

# ASSIGNMENT

## Uber Supply-Demand Gap

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# Business Objective

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- ❑ 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.

## Approach

- ❑ problems are systematically solved using EDA and data visualization.



# Data exploration

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❑ **6754** Unique Entries

❑ **2 Pickup Points types** comprising of Airport, City.

❑ **5 continuous days** 11<sup>th</sup>, 12<sup>th</sup>, 13<sup>th</sup>, 14<sup>th</sup> and 15<sup>th</sup> in the month of July

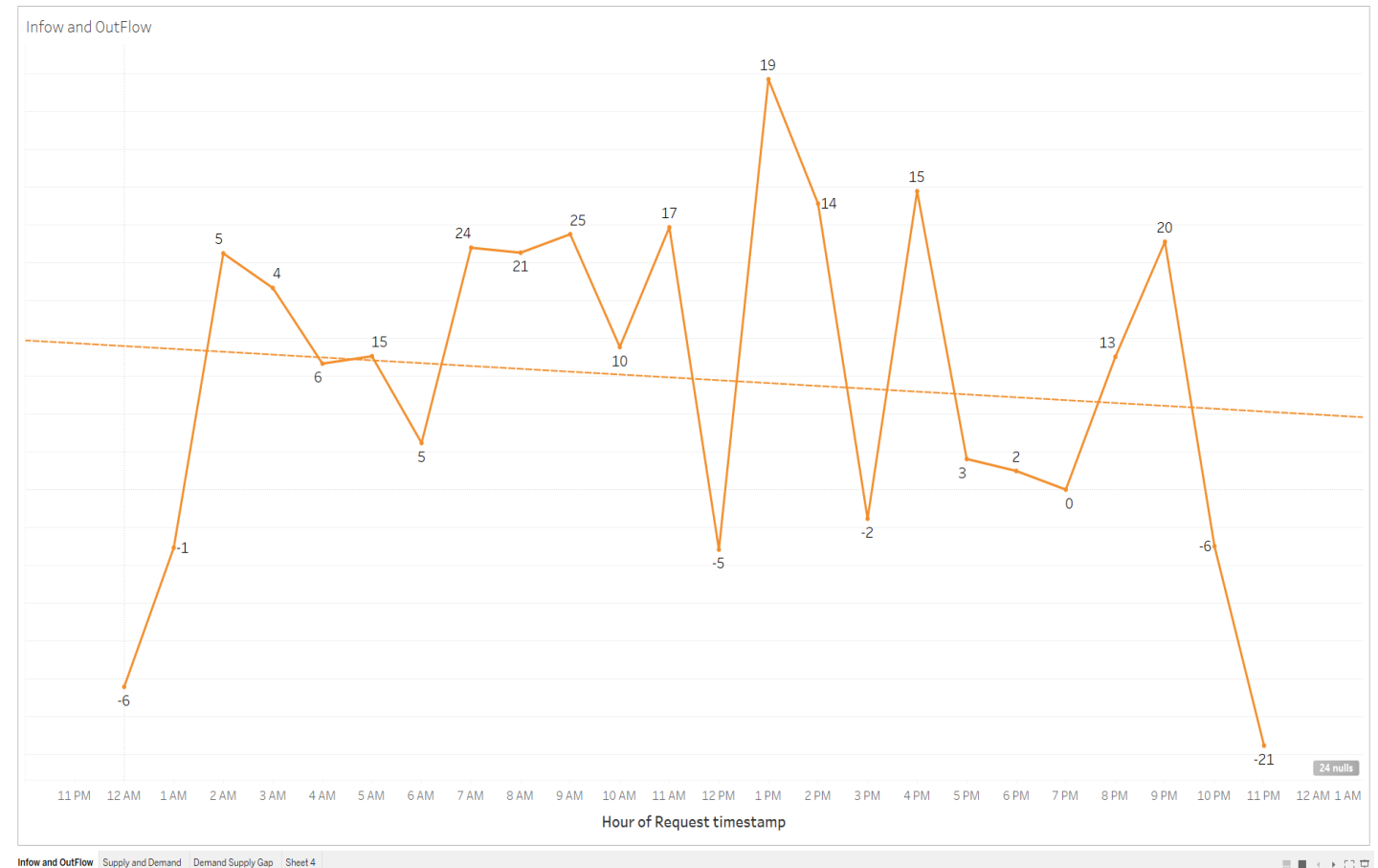
# Data Analysis

- 1) Comparing the Pick points Based on the percent of Cancelled and Car not available Rides.
- **Car Not Available** does not differ based on the pickup points and more cars needed generally in both the City and Airport.
  - **Cancelled** rides show a huge difference between Airport and City
- Assigning cars to close the demand gap in the airport first is the best ,due to the low cancel rate there.

