Stock_Price_Prediction

September 29, 2021

1 Stock Price Predictions

[1]:
```
import numpy as np
import pandas as pd
from sklearn.linear_model import LinearRegression

import warnings
warnings.filterwarnings("ignore")

import yfinance as yf
yf.pdr_override()
```

[2]:
```
symbol = 'AAPL'
start = '2020-01-01'
end = '2021-01-01'
df = yf.download(symbol, start, end)
df = df.reset_index()
```

```
[**********************100%**********************]  1 of 1 completed
```

[3]:
```
df.head()
```

[3]:

	Date	Open	High	Low	Close	Adj Close	Volume
0	2020-01-02	74.059998	75.150002	73.797501	75.087502	74.207466	135480400
1	2020-01-03	74.287498	75.144997	74.125000	74.357498	73.486023	146322800
2	2020-01-06	73.447502	74.989998	73.187500	74.949997	74.071579	118387200
3	2020-01-07	74.959999	75.224998	74.370003	74.597504	73.723213	108872000
4	2020-01-08	74.290001	76.110001	74.290001	75.797501	74.909149	132079200

[4]:
```
df.tail()
```

[4]:

	Date	Open	High	Low	Close	Adj Close	\
248	2020-12-24	131.320007	133.460007	131.100006	131.970001	131.549637	
249	2020-12-28	133.990005	137.339996	133.509995	136.690002	136.254608	
250	2020-12-29	138.050003	138.789993	134.339996	134.869995	134.440399	
251	2020-12-30	135.580002	135.990005	133.399994	133.720001	133.294067	
252	2020-12-31	134.080002	134.740005	131.720001	132.690002	132.267349	

```
        Volume
248   54930100
249  124486200
250  121047300
251   96452100
252   99116600
```

[5]:
```
X_train = df[df.columns[1:5]] # data_aal[['open', 'high', 'low', 'close']]
Y_train = df['Adj Close']
```

[6]:
```
X_train = X_train.values[:-1]
Y_train = Y_train.values[1:]
```

[7]:
```
lr = LinearRegression()
```

[8]:
```
lr.fit(X_train, Y_train)
```

[8]:
```
LinearRegression()
```

[9]:
```
X_test = df[df.columns[1:5]].values[:-1]
Y_test = df['Adj Close'].values[1:]
```

[10]:
```
lr.score(X_test, Y_test)
```

[10]:
```
0.987547268803486
```

[11]:
```
opening_price = float(input('Open: '))
high = float(input('High: '))
low = float(input('Low: '))
close = float(input('Close: '))
print('My Prediction the opening price will be:', lr.predict([[opening_price,␣
 ↪high, low, close]])[0])
```

```
My Prediction the opening price will be: 131.1166343705545
```