



# Uber Demand Supply Analysis

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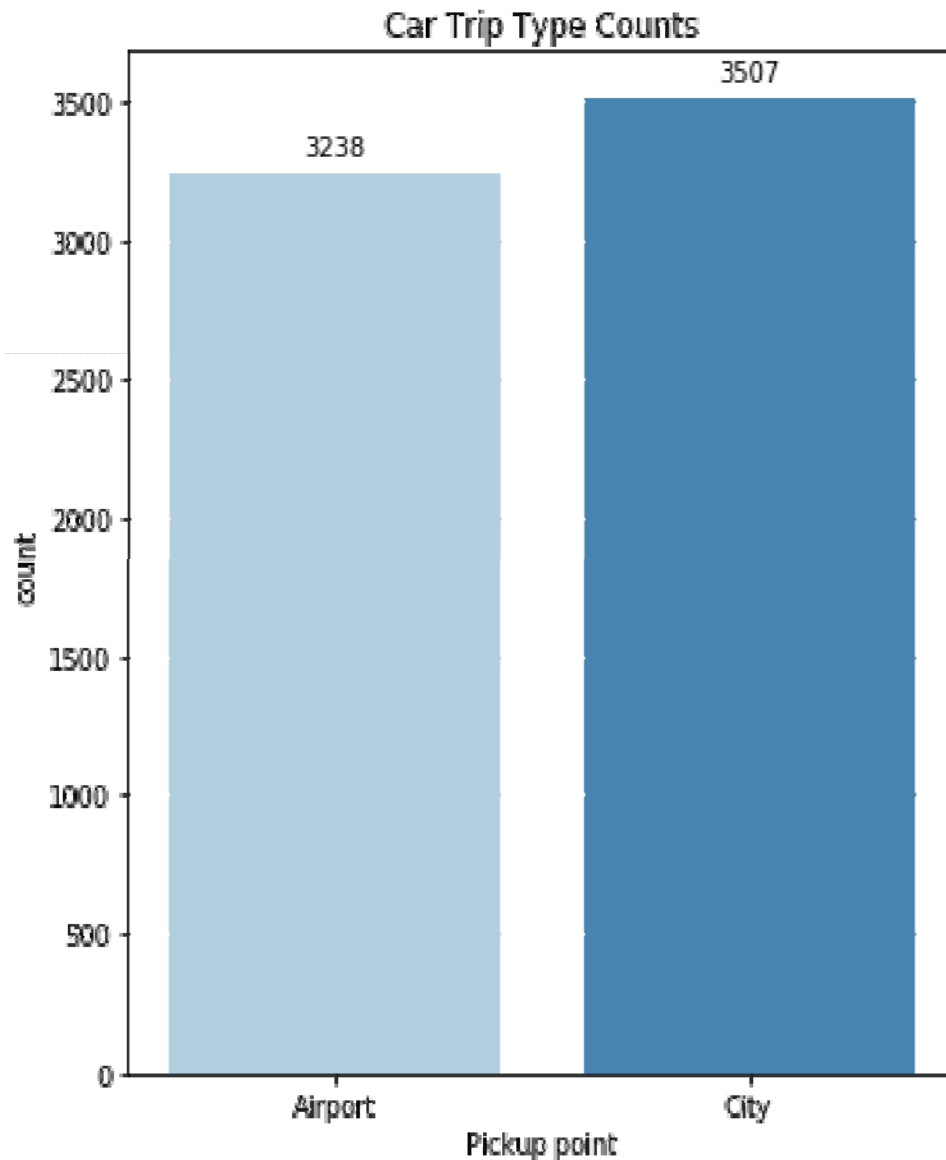
## Description about Dataset:

- Name of Dataset: Uber Request Data
  - In Application Dataset we have 6745 number of rows and 6 number of columns.
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# Dealing on missing values:

- The 'Driver id' column has missing values(NaN):
  - Based on the observation these values are missing for rows where status is 'No Cars Available'
  - This is good data and no need to drop
- The 'Drop timestamp' column has missing values(NaN):
  - Based on the observation these values are missing for rows where status is 'No Cars Available' or 'Cancelled'.
  - This is good data and no need to drop

