

Stock Bot Report

By Jake Cubernot

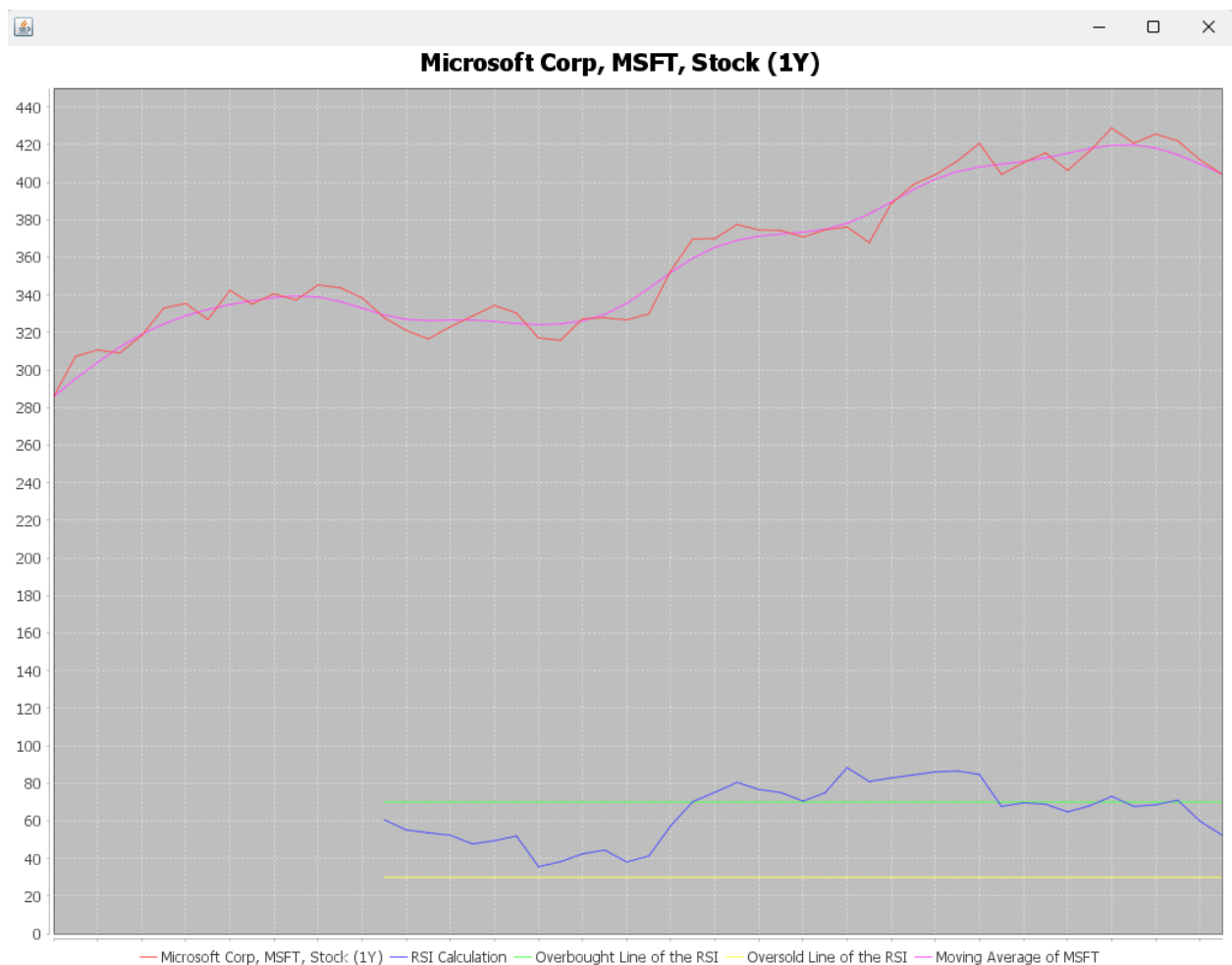
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Stock Data Plotter

The *StockDataPlotter* class is used to display a GUI representation of the different crucial components that help the stock bot perform its tasks. The GUI within the *StockDataPlotter* class can be displayed by running the *TestStockBot* tester class.

