

Xenalytics Report

Stock Price Analysis of Companies



Authors:

Hatim Talwara , Joel Alphonso

1. Proposed company/companies for investment

Companies which are the best to invest in based on their performance and overall stock trends are:

SYNTHIFY (Number 1)

NEXUS (Number 2)

QUANTUMIZE (Number 3)

2. Strategy/Reason

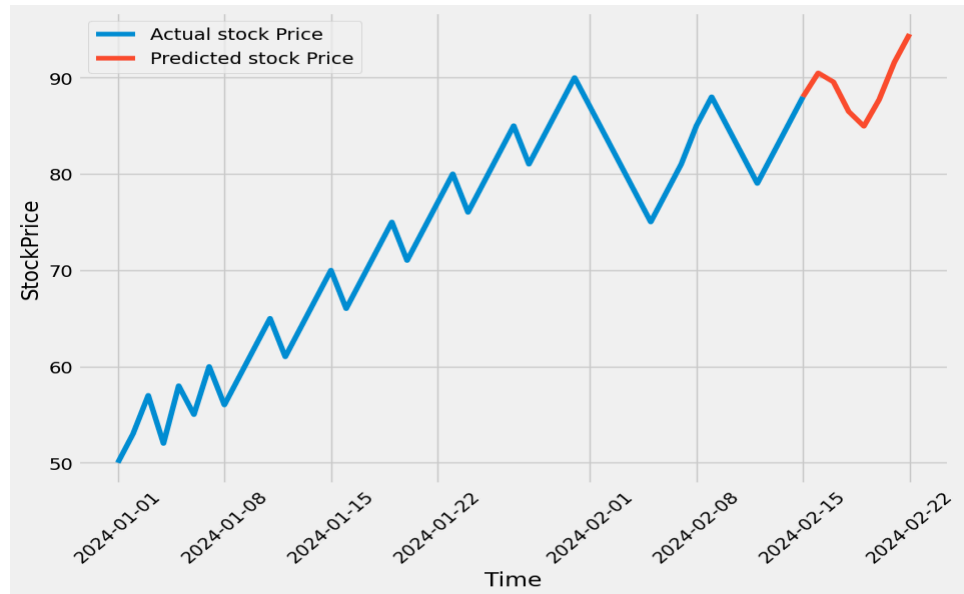
The reason provided for investing in these companies is based on the trend charts and the news of these companies affecting their market value

- **SYNTHIFY** has been top choice as the company's stock price graph indicates its stock price always lies in between \$ 140 to \$165 and no negative news surrounds it which indicates its stability in the market
- **NEXUS** comes next in our list as it recently won prestigious innovator award and its stock price also fluctuates between \$100 and \$125 and likely will increase in the upcoming days
- **QUANTUMIZE** is our final recommendation as it has been leading in renewable energy space and since its stock have larger fluctuations between \$68 to \$94 we will carefully place our investment budget in sight

