Function 2

June 16, 2022

[5]:
```
def Stockprediction(a):
    import numpy as np
    import pandas as pd
    import matplotlib.pyplot as plt
    import seaborn as sns
    import plotly.express as px
    import plotly
    import itertools
    import plotly.io as pio
    pio.renderers
    from tensorflow.keras.optimizers import Adam,RMSprop,SGD
    from tensorflow.keras.wrappers.scikit_learn import KerasClassifier
    from tensorflow.keras.wrappers.scikit_learn import KerasRegressor
    from sklearn.model_selection import GridSearchCV
    import tensorflow as tf
    from tensorflow.keras.models import Sequential
    from tensorflow.keras.layers import Dense
    from tensorflow.keras.layers import LSTM
    from sklearn.preprocessing import MinMaxScaler
    from keras.layers import Dense, LSTM
    from fbprophet.diagnostics import cross_validation
    from fbprophet.diagnostics import performance_metrics
    from fbprophet import Prophet
    from sklearn.metrics import mean_squared_error
    from sklearn.externals import joblib
    import pickle
    data = pd.read_csv("stock prices.csv")



    def loaddict():
        f = open('dict3.txt','r')
        bestparams =f.read()
        f.close()
        return eval(bestparams)

    stockparams = loaddict()
```

```
    X_Train_Fbp = data[data['date'] < '2017-01-03']
    X_Test_Fbp = data[data['date'] > '2016-12-30']
    X_Train_Fbp = X_Train_Fbp.drop(['open','high', 'low' ,'volume'], axis=1)
    X_Train_Fbp.rename(columns={'date': 'ds', 'close': 'y'}, inplace=True)
    predi = []
    stocktrain = X_Train_Fbp[(X_Train_Fbp['symbol'] == a)]
    stocktest = X_Test_Fbp[(X_Test_Fbp['symbol'] == a)]
    model = joblib.load(a+".joblib")
    stockdf = model.make_future_dataframe(periods=251)
    stockprediction = model.predict(stockdf)
    predi.extend(stockprediction.iloc[756:1007].yhat.tolist())
    actual = stocktest['close'].tolist()
    MSE_FB = mean_squared_error(actual,predi)


    return MSE_FB
```

[6]:
```
MSE = Stockprediction('AAL')
```

[7]:
```
print(MSE)
```

```
76.72636226423968
```

[ ]: