STOCK PRICE PREDICTION

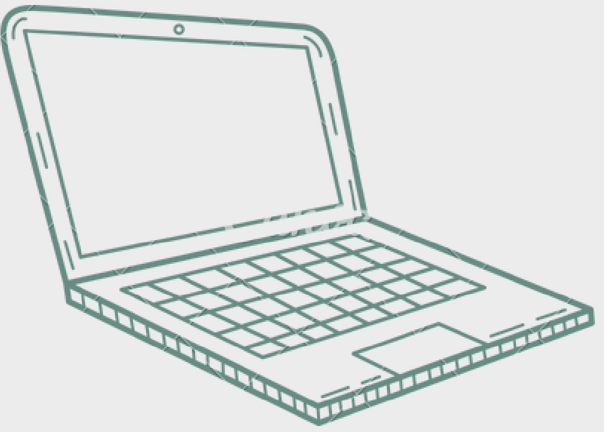
Presented by :N.Praveena

INTRODUCTION:

Stock Price Prediction using machine learning helps you discover the future value of company stock and other financial assetstraded on an exchange. The entire idea of predicting stock prices is to gain significant profits. Predicting how the stock market will perform is a hard task to do text

ABSTRACT

- **In Stock Market Prediction, the aim is to predict the future value of the financial stocks of a company. The recent trend in stock market prediction technologies is the use of machine learning which makes predictions based on the values of current stock market indices by training on their previous values.**



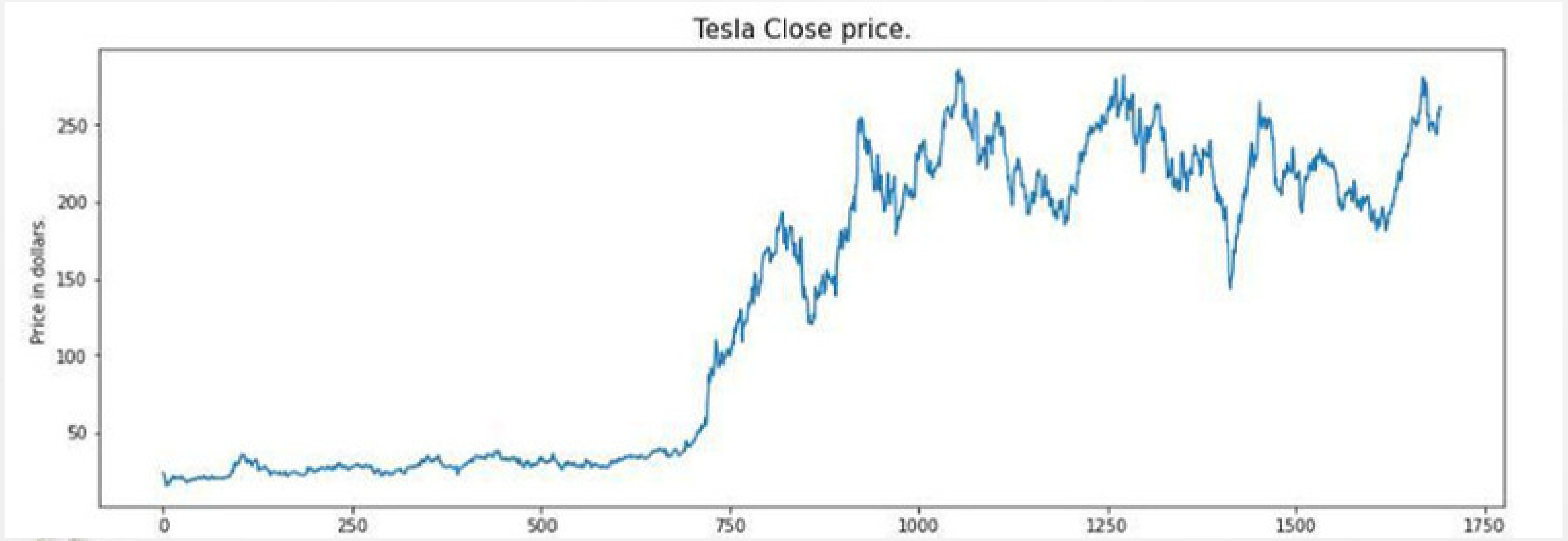
EXPLORATORY ALALYSIS

- To begin this exploratory analysis, first import libraries and define functions for plotting the data using matplotlib. Depending on the data, not all plots will be made.

