# Final Project "Daily Financial Investment Risk Aid"

CSCI 4231: Data Storage and Analysis, Spring 2023, KBTU

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Motivation and Objective

The daily financial investment risk aid is intended to deliver unified financial assistance by combining hard facts with social media data. It will provide users with historical stock movement information, forecasts for future closing costs, and trending viral terms and phrases on social media. The daily financial investment risk aid's ultimate purpose is to provide a tool that supports users in making informed investment decisions based on a combination of hard data and social media trends.
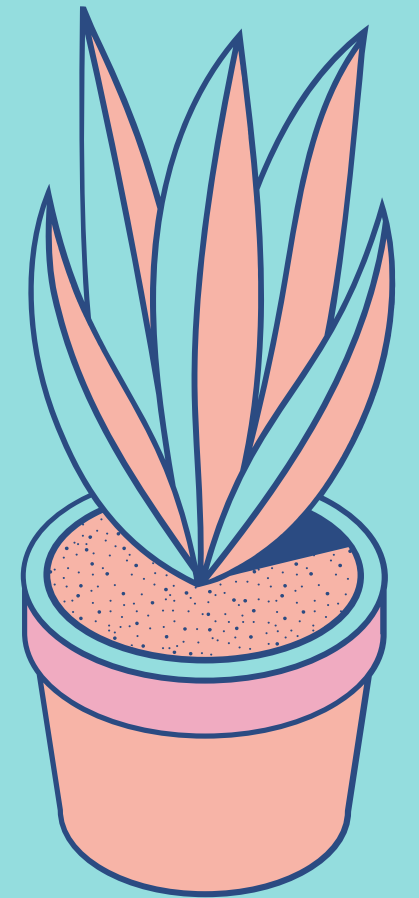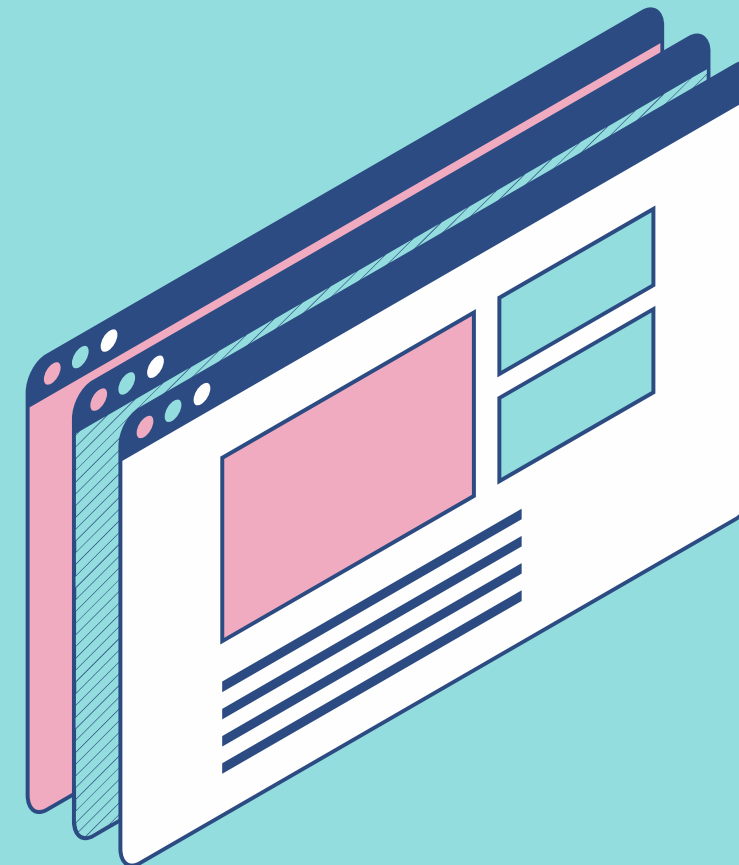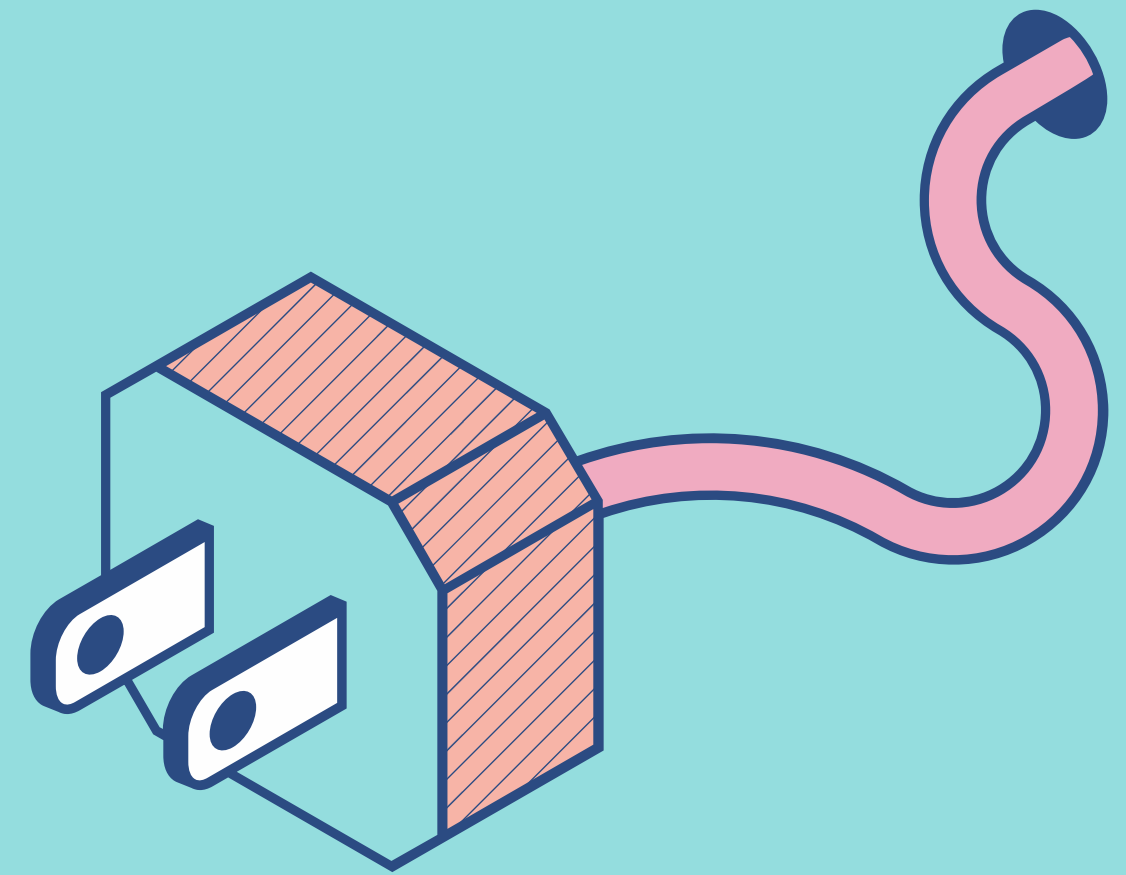
The problem lies in determining the forecasts of the future value of the shares.