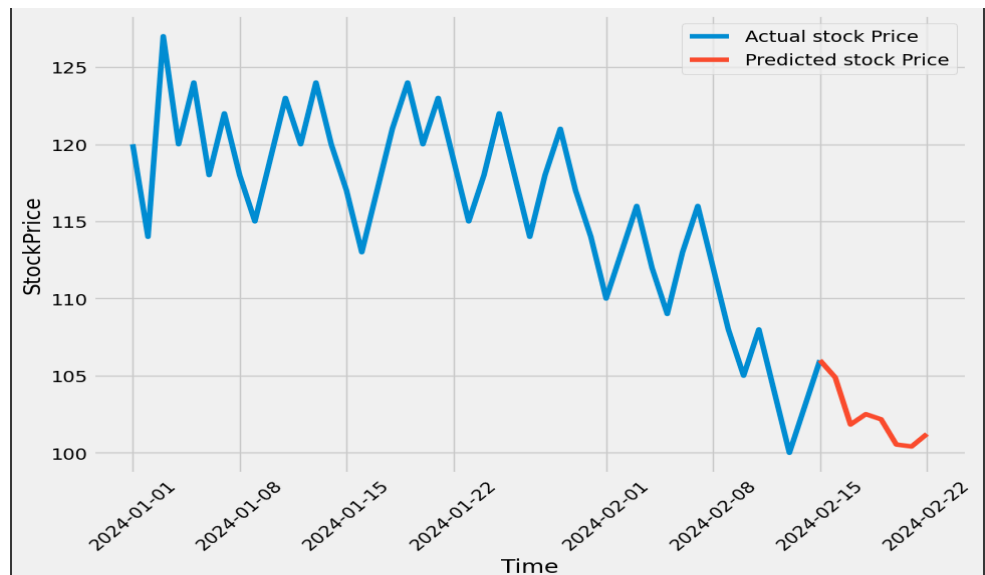
3. Data Visualization

Our Predictions for the next 7 Days

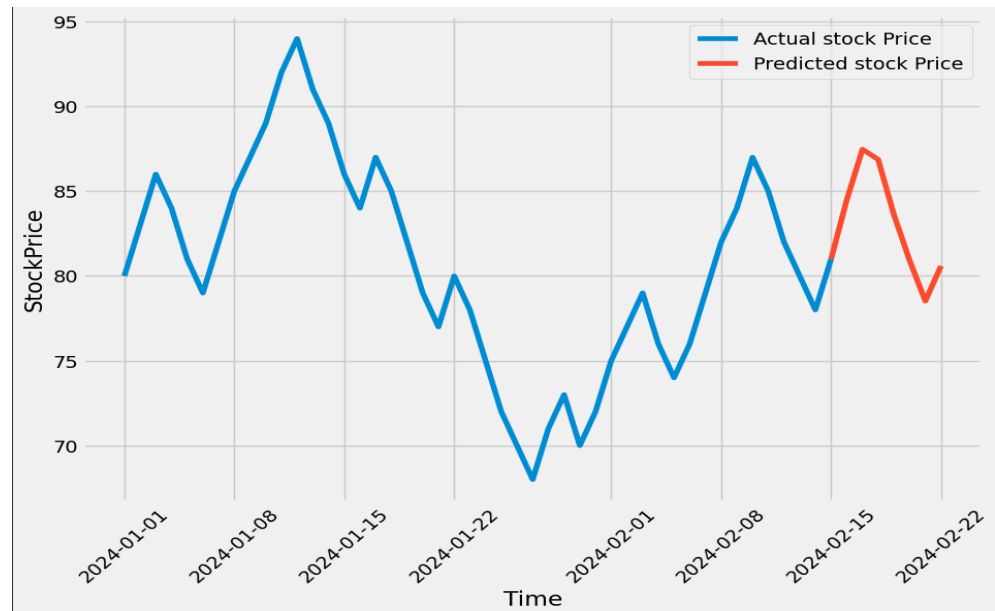
1) Lumina



