NYC Taxi Trip Time Prediction

In New York City many of people commute to different regions of city via taxi. A lot of streets and roads in New York city are quite busy due to traffic jams, construction, or road blockage etc. Therefore, it is very important to predict the trip duration of taxi so that the user will know how much time it will take to commute from one place to other. Also, due to the increasing popularity of app-based taxi such as ola or uber and there competitive pricing levels. Decisions has to be taken by the user for opting which one to choose based on trip pricing and duration. This prediction also helps drivers to choose route having lesser trip time. We were provided with dataset which is released by NYC Taxi and Limousine Commission. This dataset contains pickup time, drop-off time, geo- coordinates, number of passengers, trip duration and several other variables.

Our primary motives are to analyze the dataset, perform feature engineering to comes up with suitable independent features and building a good model that will help us in predicting the trip duration of NYC taxi.

Here, for prediction the taxi trip duration we have applied a linear regression, decision tree, random forest to find out which will give better accuracy and with which model get lesser. So among this model random forest accuracy is better.

**Contributor role**

Nyc taxi trip time prediction project was done by group of 5 members –

**Yash Dhandar:**

* Preview Data
* Check total number of entries and column types
* Check the null values
* Plot distribution of numeric data

**Komal Landge:**

* Plot distribution of categorical data
* Data preprocessing
* Correlation through heatmap

**Abhiraj Kale:**

* Feature engineering
* Feature selection
* Normalization

**Kunal Dhote:**

* Preview Data
* Data visualization
* Map visualization

**Kanhaiya Choudhary:**

* Build model
* Model interpretation
* Comparing the Model
* Conclusion

**GitHub Link:** [**https://github.com/komallandge682000/NYC-taxi-trip-project#nyc-taxi-trip-project**](https://github.com/komallandge682000/NYC-taxi-trip-project#nyc-taxi-trip-project)

**Drive Link:** [**https://drive.google.com/drive/folders/1o4xAKTlMV-5psPe8sTuoIedD6zI\_ME22?usp=sharing**](https://drive.google.com/drive/folders/1o4xAKTlMV-5psPe8sTuoIedD6zI_ME22?usp=sharing)