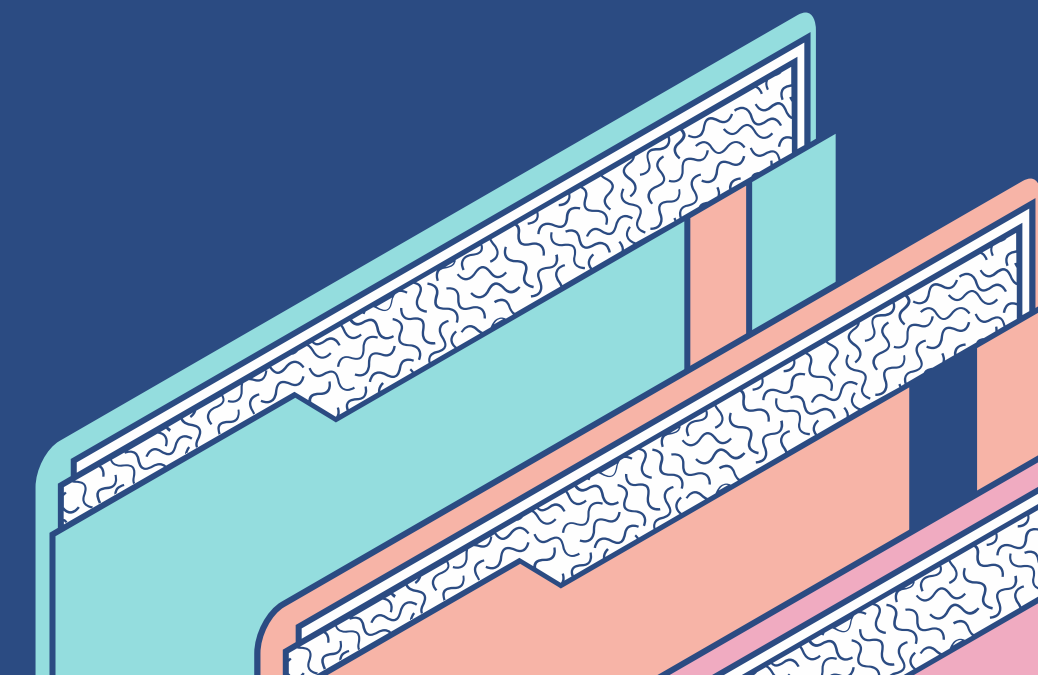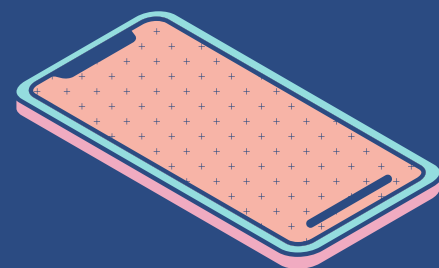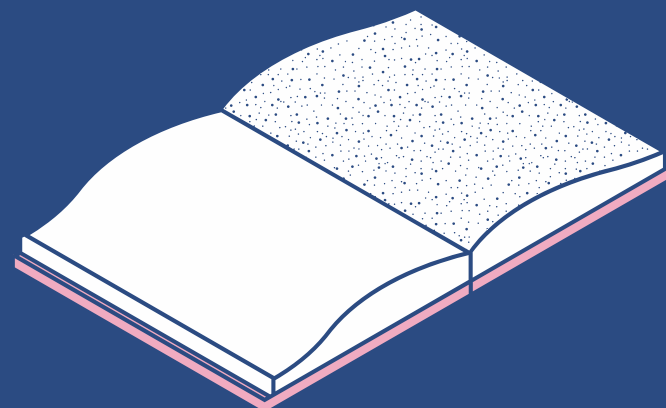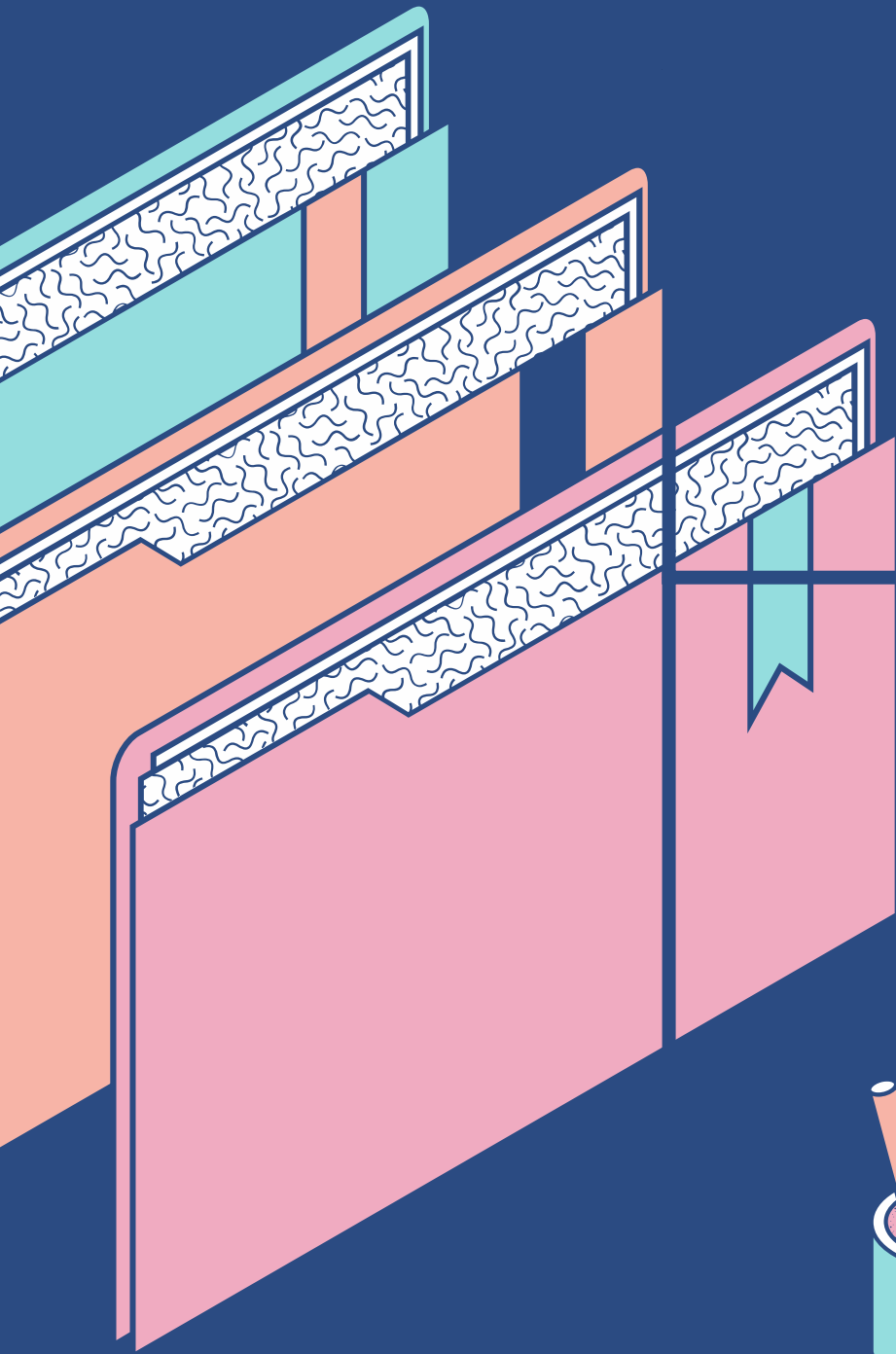
Algorithm and Training Model

A total of 4 unique datasets are being collected daily for the processing and visualization of relevant financial and global event data. Each dataset have columns such like: Open, High, Low, Close, Volume, Dividends, Stock Splits, Year, Month, Day, Hour, Minute.

The project uses a Linear Regression model using the Pyspark library.

