Capstone Project Submission

Instructions:

i) Please fill in all the required information.

ii) Avoid grammatical errors.

Team Member's Name, Email and Contribution:
1. Rishekh Dubey 91221rishekhdubey@gmail.com
Please paste the GitHub Repo link.
Github Link:- https://github.com/Rishekh/Yes-Bank-Stock-Price/blob/main/Project.ipynb Drive link:- https://drive.google.com/drive/folders/1TT8Y2PNAbcGn8CO6ZhS8_3GYWZTr9fAr?usp=sharing
Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)

Problem Statement:

Yes Bank is a well-known bank in the Indian financial domain. Since 2018, it has been in the news because of the fraud case involving Rana Kapoor.
Owing to this fact, it was interesting to see how that impacted the stock prices of the company and whether Time series models or any other predictive models can do justice to such situations.
This dataset has monthly stock prices of the bank since its inception and includes closing, starting, highest, and lowest stock prices of every month.

Objective:

The objective is that we are required to build a model to predict the stock closing price of the month with the available dataset.

Data Set Used:

Data_YesBank_Stock

Scientific Computing tool & Data manipulation:

1. NumPy
2. Pandas
3. Sklearn

Visualization libraries used:

1. Matplotlib
2. Seaborn

Contribution Role:

1. **Rishekh Dubey**

★ Data_YesBank_Stock df

Cleaning & transforming each feature in Data_YesBank_Stock

★ Null value treatment
★ Removing outliers
★ IQR based filtering
★ Opening Price of the stocks
★ Highest and Lowest stock price over the months
★ Stock closing price
★ Heatmap Correlation Matrix
★ Standardization
★ Train and Test Analysis
★ Finding R2 and Adjusted R2 values
★ Predicted value vs Actual value

Conclusion:

We have a dataset of bank stock prices after the inception and it includes closing, starting, highest, and lowest stock prices of every month.

We have reviewed the dataset and tried to build the model to predict the stock closing price of the month with the available dataset.

We have plotted multiple line plots so that we can monitor the trend in the stock market dataset. We can see that after the fraud case in the year 2018 the stock prices for the yes bank has dropped spontaneously.

So in order to achieve our target to predict the stock closing prices, we have used train test split analysis.

After applying train test split analysis and plotting the graph we can see that the error between the predicted and actual value is minimum which means our model prediction values is as good as the actual values.

As we can see from the value of R2 and Adjusted R2 it proves that our model is predicting the stock closing price very efficiently.