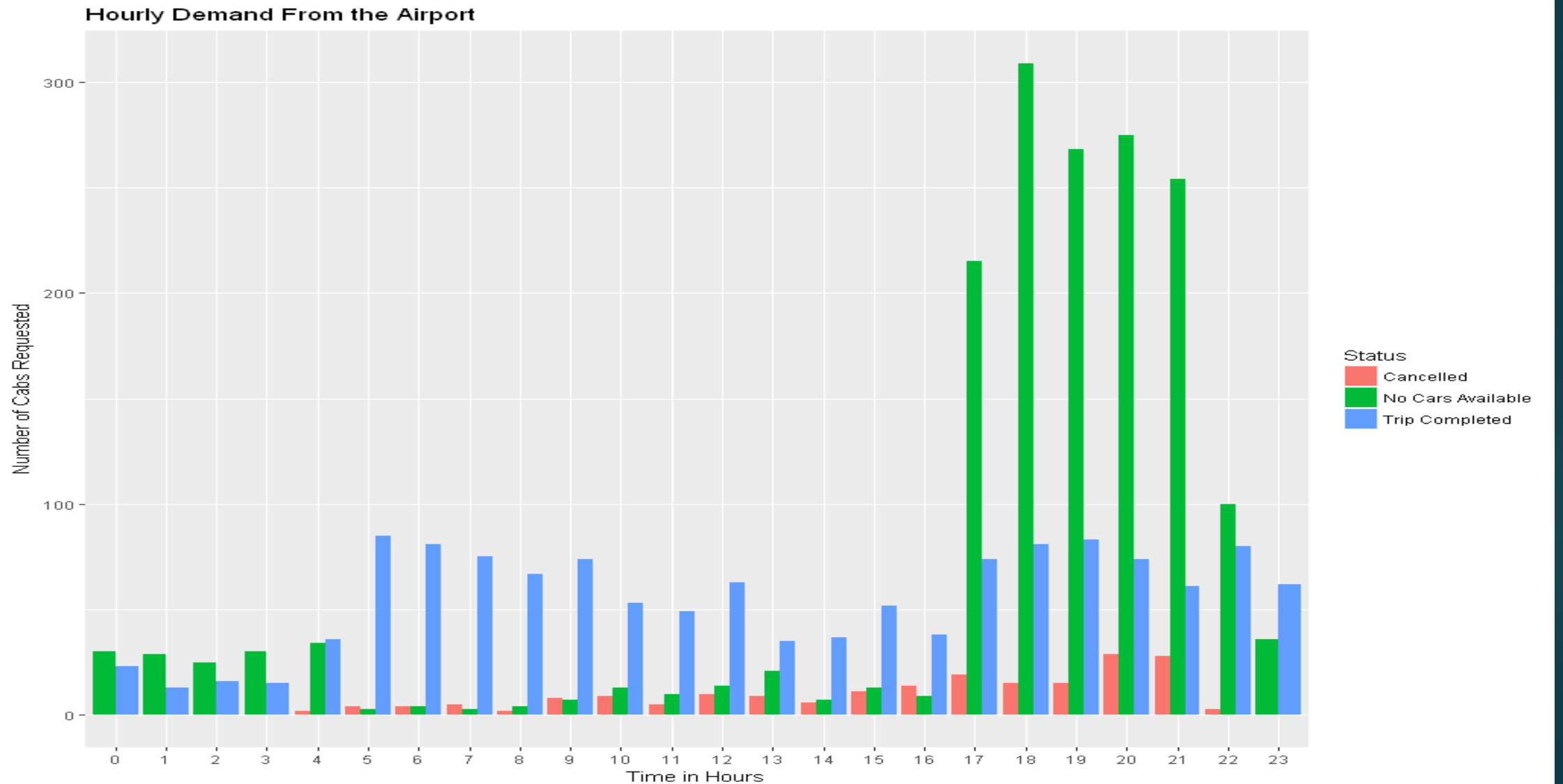
Data Preparation

- ▶ Converting all the time stamp formats to one uniform format using the package lubridate
- ▶ Extracting The hour of the day
- ▶ Plotting the graph hour of the day vs status(Completed , No Cars Available , Cancelled) segregated by Airport to City and City to Airport
- ▶ Finding the major gaps of supply and demand through plotting the graph
- ▶ Converting the hours into five time slots to get better understanding of the graph

