import numpy as np

import pandas as pd

import matplotlib.pyplot as plt

import seaborn as sns

import io

from google.colab import files

uploaded = files.upload()

data=pd.read\_csv('NFLX.csv')

data

**Date Open High Low Close Adj Close Volume**

1. **2018-02-05 262.000000 267.899994 250.029999 254.259995 254.259995 11896100**
2. **2018-02-06 247.699997 266.700012 245.000000 265.720001 265.720001 12595800**
3. **2018-02-07 266.579987 272.450012 264.329987 264.559998 264.559998 8981500**
4. **2018-02-08 267.079987 267.619995 250.000000 250.100006 250.100006 9306700**
5. **2018-02-09 253.850006 255.800003 236.110001 249.470001 249.470001 16906900**

**... ... ... ... ... ... ... ...**

1. **2022-01-31 401.970001 427.700012 398.200012 427.140015 427.140015 20047500**
2. **2022-02-01 432.959991 458.480011 425.540009 457.130005 457.130005 22542300**
3. 2022-02-02 448.250000 451.980011 426.480011 429.480011 429.480011 14346000
4. 2022-02-03 421.440002 429.260010 404.279999 405.600006 405.600006 9905200
5. 2022-02-04 407.309998 412.769989 396.640015 410.170013 410.170013 7782400
6. rows × 7 columns

data.shape

(1009, 7)

data.columns

Index(['Date', 'Open', 'High', 'Low', 'Close', 'Adj Close', 'Volume'], dtype='object')

data.dtypes

Date object

Open float64

High float64

Low float64

Close float64

Adj Close float64

Volume int64

dtype: object

data.isna().sum()

Date 0

Open 0

High 0

Low 0

Close 0

Adj Close 0

Volume 0

dtype: int64

from sklearn.preprocessing import LabelEncoder

le=LabelEncoder()

data['Date']=le.fit\_transform(data['Date'])

x=data.iloc[:,:-2].values

y=data.iloc[:,-1].values

x

array([[0.00000000e+00, 2.62000000e+02, 2.67899994e+02, 2.50029999e+02,

2.54259995e+02],

[1.00000000e+00, 2.47699997e+02, 2.66700012e+02, 2.45000000e+02,

2.65720001e+02],

[2.00000000e+00, 2.66579987e+02, 2.72450012e+02, 2.64329987e+02,

2.64559998e+02],

...,

[1.00600000e+03, 4.48250000e+02, 4.51980011e+02, 4.26480011e+02,

4.29480011e+02],

[1.00700000e+03, 4.21440002e+02, 4.29260010e+02, 4.04279999e+02,

4.05600006e+02],

[1.00800000e+03, 4.07309998e+02, 4.12769989e+02, 3.96640015e+02,

4.10170013e+02]])

Y

array([11896100, 12595800, 8981500, . . . , 14346000, 9905200, 7782400])

from sklearn import model\_selection

model\_selection.train\_test\_split(x,y)

[array([[753. , 542.01001 , 555.47998 , 538.929993, 548.159973],

[ 59. , 310.359985, 313.480011, 306.690002, 313.299988],

[150. , 352.269989, 352.5 , 343.079987, 348.410004],

...,

[633. , 479.75 , 480.920013, 466.549988, 466.929993],

[972. , 598.710022, 602.289978, 588.130005, 597.98999 ],

[676. , 548.809998, 551.809998, 538.23999 , 539.809998]]),

array([[102. , 385.450012, 398.380005, 380. , 398.179993],

[454. , 309.100006, 311.399994, 304.410004, 310.480011],

[909. , 578.169983, 584.619995, 575.369995, 582.869995],

...,

[954. , 690. , 700.98999 , 686.090027, 691.690002],

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[539. , 359.089996, 368.559998, 353. , 357.119995]]),

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5386500, 11168600, 17718000, 7487000, 2732800, 13478600,

7948800])]

from sklearn import model\_selection

x\_train,x\_test,y\_train,y\_test=model\_selection.train\_test\_split(x,y)

print(x\_train.shape)

print(y\_train.shape)

print(x\_test.shape)

print(y\_test.shape)

(756, 5)

(756,)

(253, 5)

(253, )

from sklearn.kernel\_ridge import KernelRidge

alg1=KernelRidge()

alg1.fit(x\_train,y\_train)

KernelRidge

KernelRidge()

y\_pred=alg1.predict(x\_test)

accuracy=alg1.score(x\_train,y\_train)

print(accuracy)

0.37463613561103737

accuracy2=alg1.score(x\_test,y\_pred)

print(accuracy2)

1.0

from sklearn.linear\_model import LinearRegression

alg1=LinearRegression()

alg1.fit(x\_train,y\_train)

LinearRegression

LinearRegression()

y\_pred=alg1.predict(x\_test)

accuracy=alg1.score(x\_train,y\_train)

print(accuracy)

0.5225290761295525

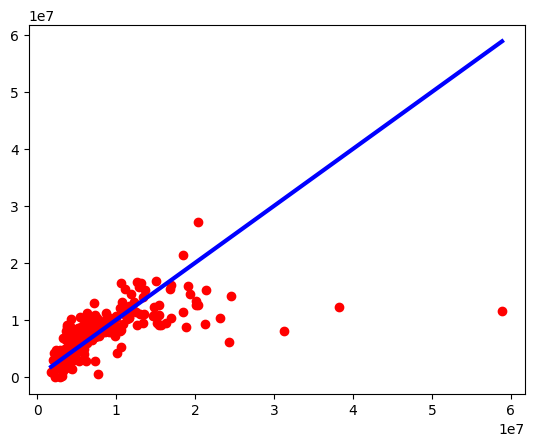
accuracy2=alg1.score(x\_test,y\_pred)

print(accuracy2)

1.0

import matplotlib.pyplot as plt

plt.scatter(y\_test,y\_pred,color='red')

plt.plot([y\_test.min(),y\_test.max()],[y\_test.min(),y\_test.max()],color='blue',linewidth=3) 

plt.show()

#plot outputs

plt.figure(figsize=(10,6))

plt.scatter(y\_test, y\_pred, color='black', alpha=0.5)

plt.plot([y\_test.min(), y\_test.max()], [y\_test.min(),y\_test.max()], color='blue',linewidth=3)

plt.xlabel('Actual')

plt.ylabel('Predicted')

plt.title('Actual vs Predicted')

plt.grid(True)

plt.show()

