Untitled

February 6, 2025

```
[2]: pip install yfinance

import yfinance as yf

tesla = yf.Ticker("TSLA")

tesla_data = tesla.history(period="max")

tesla_data.reset_index(inplace=True)

print(tesla_data.head())
```

```
                        Date      Open      High       Low     Close  \
0 2010-06-29 00:00:00-04:00  1.266667  1.666667  1.169333  1.592667
1 2010-06-30 00:00:00-04:00  1.719333  2.028000  1.553333  1.588667
2 2010-07-01 00:00:00-04:00  1.666667  1.728000  1.351333  1.464000
3 2010-07-02 00:00:00-04:00  1.533333  1.540000  1.247333  1.280000
4 2010-07-06 00:00:00-04:00  1.333333  1.333333  1.055333  1.074000

      Volume  Dividends  Stock Splits
0  281494500        0.0           0.0
1  257806500        0.0           0.0
2  123282000        0.0           0.0
3   77097000        0.0           0.0
4  103003500        0.0           0.0
```

```
[3]: !pip install pandas requests beautifulsoup4

import pandas as pd
import requests
from bs4 import BeautifulSoup
```

```
Collecting pandas
  Downloading
pandas-2.2.3-cp312-cp312-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata
(89 kB)
Requirement already satisfied: requests in /opt/conda/lib/python3.12/site-
packages (2.32.3)
Requirement already satisfied: beautifulsoup4 in /opt/conda/lib/python3.12/site-
```

```
packages (4.12.3)
Collecting numpy>=1.26.0 (from pandas)
  Downloading
numpy-2.2.2-cp312-cp312-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata
(62 kB)
Requirement already satisfied: python-dateutil>=2.8.2 in
/opt/conda/lib/python3.12/site-packages (from pandas) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in /opt/conda/lib/python3.12/site-
packages (from pandas) (2024.2)
Collecting tzdata>=2022.7 (from pandas)
  Downloading tzdata-2025.1-py2.py3-none-any.whl.metadata (1.4 kB)
Requirement already satisfied: charset_normalizer<4,>=2 in
/opt/conda/lib/python3.12/site-packages (from requests) (3.4.1)
Requirement already satisfied: idna<4,>=2.5 in /opt/conda/lib/python3.12/site-
packages (from requests) (3.10)
Requirement already satisfied: urllib3<3,>=1.21.1 in
/opt/conda/lib/python3.12/site-packages (from requests) (2.3.0)
Requirement already satisfied: certifi>=2017.4.17 in
/opt/conda/lib/python3.12/site-packages (from requests) (2024.12.14)
Requirement already satisfied: soupsieve>1.2 in /opt/conda/lib/python3.12/site-
packages (from beautifulsoup4) (2.5)
Requirement already satisfied: six>=1.5 in /opt/conda/lib/python3.12/site-
packages (from python-dateutil>=2.8.2->pandas) (1.17.0)
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pandas-2.2.3-cp312-cp312-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (12.7
MB)
                          12.7/12.7 MB
158.7 MB/s eta 0:00:00
Downloading
numpy-2.2.2-cp312-cp312-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (16.1 MB)
                          16.1/16.1 MB
145.0 MB/s eta 0:00:00
Downloading tzdata-2025.1-py2.py3-none-any.whl (346 kB)
Installing collected packages: tzdata, numpy, pandas
Successfully installed numpy-2.2.2 pandas-2.2.3 tzdata-2025.1
```

```python
url = "https://www.macrotrends.net/stocks/charts/TSLA/tesla/revenue"

soup = BeautifulSoup(response.text, "html.parser")

table = soup.find("table")
rows = table.find_all("tr")

data = []
for row in rows:
    cols = row.find_all("td")
    data.append([col.text.strip() for col in cols])
```

```python
tesla_revenue = pd.DataFrame(data)
print(tesla_revenue.tail())
```

```
       0       1
11  2013  $2,013
12  2012    $413
13  2011    $204
14  2010    $117
15  2009    $112
```