Results and Performance Evaluation

Closing Price over Time

Actual vs. Predicted Close Prices for May 2022
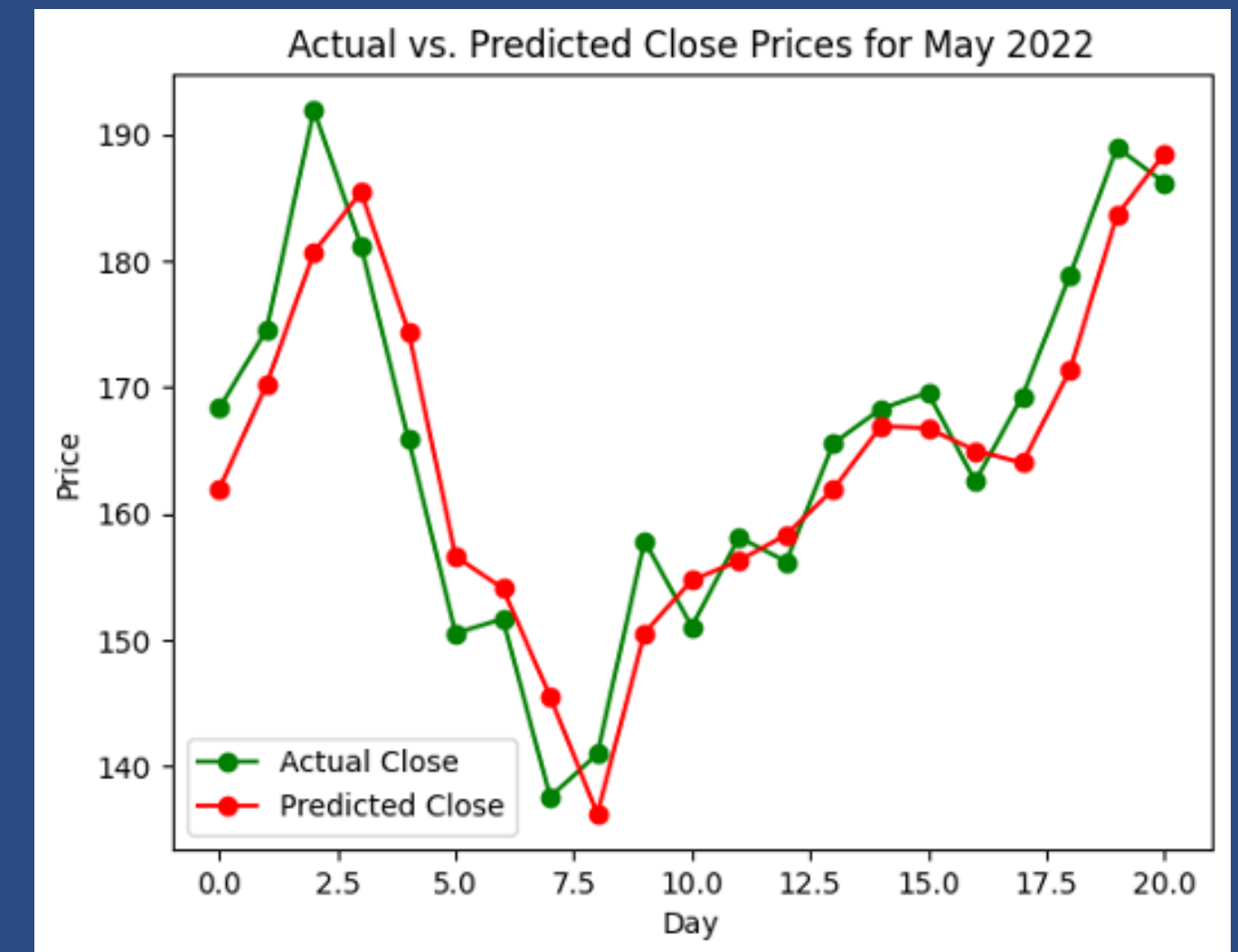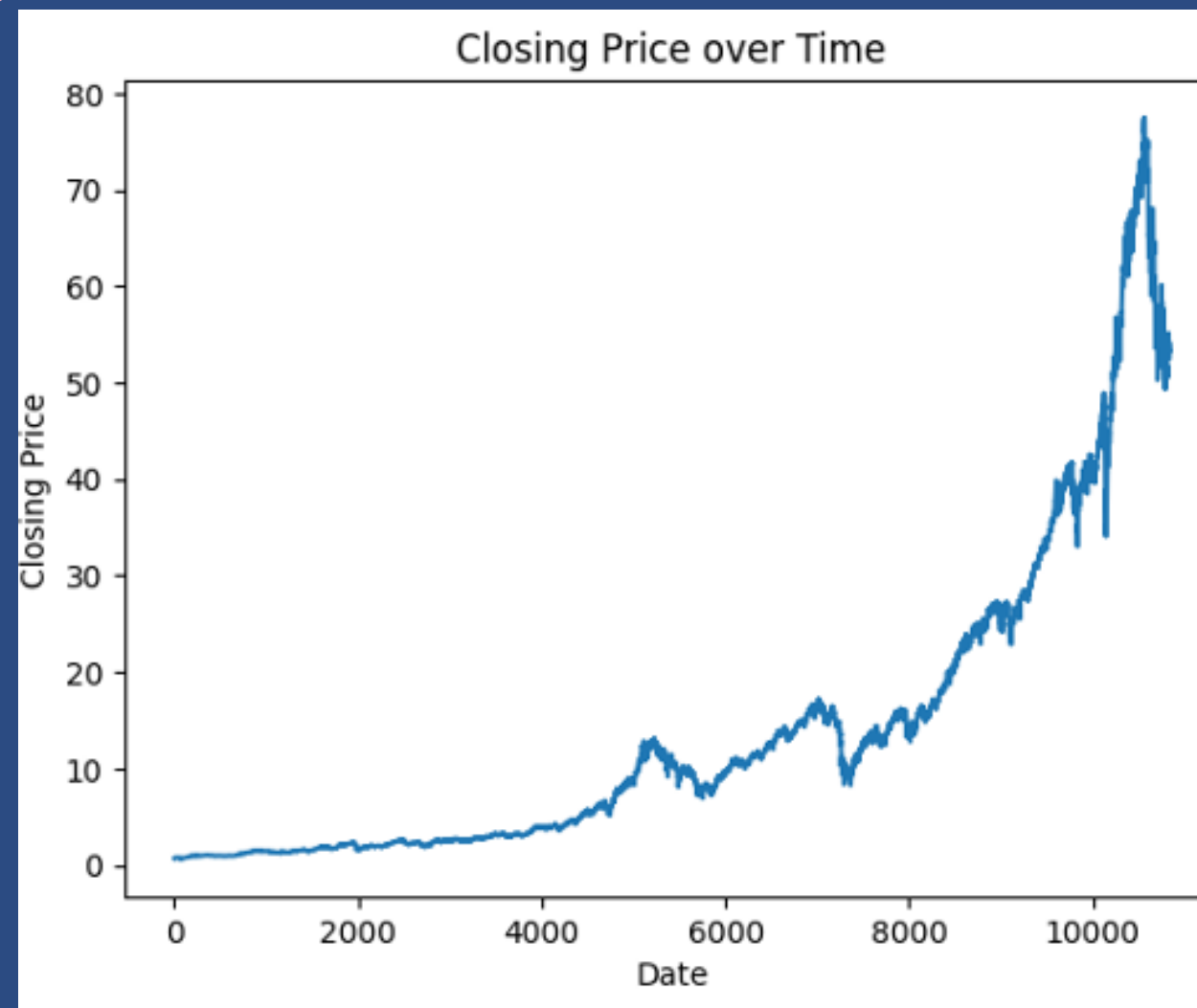
RMSE: 2.409557968299586
MSE: 5.805969602596028
R2: 0.998993443148851