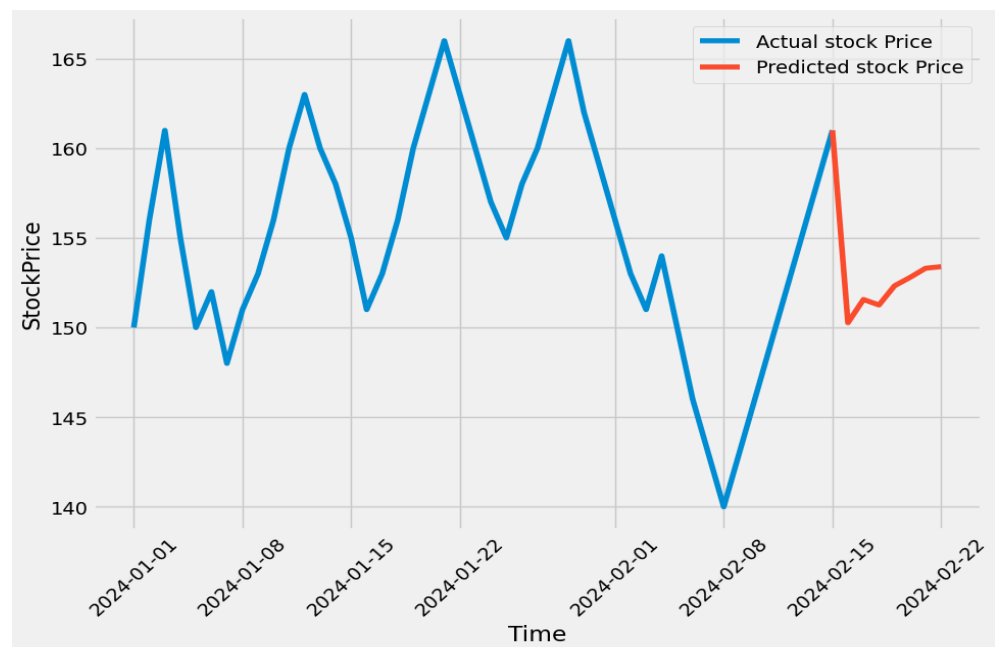
2) Nexus



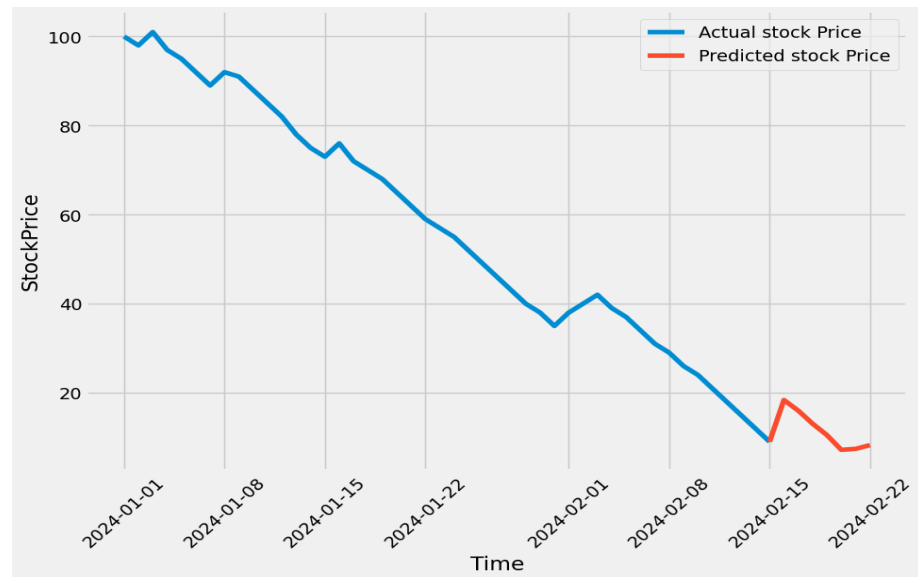
3) Quantumize



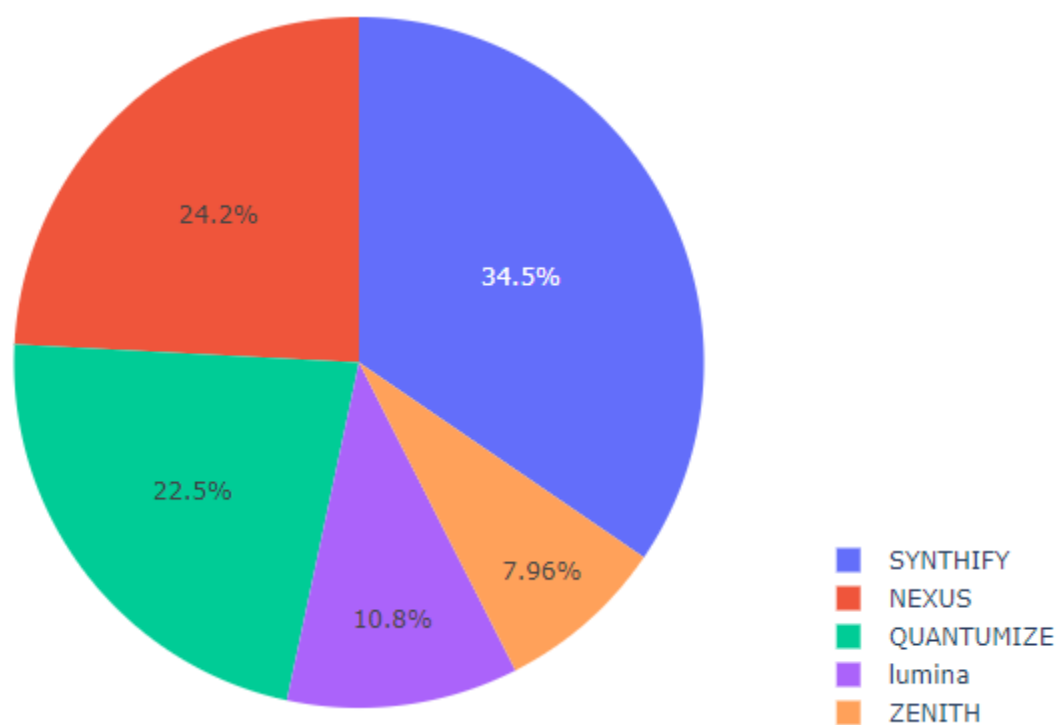
4) Synthify