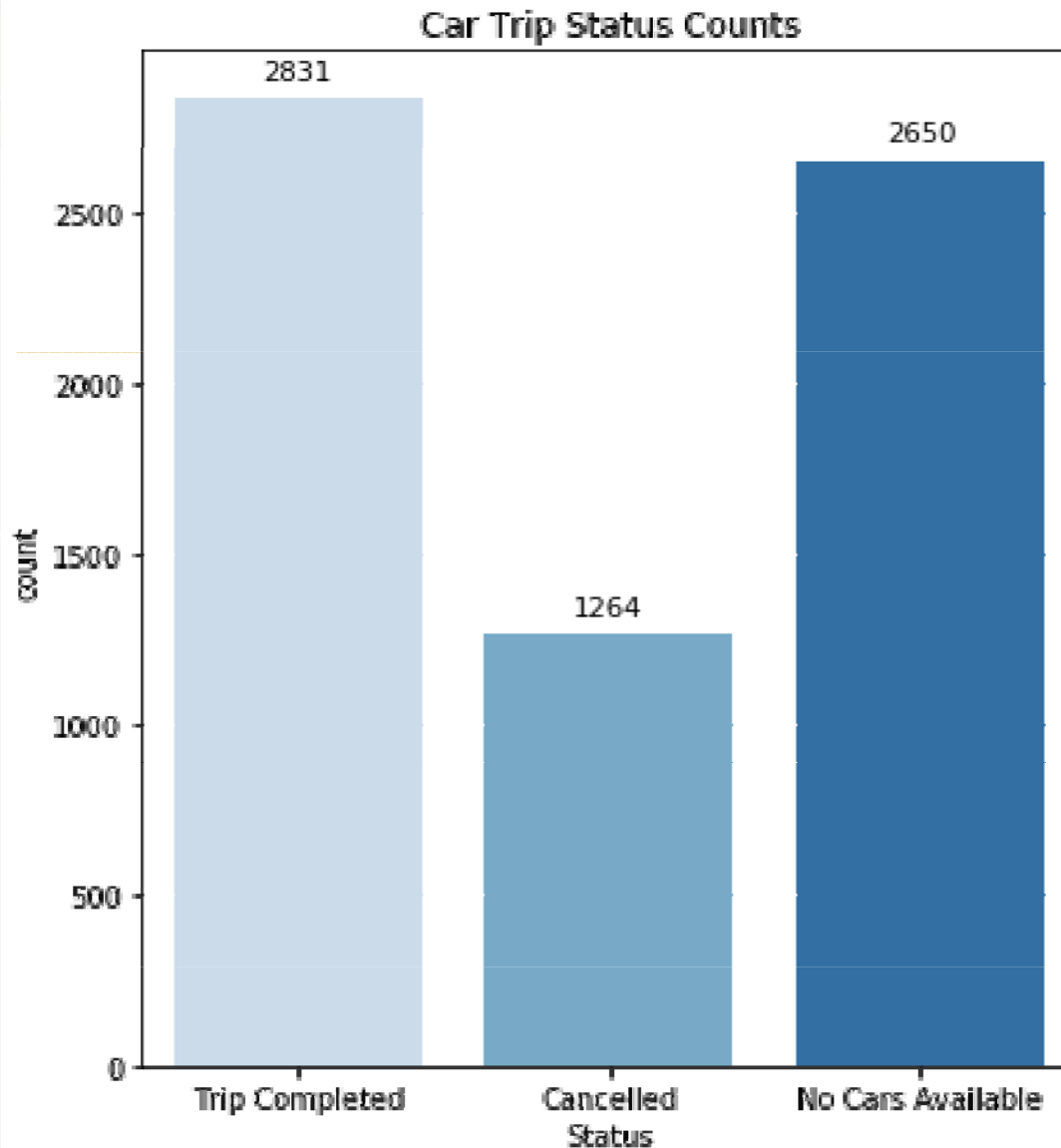
# Univariate Analysis:



There are 3238 request with Airport pickup point

There are 3507 requests with City pickup point

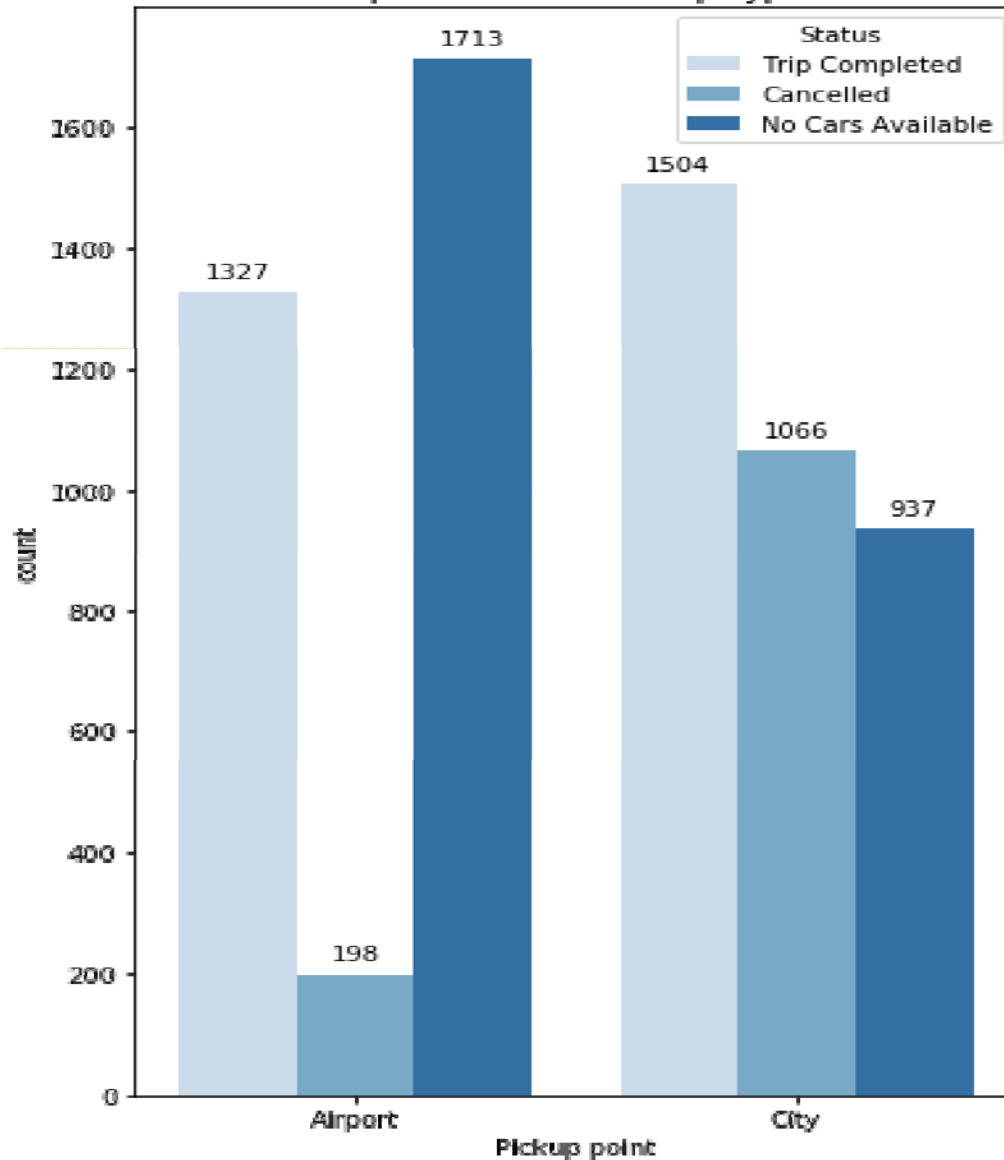
# Univariate Analysis:



- There are 2831 request with Status Trip Completed
- There are 1264 Cancelled Trips and 2650 Trips with Status 'No Cars Available'
- There is large potential revenue lost due to demand supply gap

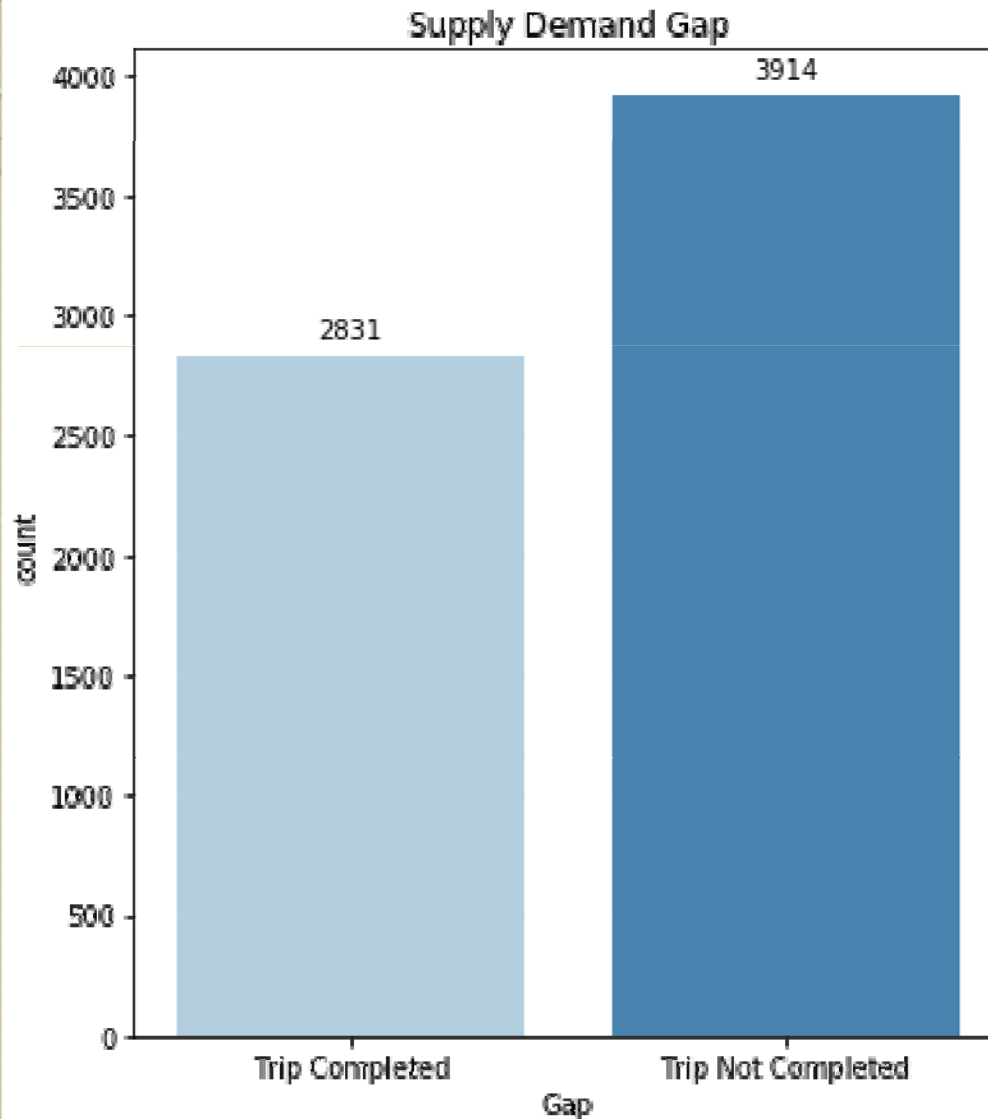
# Bivariate Analysis:

Car Trip Status Counts - Trip Type Wise



- Airport pickup Trip Requests largely suffer from non availability of cars
- City pickup trips suffers from both cancelled and non availability of cars. Cancelled being on slightly higher side than no cars available

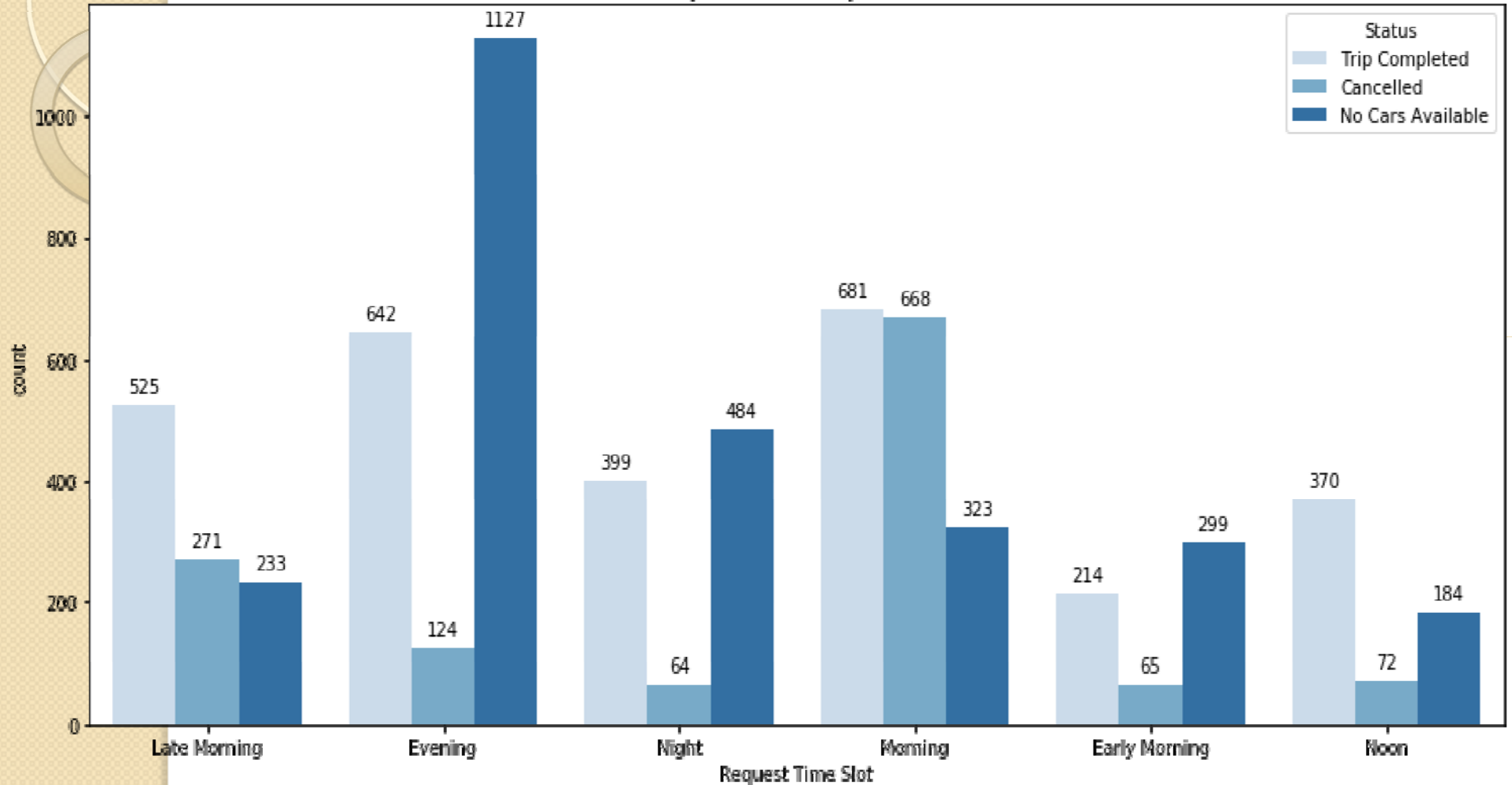
# Demand Supply Gap Analysis



- There is huge demand supply gap
