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Introduction

In this study, we aim to explore and evaluate common stock market trading methods, employing a variety of approaches to enhance our understanding of effective strategies. Our objectives include testing three widely used trading methods, seeking ways to improve trading returns, and integrating observations from the stock market into our models.

Dataset

0050 Yuanta Taiwan

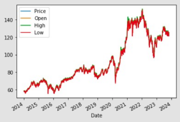
	Date	Price	Open	High	Low	Vol.	Change %
0	11/03/2023	125.45	125.00	125.60	124.70	9.13M	0.76%
1	11/02/2023	124.50	123.15	124.50	123.15	10.20M	2.26%
2	11/01/2023	121.75	122.00	122.15	121.25	4.85M	0.50%
3	10/31/2023	121.15	122.40	122.45	121.10	11.95M	-0.70%
4	10/30/2023	122.00	122.40	122.85	121.75	9.79M	-0.25%
...	...	...	...	...	...	...	...
2397	01/08/2014	57.80	57.70	57.95	57.70	7.61M	0.17%
2398	01/07/2014	57.70	57.75	57.90	57.70	13.13M	0.00%
2399	01/06/2014	57.70	57.75	57.95	57.55	14.87M	-0.26%
2400	01/03/2014	57.85	58.45	58.45	57.70	14.51M	-1.20%
2401	01/02/2014	58.55	58.70	58.75	58.35	10.76M	-0.26%

2402 rows × 7 columns

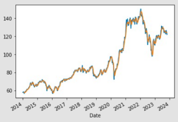
原始資料格式

1. Golden Cross

Moving Average: Short = 5, Long = 20
Total Return Rate of Backtesting Analysis: 62.48%

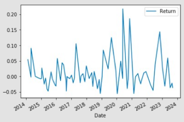


Trend chart of original data



Long and short moving averages

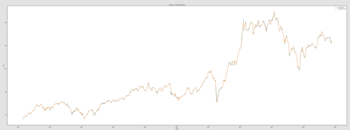
Entry points



Return rate for each trade

2. Machine learning-Random Forest

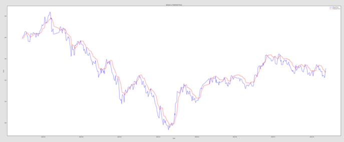
R2 Score: 0.9997980640298204



Actual price and predicted price trend chart

3. LSTM

•R2 Score: 0.9535430373937358
•RMSE: 2.4544517600216915



Actual price and predicted price trend chart

Results

Add your information, graphs and images to this section.

Conclusion

Add your information, graphs and images to this section.

Acknowledgements

https://wealth.businessweekly.com.tw/GArticle.aspx?id=ARTL000091498&p=1
https://github.com/nickmccullum/algorithmic-trading-python
Python Programming for Finance
How to Backtest your First Trading Strategy in Python
https://medium.com/overfitted-microservices/looking-for-correlations-in-the-stock-market-1b90bd438745