**DATA SCIENCE PROJECT**

**LABORATORY COURSE**

**TOPIC - Uber Pickup Analysis**

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***1) Do the business requirement for the assigned project***

There is a lot of information stored in the traffic flow data of any city. This data when mined over location can provide information about the major attractions of the city, it can help us understand the various zones of the city such as residential areas, office/school zones, highways, etc. This can help governments and other institutes plan the city better and enforce suitable rules and regulations accordingly.

The data when monitored over time can help us identify rush hours, holiday season, impact of weather, etc. This knowledge can be applied for better planning and traffic management. This can at a large, impact the efficiency of the people in the city and can also help avoid disasters, or at least faster redirection of traffic flow after accidents.

***2) Identify the project objectives from your perspective***

- To find out the pickup Hotspots from a particular area.
- Analysing the data of pickups on weekdays and weekend.
- Hour-wise analysis of Uber Pickups.
- To find out weekdays which have more pickups.
- To find out Hours of the day which are mostly busy
- To find out the impact of the Holidays on Uber Pickups
- To analyse the data based on time
- To identify the average passenger count from particular area

***3) Identify the data required***

The official website of TLC(Taxi and Limousine Comission) monthly publishes raw data of Taxi rides happened throughout the month. The file has following attributes -

lpep_pickup_datetime: The date and time of the Uber pickup.

lpep_dropoff_datetime: The date and time of the Uber dropoff.

passenger_count: The count of the passengers.

trip_distance: Average distance of trip.

PULocationID: The location of pickup.

DOLocationID: The location of dropoff.

fare_amount: Average fare amount.

tip_amount: Average tip amount.

***Reference -*** https://www1.nyc.gov/site/tlc/about/tlc-trip-record-data.page

***4) Design Model of our project***