- There is huge potential revenue loss due to this gap

# Day Time Impact on Demand Supply

Day Time Wise Trip Status

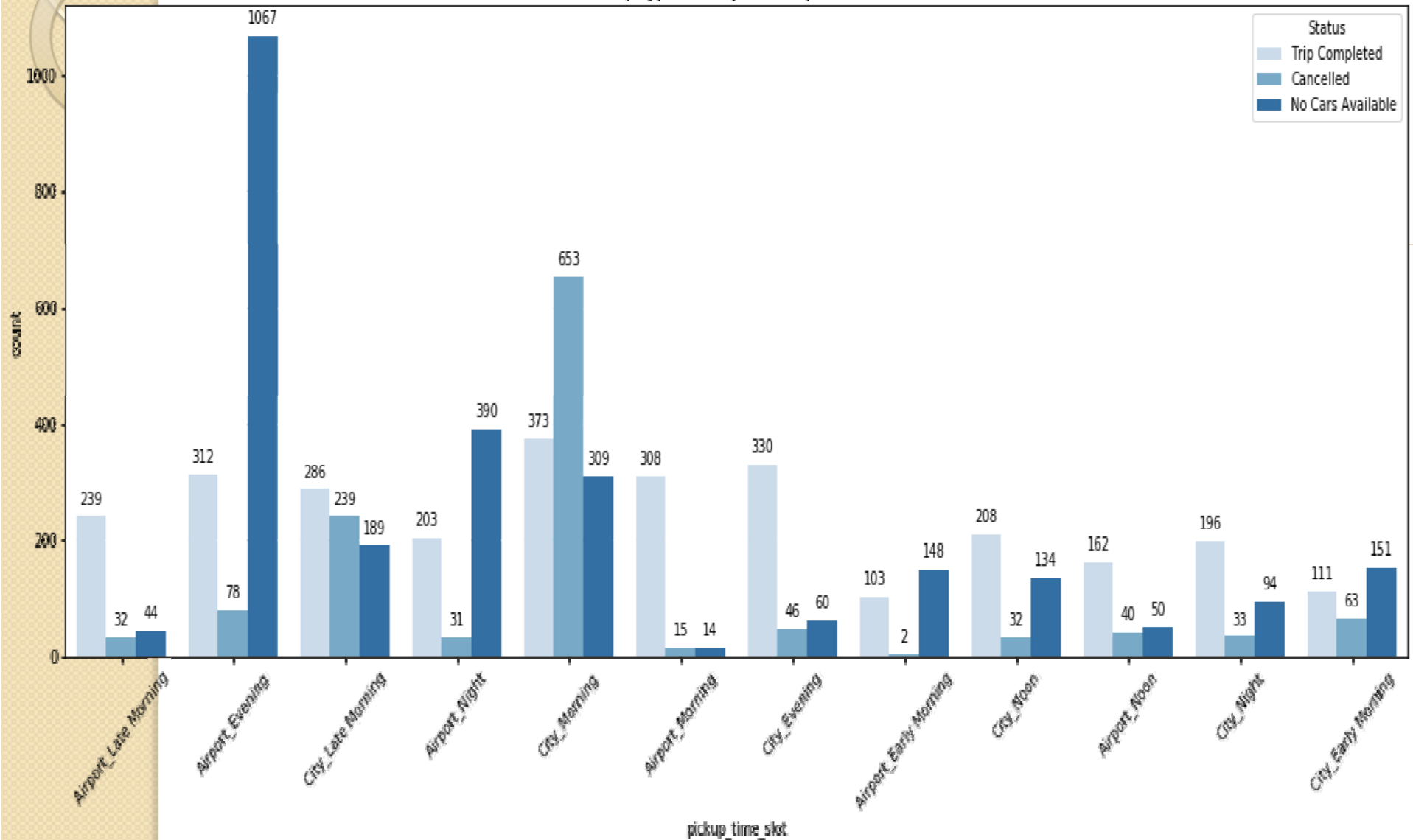


- We see most of the non car availability in the evening time
- More trips are cancelled by drivers in the morning time indicating more demand due to office time



