

- ✓ Must import proper libraries
- ✓ Must import data used and perform feature engineering
- ✓ Must train split test data 70% 30%
- ✓ Must design x data and y data
- ✓ Create hidden layer select activation function, optimizer and loss function

X Data = pickup_date_time, pickup_longitude, pickup_latitude, dropoff_latitude, dropoff_longitude, Passenger-Count

Y Data = fare_amount

Importing models
Import pandas as pd
Import models from keras

First code only using Euclidean distance as X-data

pd.read_csv('Nyc-taxi-fares.csv')

Feature engineering
print df.isnull()

dropna(inplace=True)

Creating the euclidean distance equation

def euclidean_distance(lat1, long1, lat2, long2): # Defining the euclidean distance equation.
 return ((lat1-lat2)**2 + (long1-long2)**2)**.5

euclidean_distance = $\sqrt{(\text{dropoff_longitude} - \text{pickup_longitude})^2 + (\text{dropoff_latitude} - \text{pickup_latitude})^2}$

lat1 = df['dropoff_latitude']

lat2 = df['pickup_latitude']

long1 = df['dropoff_longitude']

long2 = df['pickup_longitude']

Providing values for the euclidean distance equation referring to our pd file

df['distance'] = euclidean_distance(df['pickup_latitude'], df['pickup_longitude'],
df['dropoff_latitude'], df['dropoff_longitude'])

x_data = df['distance']

y_data = df['fare_amount'] # Creating x and y data, x is 'distance' outcome variable
is 'fare_amount'

→ Split train and test data

Add hidden layer

add models.dense_layer 12 ('RELU')

add models.dense_layer 8 ('RELU')

add models.dense_layer 4 ('Sigmoid')