City To Airport Hourly Basis



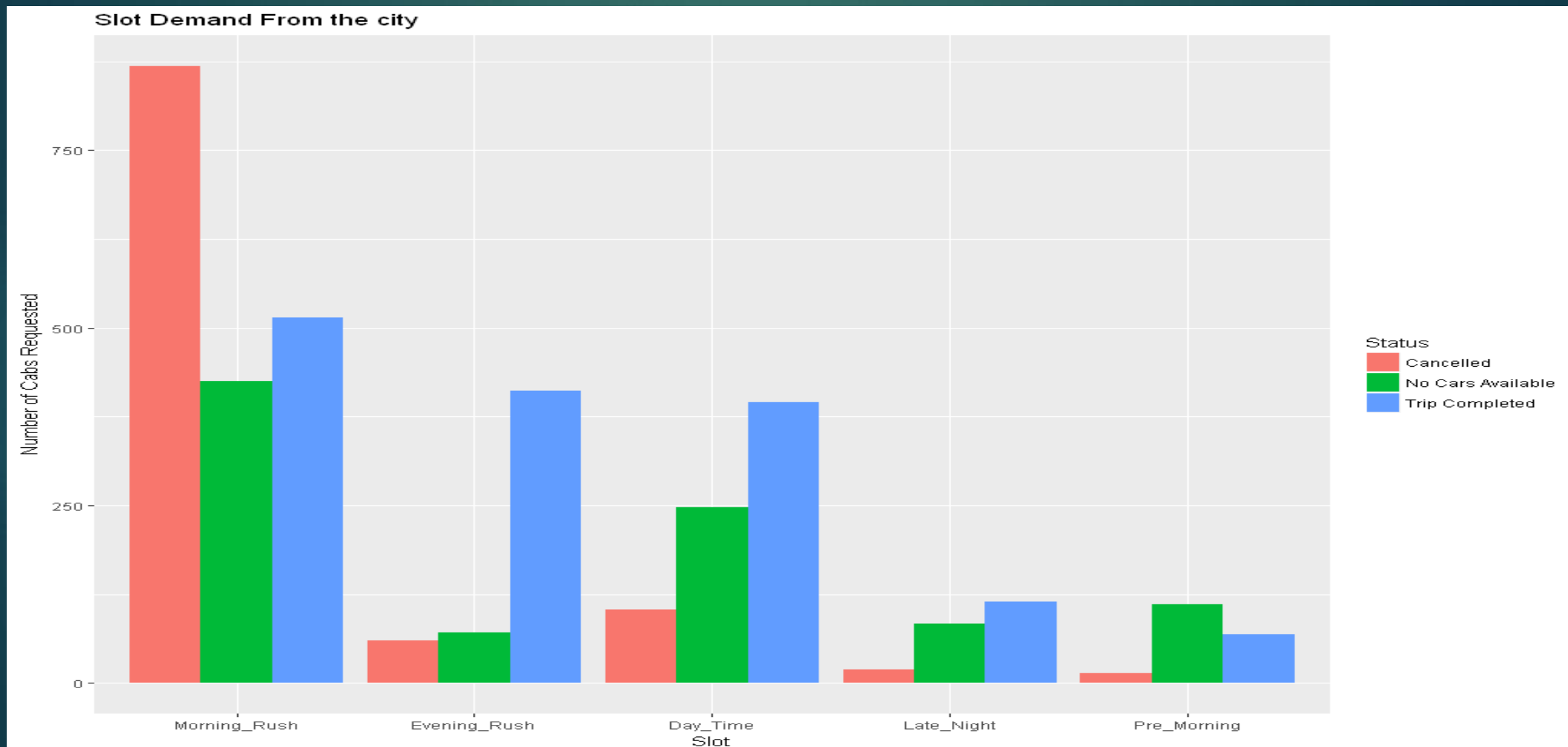
Airport To City Hourly Basis



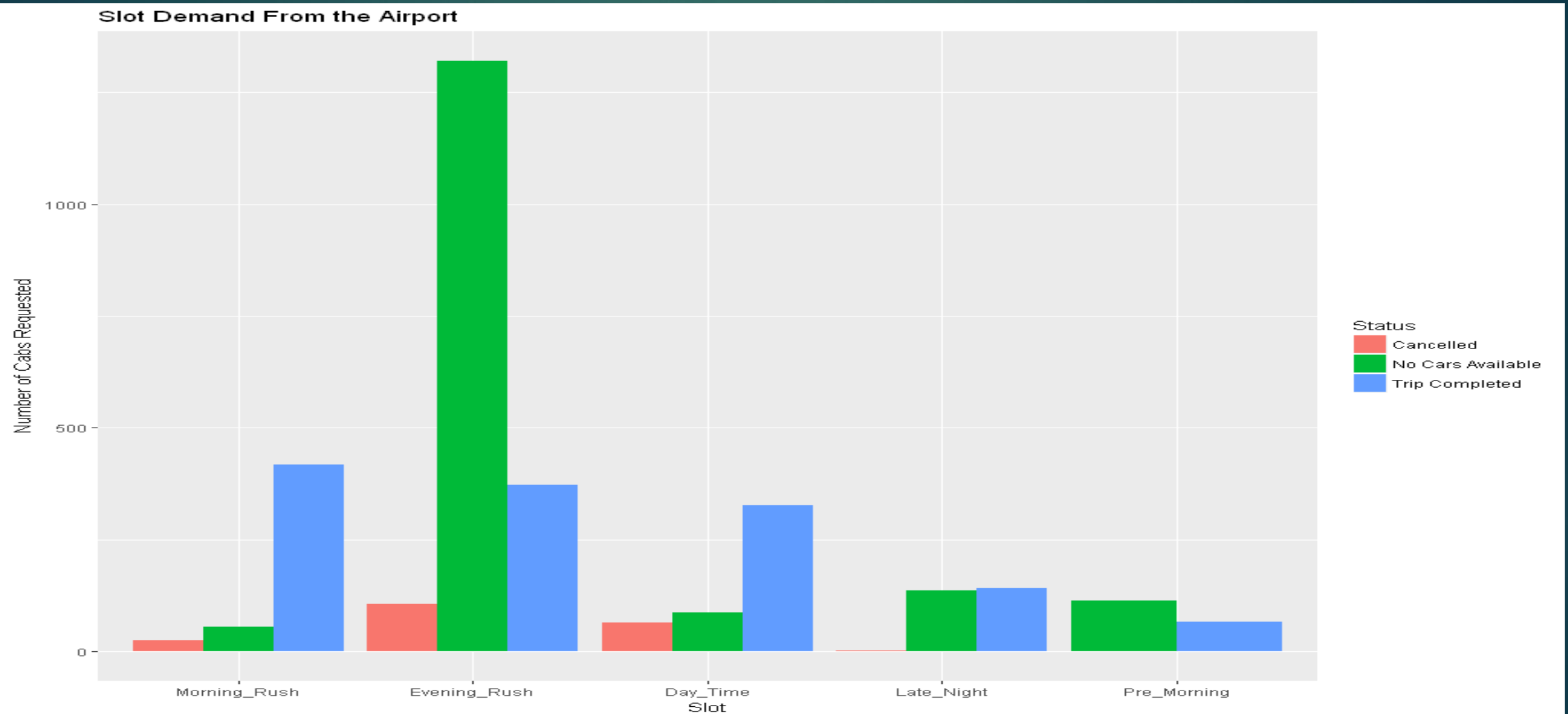
Time Slots

- ▶ 0hrs -3hrs : Pre_Morning
- ▶ 4hrs-9hrs: Morning_Rush
- ▶ 10hrs-16hrs :Day_Time
- ▶ 17hrs-21hrs: Evening_Rush
- ▶ 22hrs-23hrs: Late_Night"