# Day Time & Pickup point Impact on the demand supply Gap

Trip Type and Day Slot - Trip Status



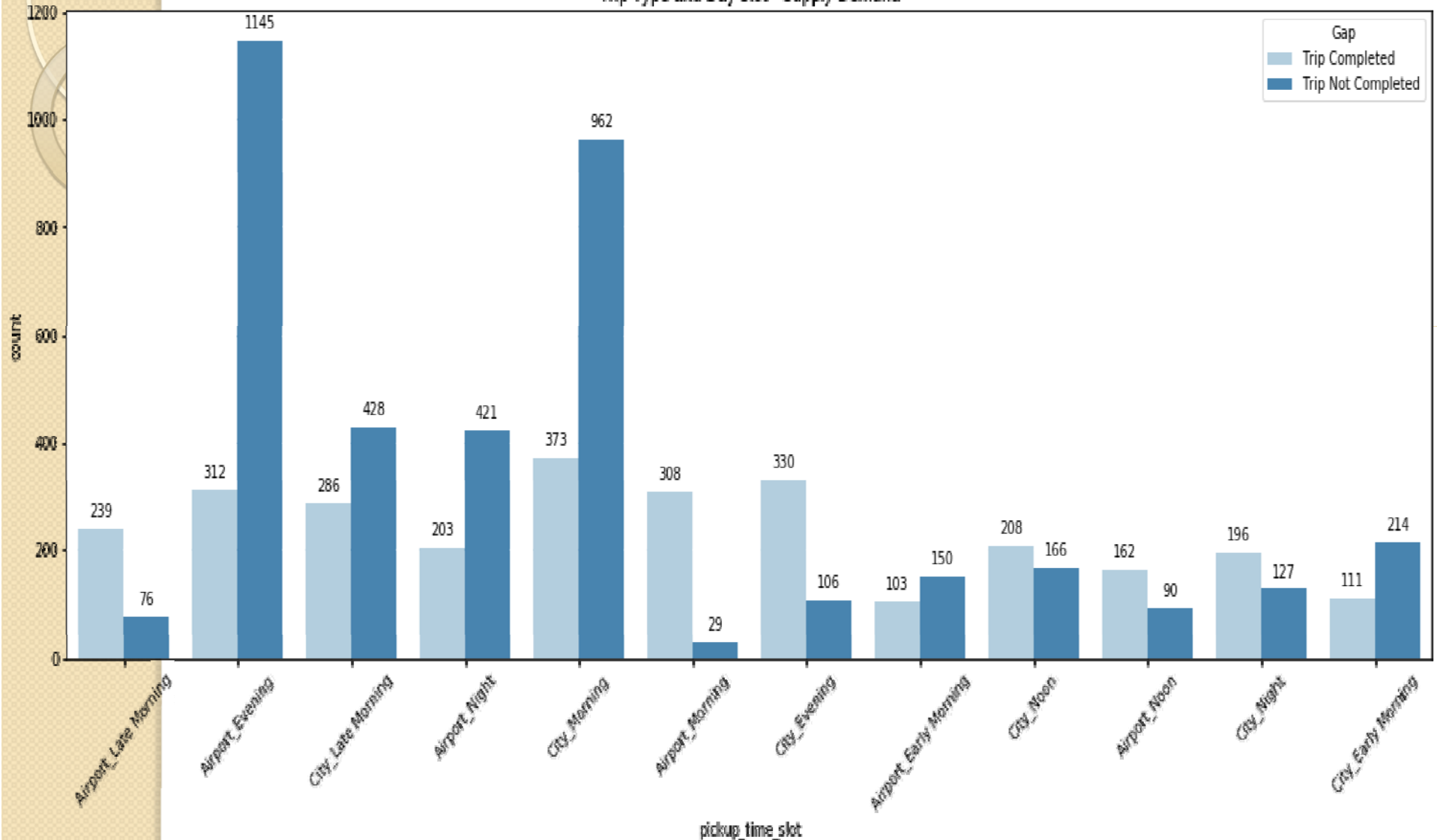


# Day Time and Pickup point Impact on the demand supply Gap

- Airport pickup point requests specifically suffers from poor car availability in the evenings
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- City pickup point requests suffers from cancellations in the morning time

# Day Time & Pickup point wise demand supply

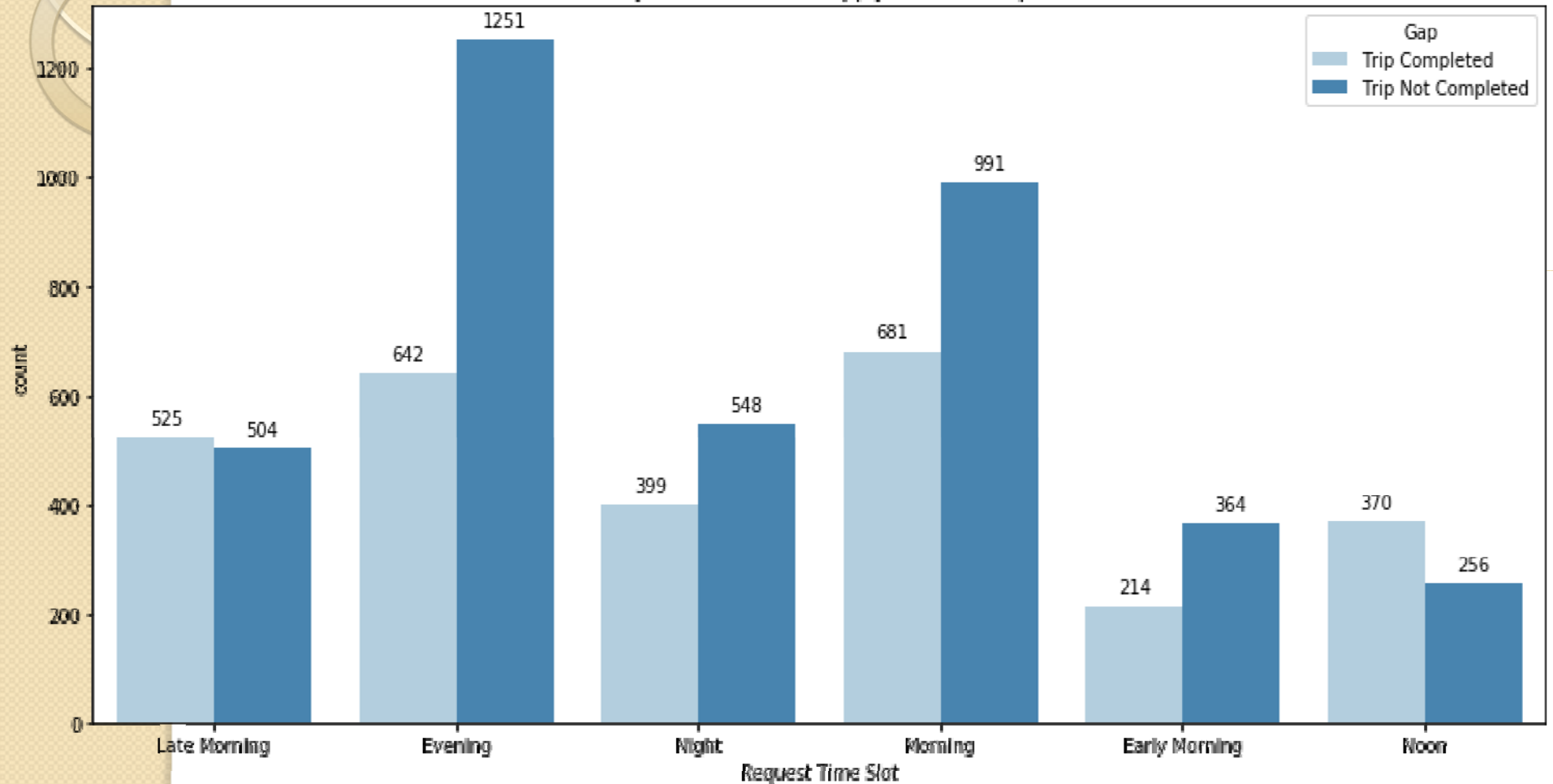
Trip Type and Day Slot - Supply Demand



- There is huge demand supply gap for airport pickup points in the evening and for city pickup points in the morning time