The *StockDataPlotter* GUI displays all the necessary information to help one know when to buy, sell, or hold their stocks. This is the result of the GUI when given the weekly stock data for Microsoft Corp., MSFT, Stock (1Y):



The GUI displays the standard stock line, the moving average of that stock, the RSI calculation for the MSFT stock, and then the overbought and oversold lines.

Stock Bot

With all the data ready from the `StockDataPlotter` class, the *StockBot* class can now begin its simulation in which it tries to buy, sell, and hold its shares when it detects the changes in the stock from the `StockDataPlotter` class's data. When the *TestStockBot* tester class is run, the bot will perform a decision each day after evaluating the data.

The stock bot trade data below is the output of one of the tests the bot performed from the first date to the last date recorded by the CSV file. The stock bot was able to make a \$2,245.70 profit within the time frame. The bot seemed to perform as intended and had no issues during its test.

Stock Bot Trade Data:

Trade Date: 2023-04-17, Decision: Hold, Shares: 0.0, Price: \$285.76, Balance: \$10,000
Trade Date: 2023-04-24, Decision: Buy, Shares: 32.0, Price: \$307.26, Balance: \$167.68
Trade Date: 2023-05-01, Decision: Hold, Shares: 32.0, Price: \$310.65, Balance: \$167.68
Trade Date: 2023-05-08, Decision: Hold, Shares: 32.0, Price: \$308.97, Balance: \$167.68
Trade Date: 2023-05-15, Decision: Hold, Shares: 32.0, Price: \$318.34, Balance: \$167.68
Trade Date: 2023-05-22, Decision: Hold, Shares: 32.0, Price: \$332.89, Balance: \$167.68
Trade Date: 2023-05-29, Decision: Hold, Shares: 32.0, Price: \$335.4, Balance: \$167.68
Trade Date: 2023-06-05, Decision: Hold, Shares: 32.0, Price: \$326.79, Balance: \$167.68
Trade Date: 2023-06-12, Decision: Hold, Shares: 32.0, Price: \$342.33, Balance: \$167.68
Trade Date: 2023-06-19, Decision: Hold, Shares: 32.0, Price: \$335.02, Balance: \$167.68
Trade Date: 2023-06-26, Decision: Hold, Shares: 32.0, Price: \$340.54, Balance: \$167.68
Trade Date: 2023-07-03, Decision: Hold, Shares: 32.0, Price: \$337.22, Balance: \$167.68
Trade Date: 2023-07-10, Decision: Hold, Shares: 32.0, Price: \$345.24, Balance: \$167.68
Trade Date: 2023-07-17, Decision: Hold, Shares: 32.0, Price: \$343.77, Balance: \$167.68
Trade Date: 2023-07-24, Decision: Hold, Shares: 32.0, Price: \$338.37, Balance: \$167.68
Trade Date: 2023-07-31, Decision: Hold, Shares: 32.0, Price: \$327.78, Balance: \$167.68
Trade Date: 2023-08-07, Decision: Hold, Shares: 32.0, Price: \$321.01, Balance: \$167.68
Trade Date: 2023-08-14, Decision: Hold, Shares: 32.0, Price: \$316.48, Balance: \$167.68
Trade Date: 2023-08-21, Decision: Hold, Shares: 32.0, Price: \$322.98, Balance: \$167.68
Trade Date: 2023-08-28, Decision: Hold, Shares: 32.0, Price: \$328.66, Balance: \$167.68