PROGRAM

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sb
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.linear_model import LogisticRegression
from sklearn.svm import SVC
from xgboost import XGBClassifier
from sklearn import metrics
features = ['Open', 'High', 'Low', 'Close', 'Volume']
 plt.subplots(figsize=(20,10))
 for i, col in enumerate(features):
plt.subplot(2,3,i+1)
sb.distplot(df[col])
plt.show()
```

OUTPUT

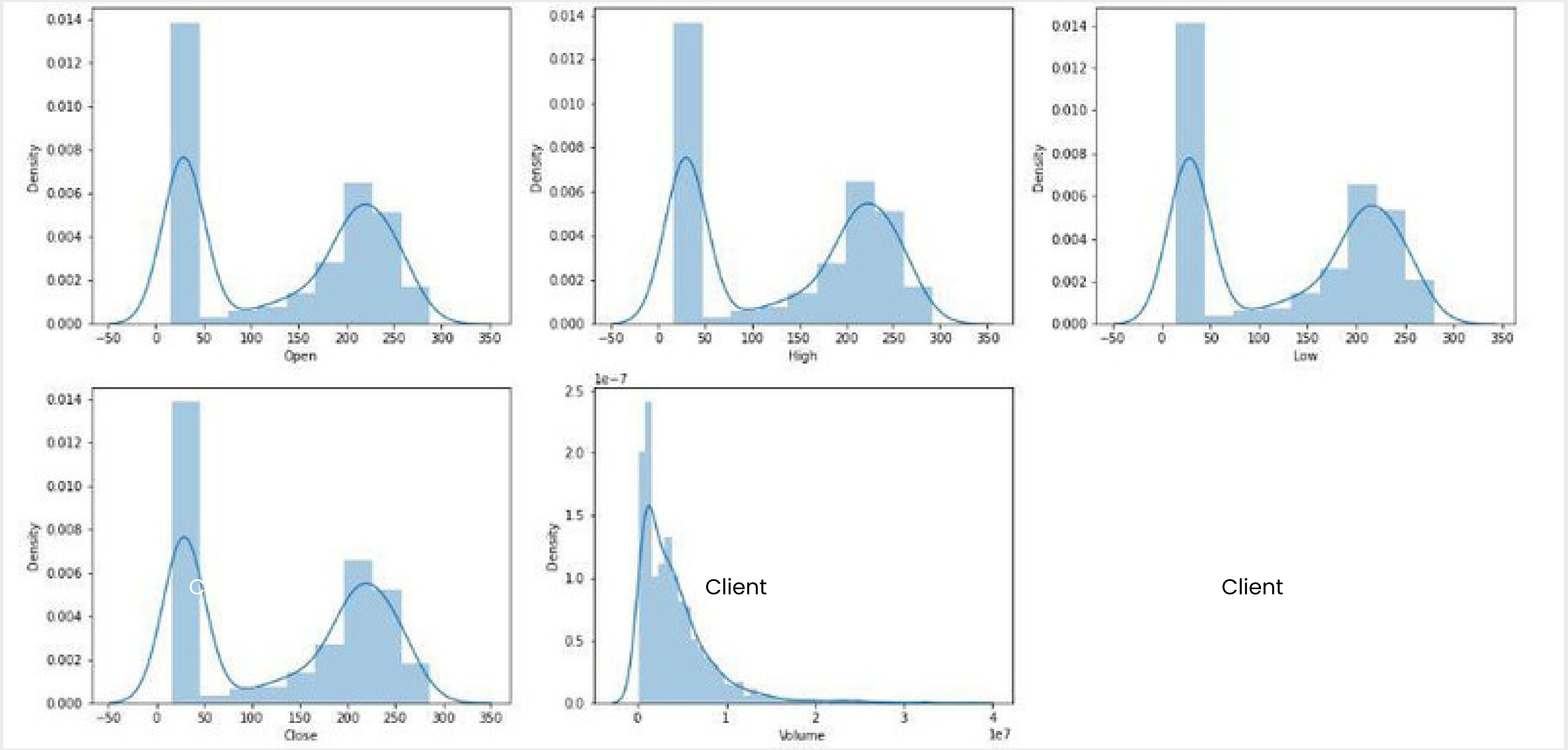


Tesla Close price.
Price in dollars.
250
200
150
100
50
0
250
500
750
1000
1250
1500
1750

```
features = ['Open', 'High', 'Low',
'Close', 'Volume']
plt.subplots(figsize=(20,10))
for i, col in enumerate(features):
plt.subplot(2,3,i+1)
sb.distplot(df[col])
plt.show()
```

```
features = ['Open', 'High', 'Low', 'Close', 'Volume']

plt.subplots(figsize=(20,10))

for i, col in enumerate(features):

 plt.subplot(2,3,i+1)

sb.distplot(df[col])

plt.show()
```

OUTPUT



Client

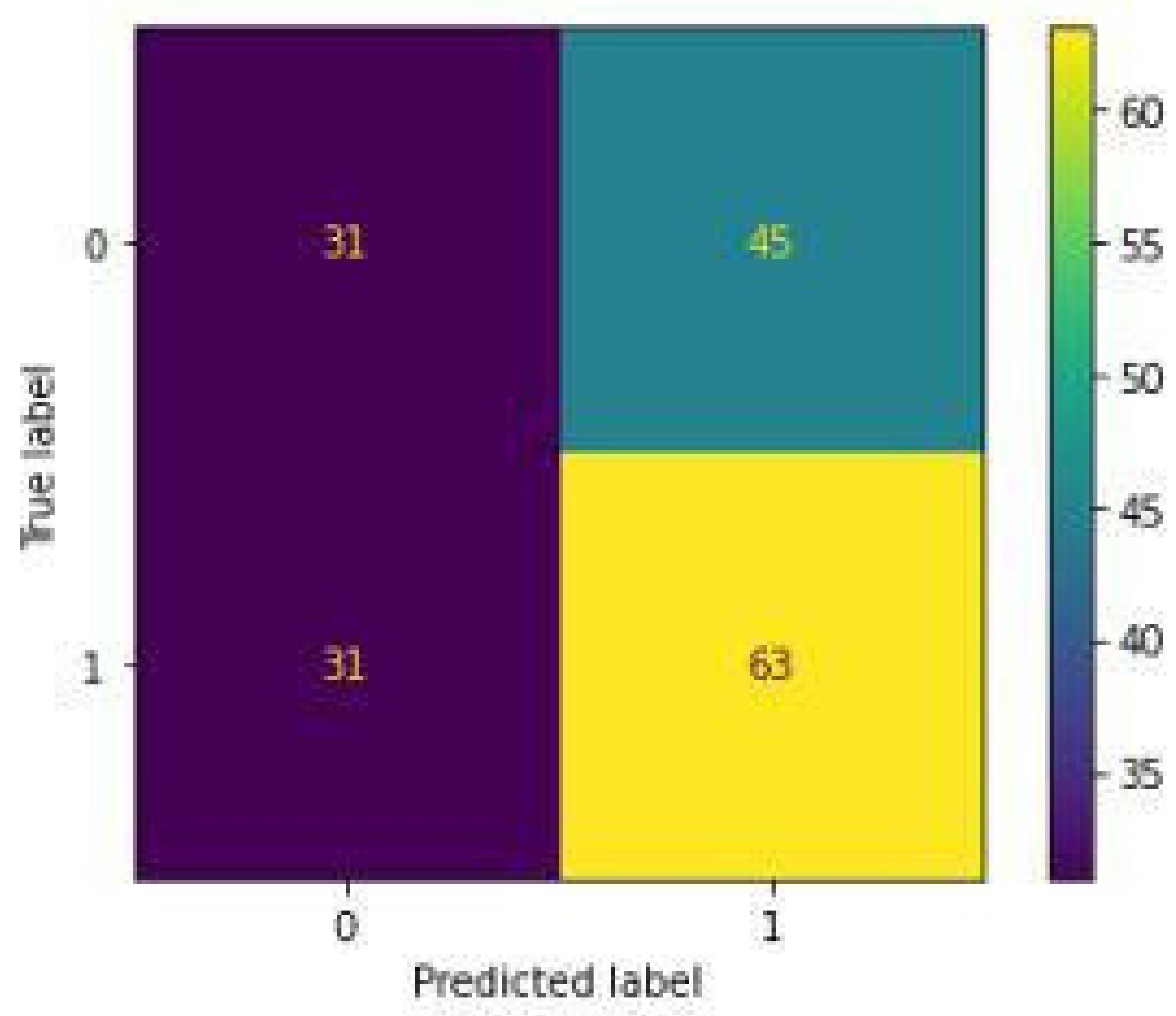
Client

we have trained XGBClassifier has the highest performance but it is pruned to overfitting as the difference between the training and the validation accuracy is too high. But in the case of the Logistic Regression, this is not the case.

Now let’s plot a confusion matrix for the validation data.

```
metrics.plot_confusion_matrix(models[0],
X_valid, Y_valid)
plt.show()
```

OUTPUT



CONCLUSION

A stock price is a given for every share issued by a publicly-traded company. The price is a reflection of the company's value – what the public is willing to pay for a piece of the company.