# Day Time wise demand supply

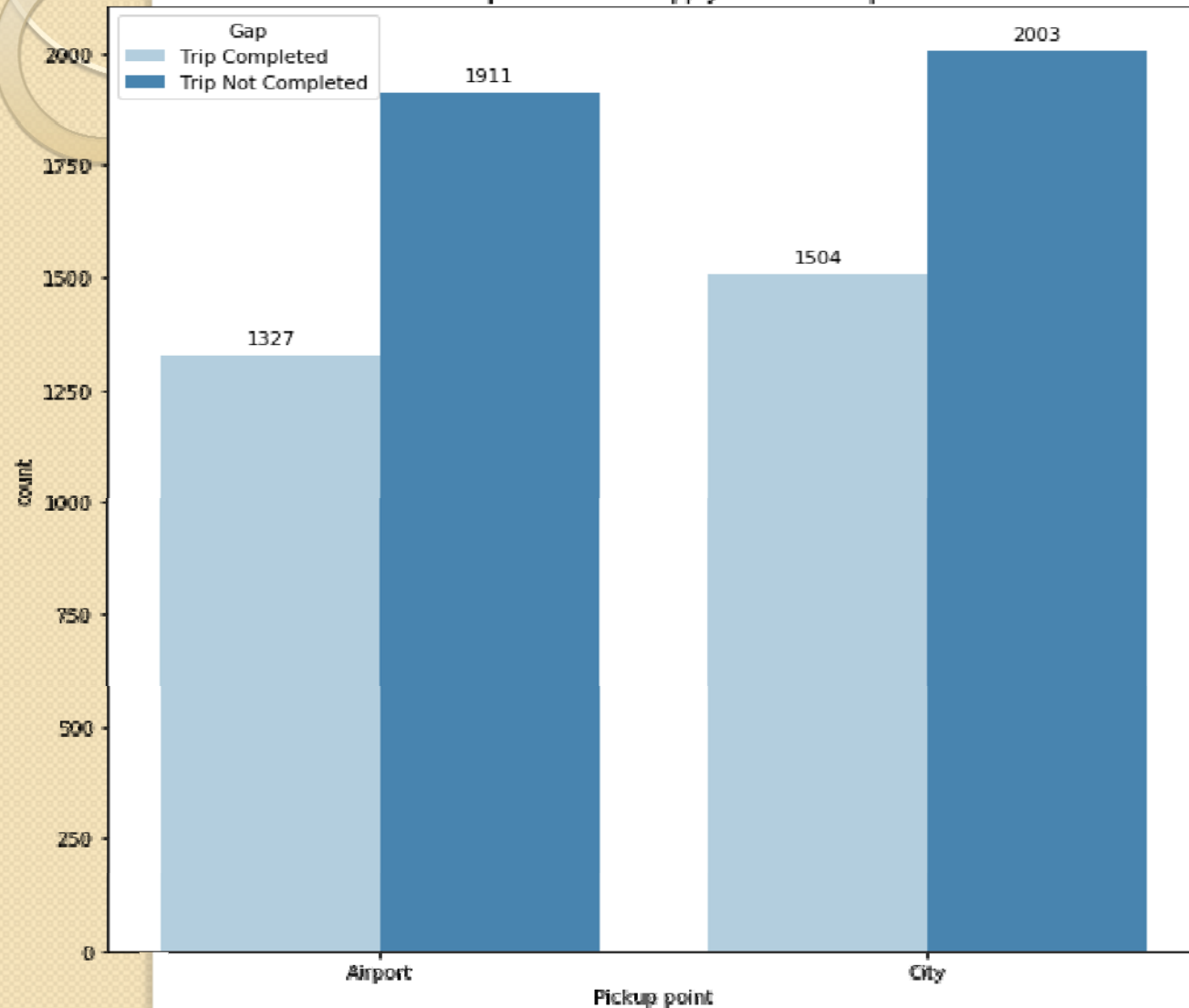
Day Time Slot Wise Supply Demand Gap



- There is huge demand supply gap in the evening followed by in the morning time

# Pickup point wise demand supply

Pickup Point Wise Supply Demand Gap



There is demand supply gap for both city and airport pickup points



# Observations

- **City Pickup points** - It is observed that due to high demand in the morning there are more cancellation of the trip requests. Driver may want to earn more in the city with many trips than a single long trip to the Airport
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- **Airport Pickup points** - It is observed that in the evening there are more issues related to cars not being available for airport pickup points. The drivers are busy serving within the city during this time



## Recommendation:

- **City Pickup points**

- There is high demand for the rides in the early morning and drivers are choosing to complete more trips within city than the long trip to airport. Drivers should be incentivized to take airport trips in the morning slots so that they will not cancel airport trip requests in early morning.
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- **Airport Pickup points**

- There are no cabs in the airport in the evening times since most of the cabs are busy serving within the city completing the trips. We should incentivize the drivers to take evening airport to city trips. This may cause lots of cabs near the airport in waiting for the trip request. We should also provide some permanent parking near the airport for cabs waiting
- It is also recommended to increase the overall cab fleet size



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Thank you!