Trade Date: 2023-09-04, Decision: Hold, Shares: 32.0, Price: \$334.27, Balance: \$167.68
Trade Date: 2023-09-11, Decision: Hold, Shares: 32.0, Price: \$330.22, Balance: \$167.68
Trade Date: 2023-09-18, Decision: Hold, Shares: 32.0, Price: \$317.01, Balance: \$167.68
Trade Date: 2023-09-25, Decision: Hold, Shares: 32.0, Price: \$315.75, Balance: \$167.68
Trade Date: 2023-10-02, Decision: Hold, Shares: 32.0, Price: \$327.26, Balance: \$167.68
Trade Date: 2023-10-09, Decision: Hold, Shares: 32.0, Price: \$327.73, Balance: \$167.68
Trade Date: 2023-10-16, Decision: Hold, Shares: 32.0, Price: \$326.67, Balance: \$167.68
Trade Date: 2023-10-23, Decision: Sell, Shares: 0.0, Price: \$329.81, Balance: \$10,711.6
Trade Date: 2023-10-30, Decision: Buy, Shares: 30.0, Price: \$352.8, Balance: \$127.6
Trade Date: 2023-11-06, Decision: Buy, Shares: 30.0, Price: \$369.67, Balance: \$127.6
Trade Date: 2023-11-13, Decision: Buy, Shares: 30.0, Price: \$369.85, Balance: \$127.6
Trade Date: 2023-11-20, Decision: Buy, Shares: 30.0, Price: \$377.43, Balance: \$127.6
Trade Date: 2023-11-27, Decision: Buy, Shares: 30.0, Price: \$374.51, Balance: \$127.6
Trade Date: 2023-12-04, Decision: Buy, Shares: 30.0, Price: \$374.23, Balance: \$127.6
Trade Date: 2023-12-11, Decision: Buy, Shares: 30.0, Price: \$370.73, Balance: \$127.6
Trade Date: 2023-12-18, Decision: Buy, Shares: 30.0, Price: \$374.58, Balance: \$127.6
Trade Date: 2023-12-25, Decision: Buy, Shares: 30.0, Price: \$376.04, Balance: \$127.6
Trade Date: 2024-01-01, Decision: Buy, Shares: 30.0, Price: \$367.75, Balance: \$127.6
Trade Date: 2024-01-08, Decision: Buy, Shares: 30.0, Price: \$388.47, Balance: \$127.6
Trade Date: 2024-01-15, Decision: Buy, Shares: 30.0, Price: \$398.67, Balance: \$127.6
Trade Date: 2024-01-22, Decision: Buy, Shares: 30.0, Price: \$403.93, Balance: \$127.6
Trade Date: 2024-01-29, Decision: Buy, Shares: 30.0, Price: \$411.22, Balance: \$127.6
Trade Date: 2024-02-05, Decision: Buy, Shares: 30.0, Price: \$420.55, Balance: \$127.6
Trade Date: 2024-02-12, Decision: Hold, Shares: 30.0, Price: \$404.06, Balance: \$127.6
Trade Date: 2024-02-19, Decision: Hold, Shares: 30.0, Price: \$410.34, Balance: \$127.6
Trade Date: 2024-02-26, Decision: Hold, Shares: 30.0, Price: \$415.5, Balance: \$127.6
Trade Date: 2024-03-04, Decision: Hold, Shares: 30.0, Price: \$406.22, Balance: \$127.6
Trade Date: 2024-03-11, Decision: Buy, Shares: 30.0, Price: \$416.42, Balance: \$127.6
Trade Date: 2024-03-18, Decision: Hold, Shares: 30.0, Price: \$428.74, Balance: \$127.6
Trade Date: 2024-03-25, Decision: Hold, Shares: 30.0, Price: \$420.72, Balance: \$127.6
Trade Date: 2024-04-01, Decision: Buy, Shares: 30.0, Price: \$425.52, Balance: \$127.6
Trade Date: 2024-04-08, Decision: Hold, Shares: 30.0, Price: \$421.9, Balance: \$127.6
Trade Date: 2024-04-15, Decision: Hold, Shares: 30.0, Price: \$411.84, Balance: \$127.6
Trade Date: 2024-04-18, Decision: Hold, Shares: 30.0, Price: \$404.27, Balance: \$127.6

Final balance: \$12,245.7