	Pickup point	Cancelled	Car_Not_Available
0	Airport	2.935508	28.288577
1	City	15.804299	29.461760

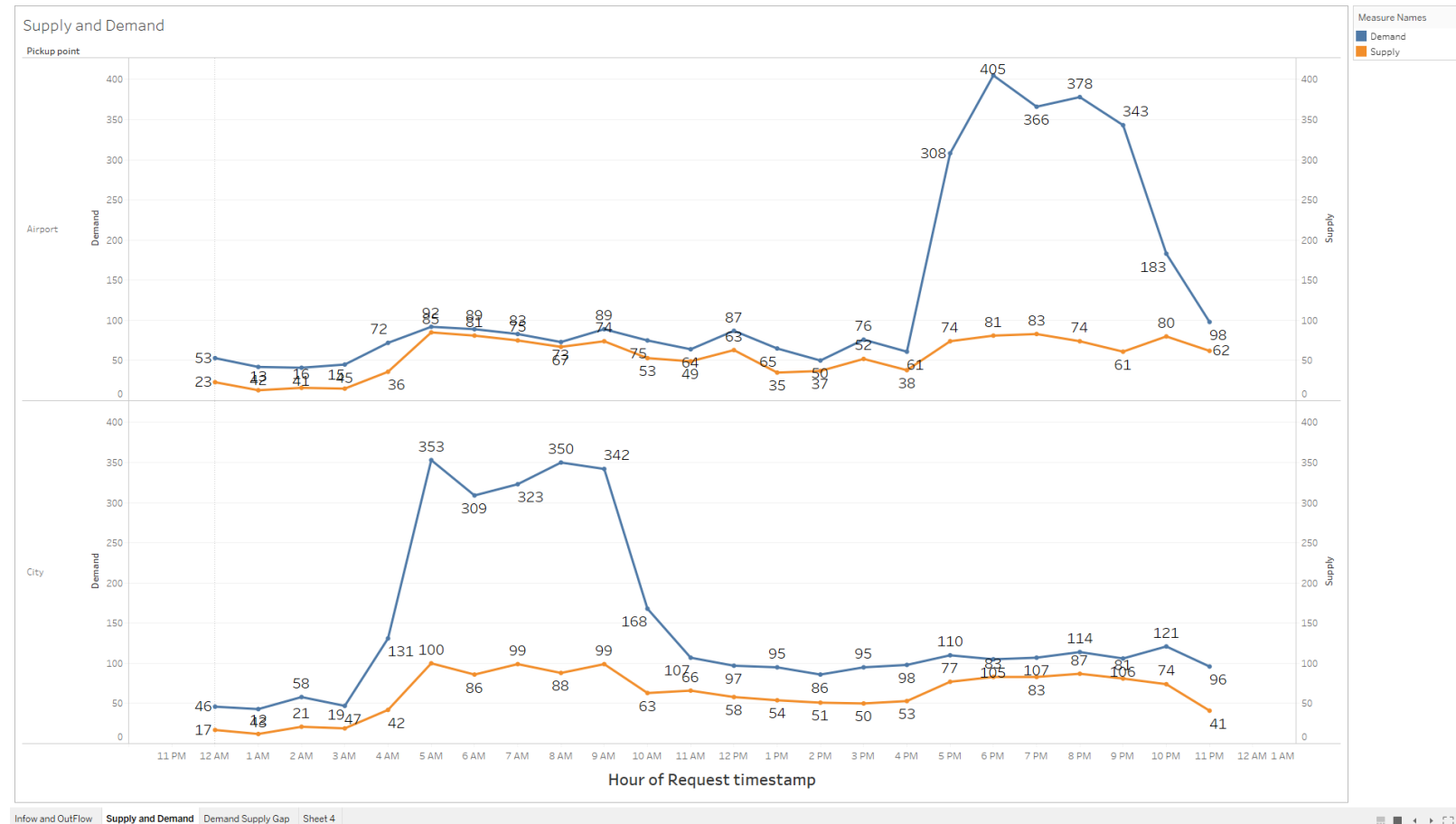
# Hourly Analysis

- Analysing the Hourly inflow and outflow of cars to and from the airport.
- Analysis reveals that the inflow of car increases through out the data, then **decreases at night** corresponding to the arriving planes.