City To Airport Slot Basis



Airport To City Hourly Basis



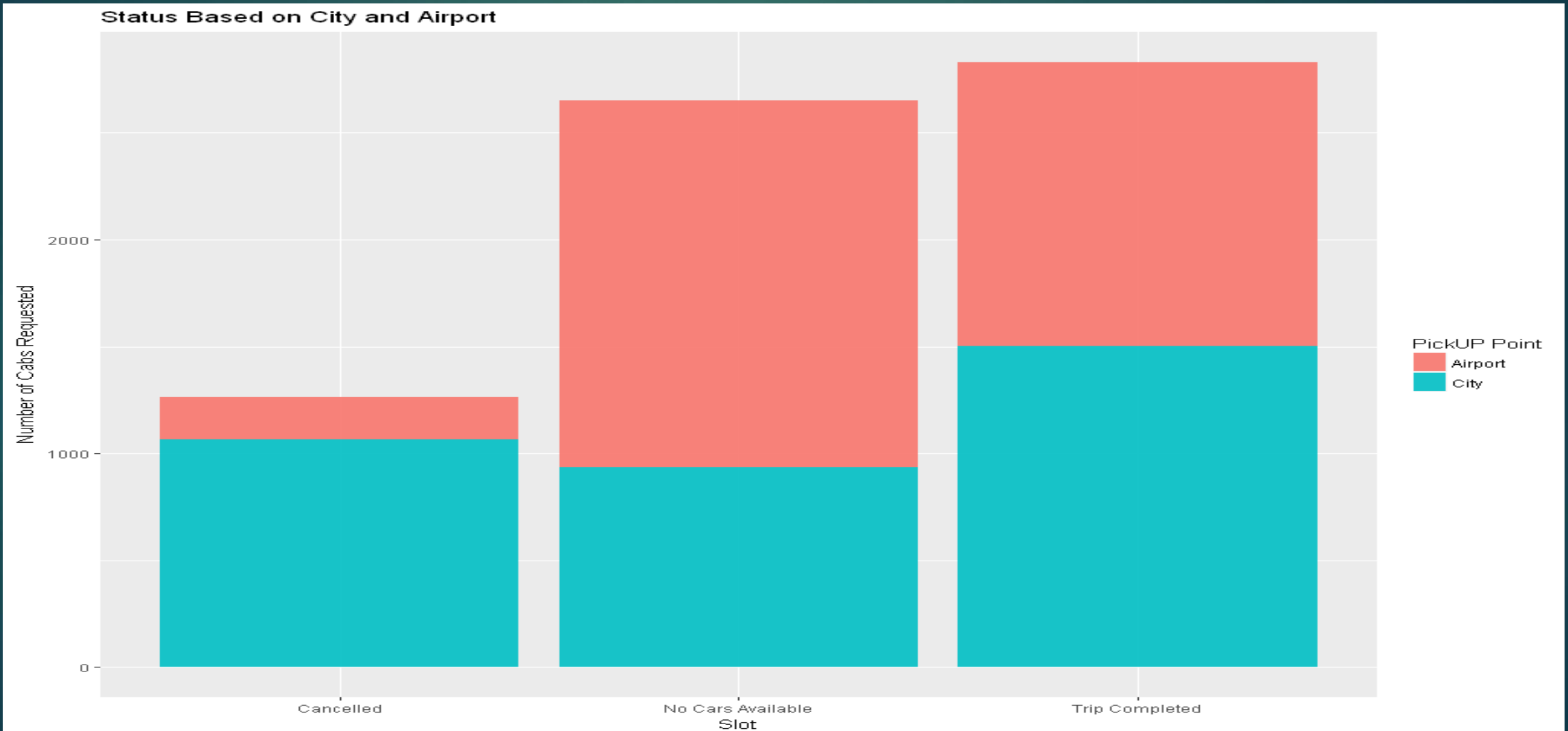
2 A) Find the time slots when the highest gap exists

- ▶ The time slots in the evening rush is very high. Due to high demand in the airport and very less supply .Which is seen from the above graphs
- ▶ In the morning slot also there is gap which is not much of the concern as the demand is almost met in the airport but there is a high cancellation in the city side

2 B) Find the types of requests for which the gap is the most severe in the identified time slots

- ▶ The time request in which the the gap is most is in the evening rush from airport to city

Status Based on City and Airport



3) What do you think is the reason for this issue for the supply-demand gap? Write the answer in less than 100 words. You may accompany the write-up with plot(s).

- ▶ First there is high cancelation rate from city to airport(1066 records) because there is very less demand(498 total records including cancelled and no cars available) in the airport during the morning rush .This demand is almost met by the completed trips from city to airport(418 records) and there is very less chances of no driver available or cancellation during the morning rush.
- ▶ There is a very high demand in the airport during the evening rush hour(1800 Records) this is mainly due to very less supply from the city to airport(542 Records). Though there is less cancelation and no car available scenario in city to airport

4) Recommend some ways to resolve the supply-demand gap

- ▶ Giving more incentives to the driver who drives from city to airport during the evening rush hour
- ▶ Charging the customer according to the time slots
- ▶ Customers need to pay more during the evening rush to compensate the driver incentives
- ▶ Drivers be made aware of the high demand in the airport during the evening rush hour
- ▶ Promoting the drivers to go to airport during the initial days to make the aware of the demand