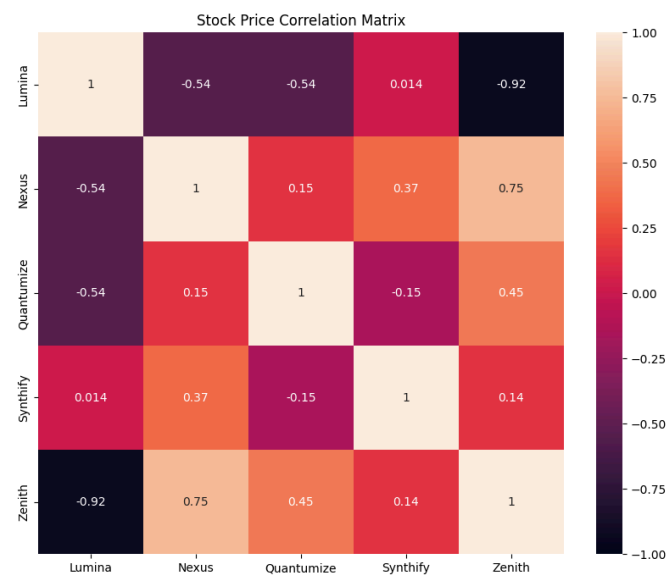
5) Zenith



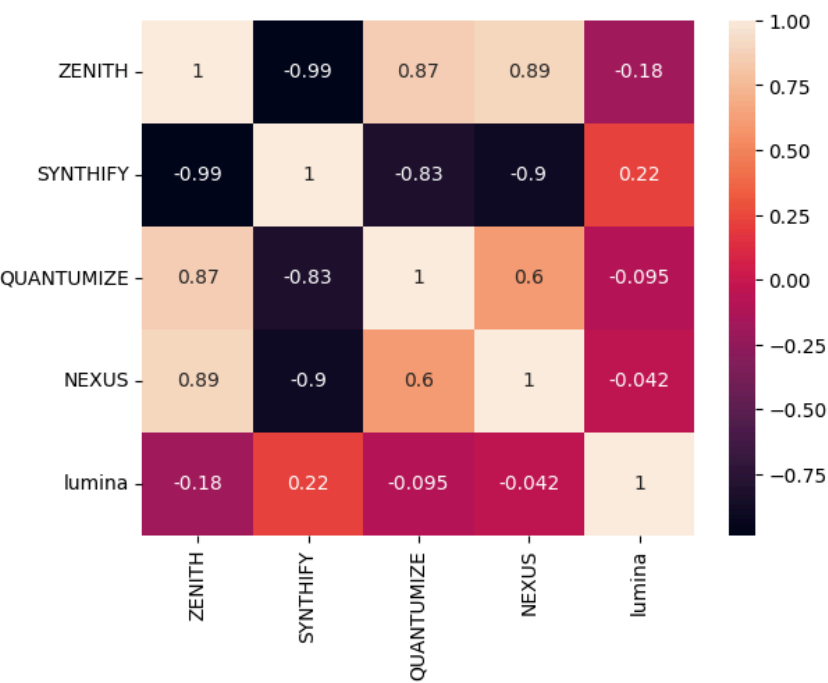
Budget Allocation: (Adjusted Mean with Penalties and Awards)