# Demand and Supply Hourly Analysis

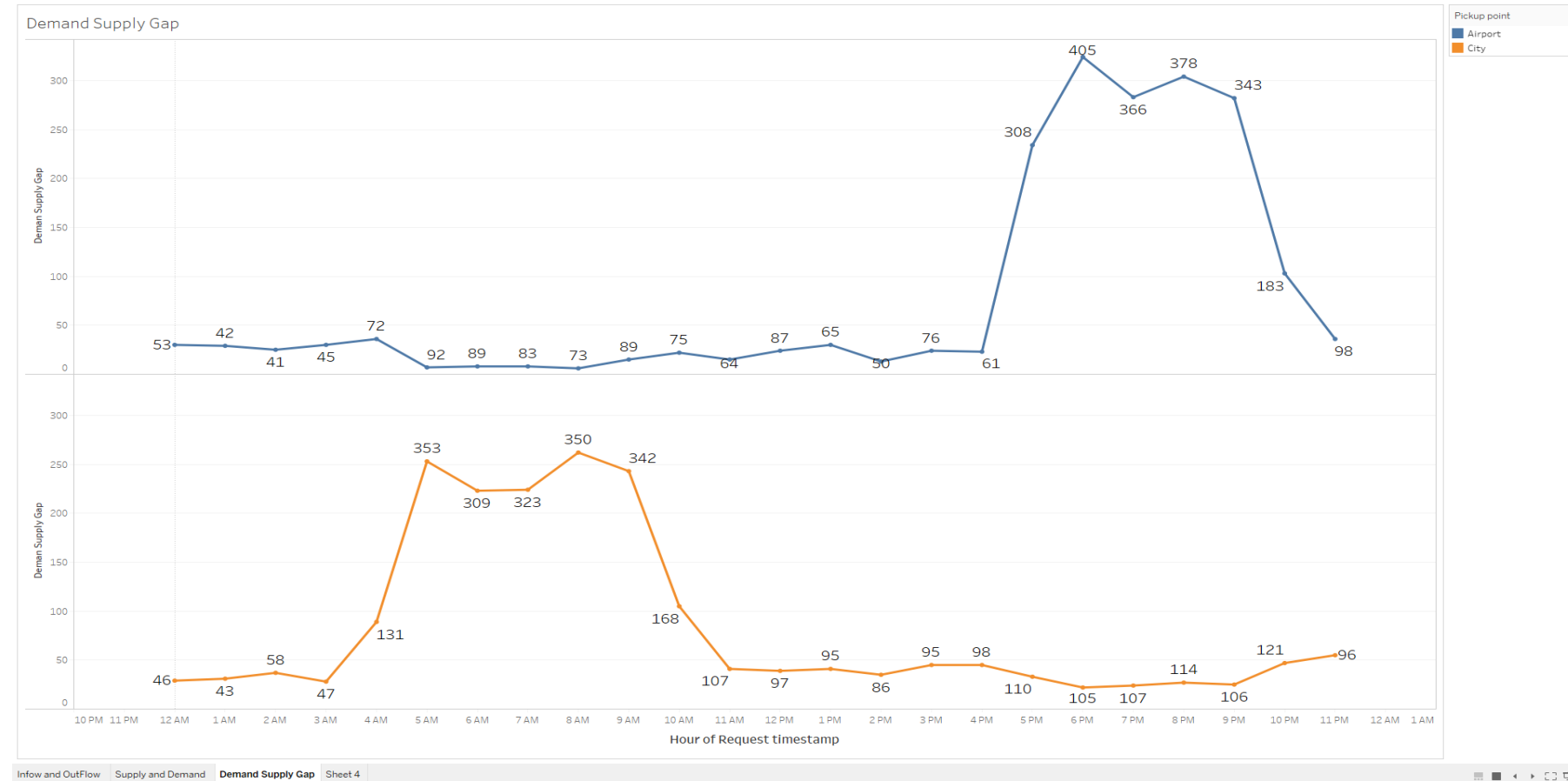
- ❑ **Airport** has a huge spike in the **demand** at Night from **5pm to 11pm**.
- More drivers must be assigned at the night by providing proper incentives such as extra pay
- ❑ **City** has a huge spike in **demand** in the early mornings when the day is starting from **04:00am to 11:00am**.
- ❑ More driver must be assigned at the night by adding proper incentives such as extra pay



# Demand and Supply Gap

❑ As we can see there is always excess demand.

- 1) Increase no of cars at night at the Airport
- 2) Increase no of cars from 5am to 11am at the City



# Conclusion

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❑ After a through analysis we can draw the following conclusion :

- **Increase** no of cars at night at the **Airport** from **5pm to 11pm**.
- **Increase** no of cars at the **City** from **04:00am to 11:00am**.
- **Assigning** car **first** to the **airport** as the riders have a **lower cancellation** rate but **Very High Demand** at night.