Close vs Predicted Close by Year

Close vs Predicted Close for 2022
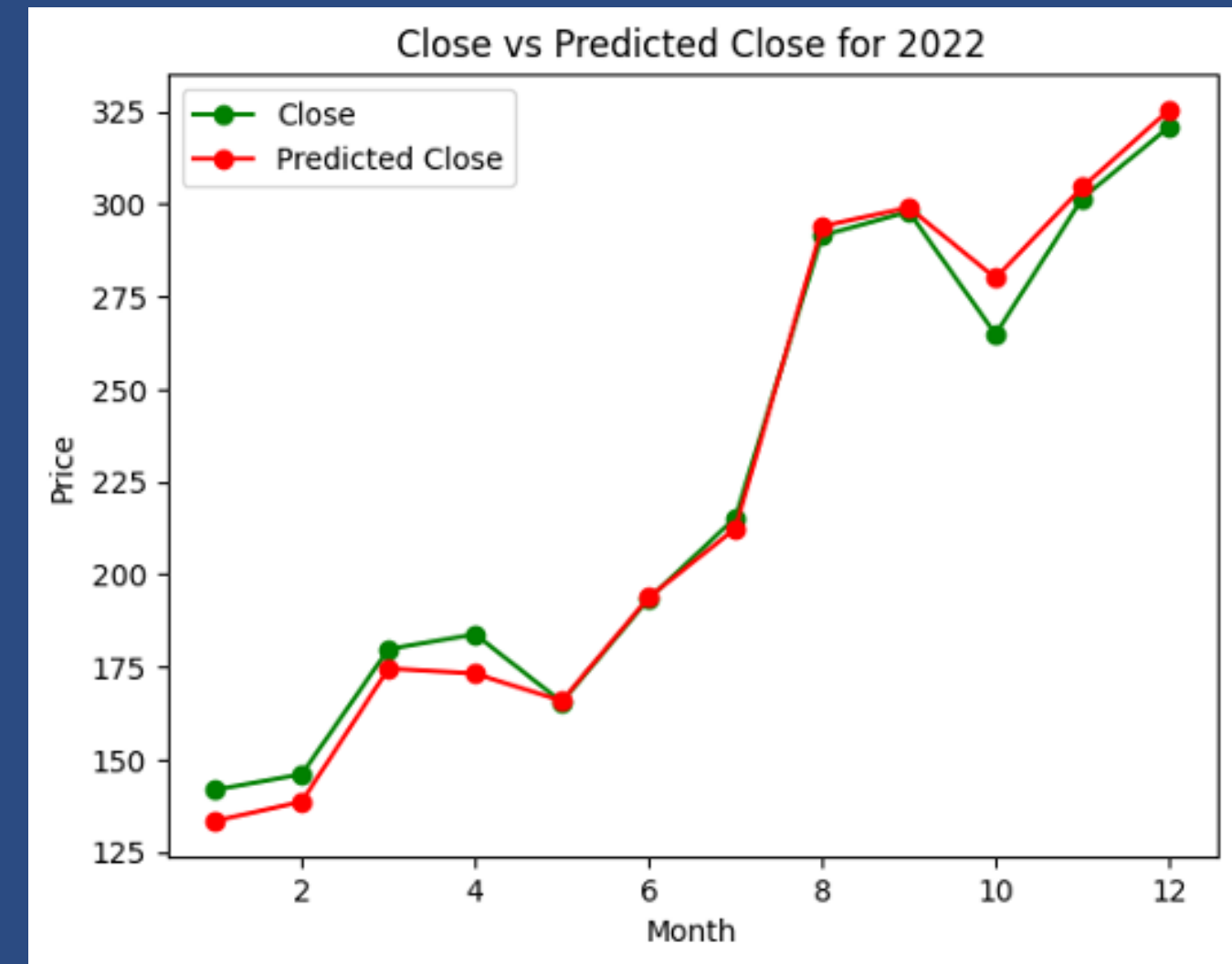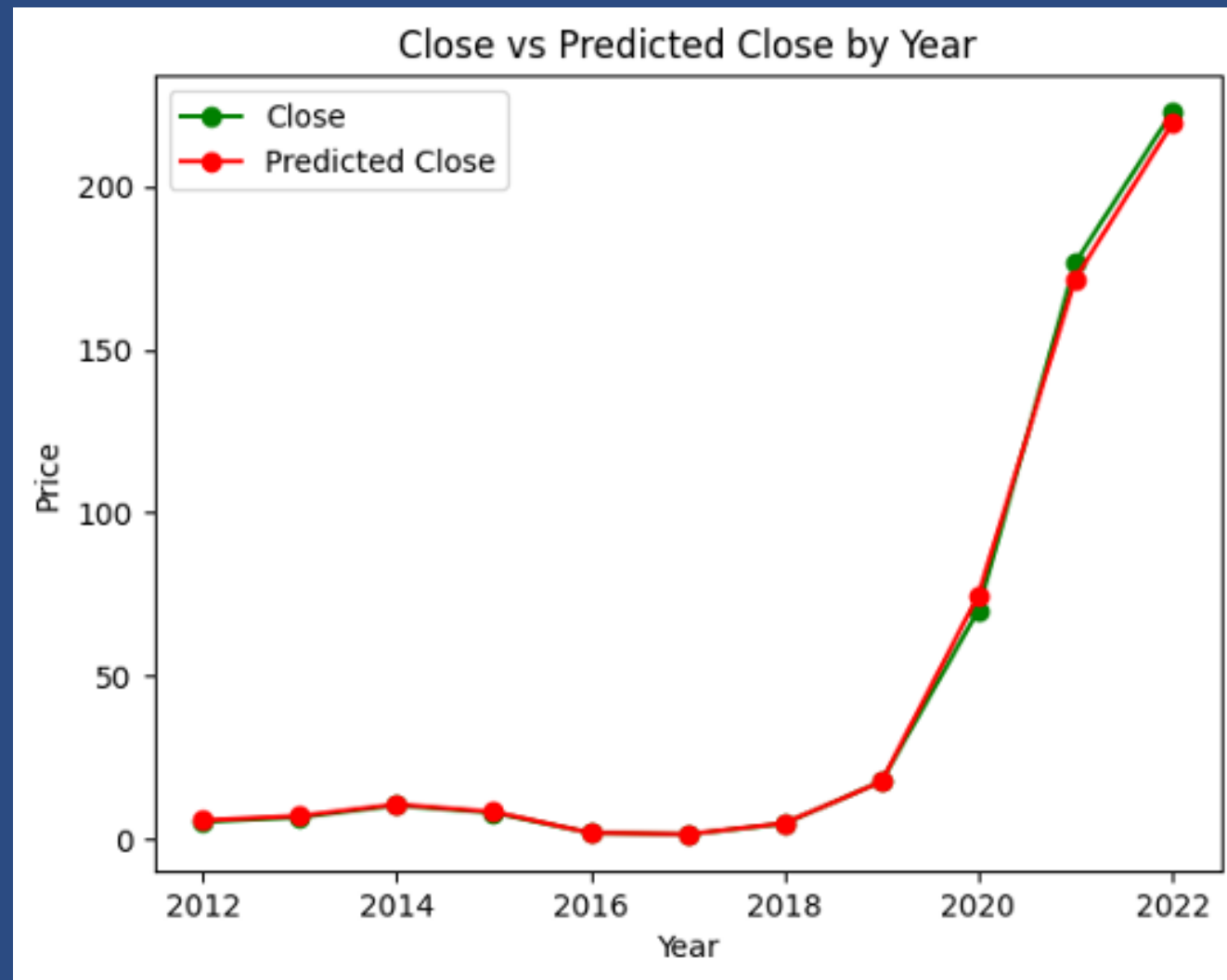
Conclusion

The Daily Financial Risk Aid created a cloud computing platform to provide investors with valuable information. The project utilized a cloud computing backend, open-source data acquisition libraries, and open-source repository frameworks for storage, resulting in a consolidated front-end financial visualizer for users. Future work could build upon this project by visualizing different investment vehicles, sourcing social discord from other social media platforms, and utilizing further models for investment predictions.

GitHub: https://github.com/Kozhakhmet21/Final-Project---Data-Storage-Analysis

Thank you for your attention!
Have a nice day!