Stock Price Correlation Matrix



Predicted Stock Price Correlation Matrix

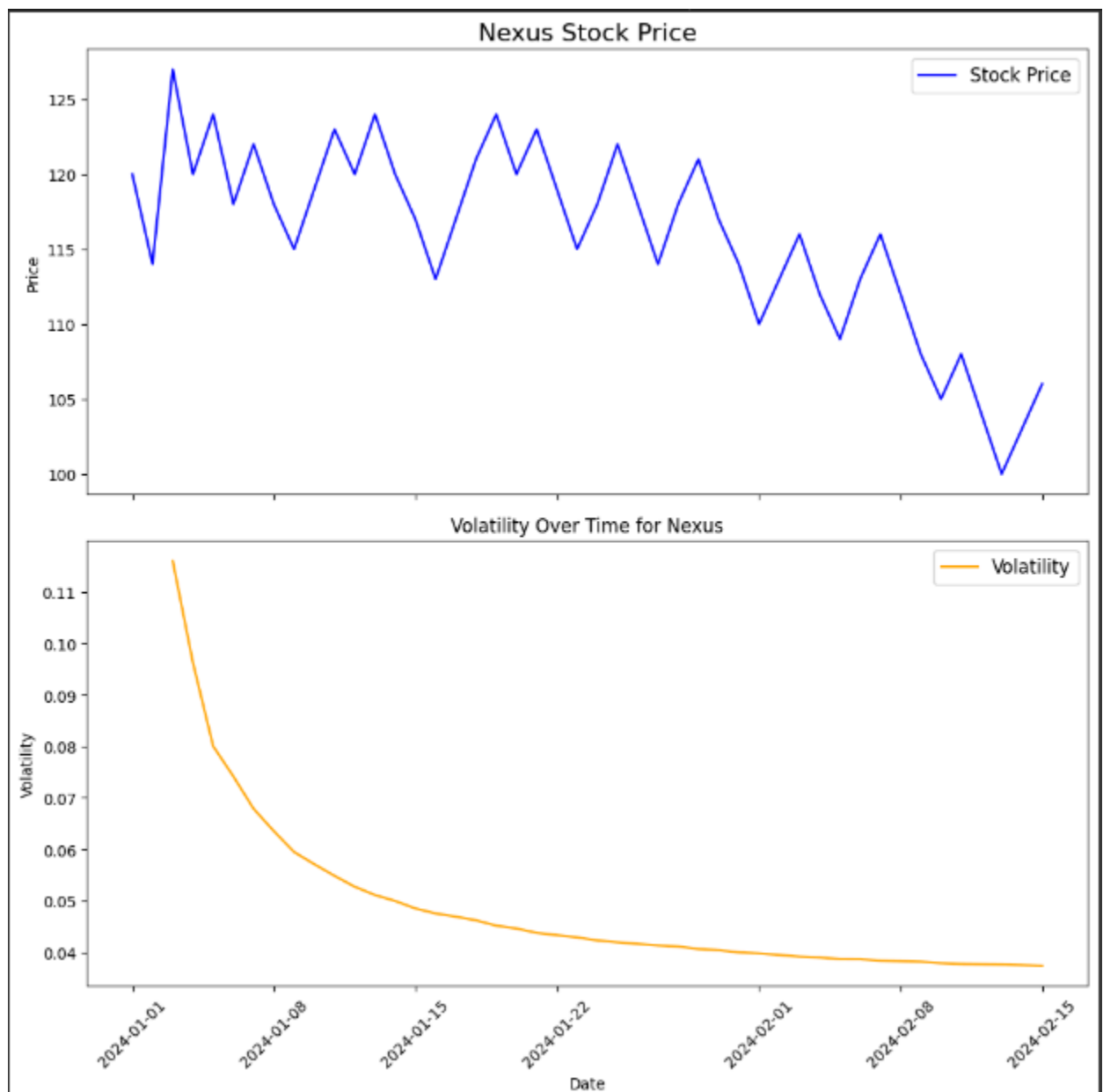


Volatility Plots

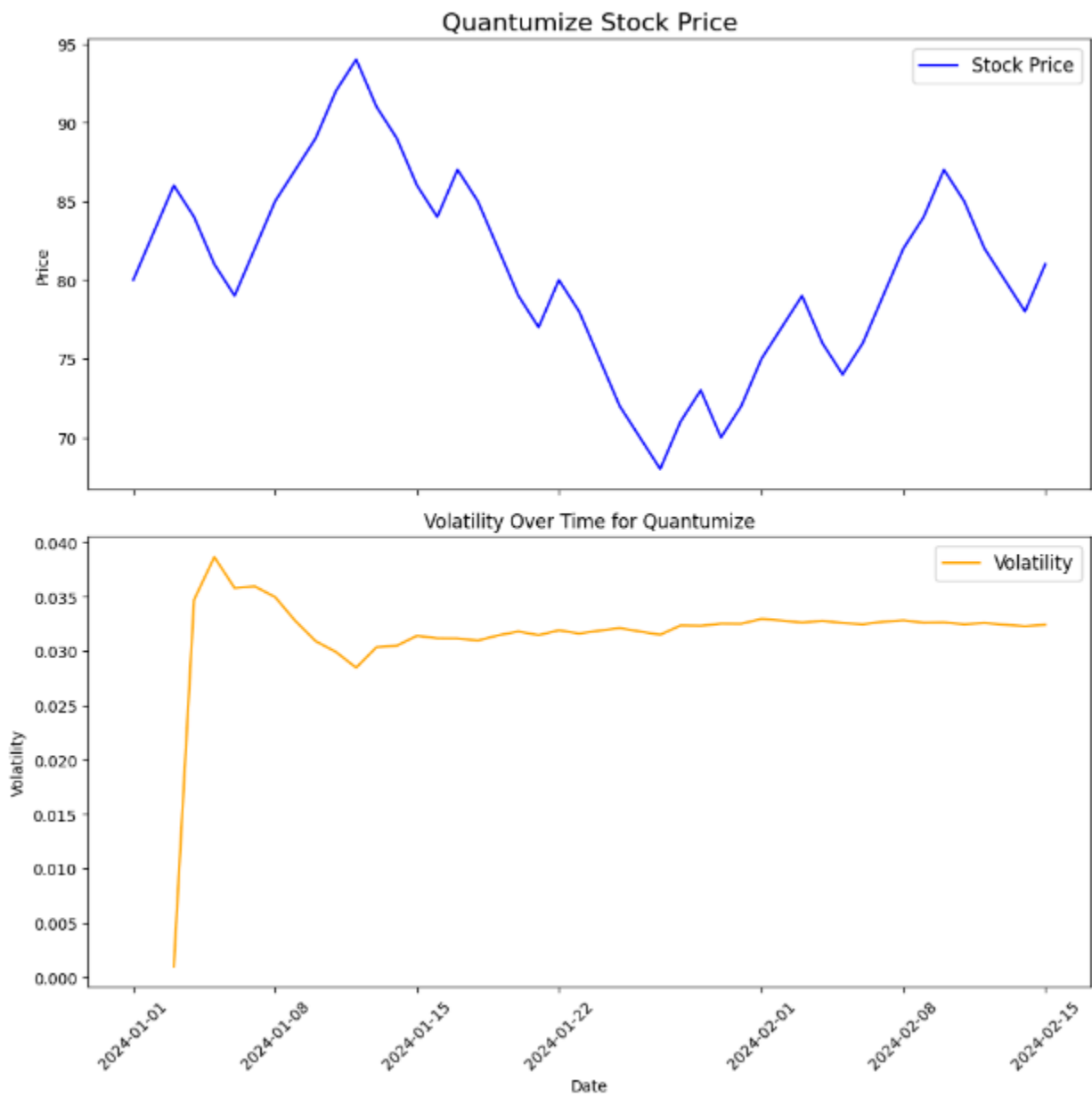
1) Synthify



2) Nexus



3) Quantumize



4. Results of ML Model

| Model | MAE | MSE | RMSE |
|----------|---------|---------|---------|
| Lumina | 1.80624 | 4.93295 | 2.22102 |
| Nexus | 2.32286 | 7.7704 | 2.78754 |
| Quantum | 1.79077 | 4.44644 | 2.10866 |
| Synthify | 5.50934 | 50.3701 | 7.09719 |
| Zenith | 2.85197 | 11.3788 | 3.37325 |

5. Colab Notebook

https://colab.research.google.com/drive/17GPY-OdbRgG3beAiydAofJzNV_ThBtnX#scrollTo=_M0PkLTcMaPU