[2]:
```python
!pip install yfinance


import yfinance as yf
import pandas as pd


symbol = "TSLA"


tesla = yf.Ticker(symbol)


tesla_data = tesla.history(period="max")


tesla_data.reset_index(inplace=True)
print(tesla_data.head())
```

```
Collecting yfinance
  Downloading yfinance-0.2.52-py2.py3-none-any.whl.metadata (5.8 kB)
Collecting pandas>=1.3.0 (from yfinance)
  Downloading
pandas-2.2.3-cp312-cp312-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata
(89 kB)
Collecting numpy>=1.16.5 (from yfinance)
  Downloading
numpy-2.2.2-cp312-cp312-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata
(62 kB)
Requirement already satisfied: requests>=2.31 in /opt/conda/lib/python3.12/site-
packages (from yfinance) (2.32.3)
Collecting multitasking>=0.0.7 (from yfinance)
  Downloading multitasking-0.0.11-py3-none-any.whl.metadata (5.5 kB)
Collecting lxml>=4.9.1 (from yfinance)
  Downloading lxml-5.3.0-cp312-cp312-manylinux_2_28_x86_64.whl.metadata (3.8 kB)
```

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Requirement already satisfied: platformdirs>=2.0.0 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (4.3.6)
Requirement already satisfied: pytz>=2022.5 in /opt/conda/lib/python3.12/site-
packages (from yfinance) (2024.2)
Requirement already satisfied: frozendict>=2.3.4 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (2.4.6)
Collecting peewee>=3.16.2 (from yfinance)
  Downloading peewee-3.17.8.tar.gz (948 kB)
                        948.2/948.2 kB
52.7 MB/s eta 0:00:00
  Installing build dependencies … one
  Getting requirements to build wheel … done
  Preparing metadata (pyproject.toml) … done
Requirement already satisfied: beautifulsoup4>=4.11.1 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (4.12.3)
Collecting html5lib>=1.1 (from yfinance)
  Downloading html5lib-1.1-py2.py3-none-any.whl.metadata (16 kB)
Requirement already satisfied: soupsieve>1.2 in /opt/conda/lib/python3.12/site-
packages (from beautifulsoup4>=4.11.1->yfinance) (2.5)
Requirement already satisfied: six>=1.9 in /opt/conda/lib/python3.12/site-
packages (from html5lib>=1.1->yfinance) (1.17.0)
Requirement already satisfied: webencodings in /opt/conda/lib/python3.12/site-
packages (from html5lib>=1.1->yfinance) (0.5.1)
Requirement already satisfied: python-dateutil>=2.8.2 in
/opt/conda/lib/python3.12/site-packages (from pandas>=1.3.0->yfinance)
(2.9.0.post0)
Collecting tzdata>=2022.7 (from pandas>=1.3.0->yfinance)
  Downloading tzdata-2025.1-py2.py3-none-any.whl.metadata (1.4 kB)
Requirement already satisfied: charset_normalizer<4,>=2 in
/opt/conda/lib/python3.12/site-packages (from requests>=2.31->yfinance) (3.4.1)
Requirement already satisfied: idna<4,>=2.5 in /opt/conda/lib/python3.12/site-
packages (from requests>=2.31->yfinance) (3.10)
Requirement already satisfied: urllib3<3,>=1.21.1 in
/opt/conda/lib/python3.12/site-packages (from requests>=2.31->yfinance) (2.3.0)
Requirement already satisfied: certifi>=2017.4.17 in
/opt/conda/lib/python3.12/site-packages (from requests>=2.31->yfinance)
(2024.12.14)
Downloading yfinance-0.2.52-py2.py3-none-any.whl (108 kB)
Downloading html5lib-1.1-py2.py3-none-any.whl (112 kB)
Downloading lxml-5.3.0-cp312-cp312-manylinux_2_28_x86_64.whl (4.9 MB)
                        4.9/4.9 MB
134.4 MB/s eta 0:00:00
Downloading multitasking-0.0.11-py3-none-any.whl (8.5 kB)
Downloading
numpy-2.2.2-cp312-cp312-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (16.1 MB)
                        16.1/16.1 MB
135.6 MB/s eta 0:00:00
Downloading
```

```
pandas-2.2.3-cp312-cp312-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (12.7
MB)
                          12.7/12.7 MB
152.6 MB/s eta 0:00:00
Downloading tzdata-2025.1-py2.py3-none-any.whl (346 kB)
Building wheels for collected packages: peewee
  Building wheel for peewee (pyproject.toml) … one
  Created wheel for peewee:
filename=peewee-3.17.8-cp312-cp312-linux_x86_64.whl size=303769
sha256=831e508ee22d43737fbeedca65ed54232cfba42d7a67bcc214015e5052582084
  Stored in directory: /home/jupyterlab/.cache/pip/wheels/8f/65/34/456800445efea
fb05164fe95285c70e81ba1d96bae30f43917
Successfully built peewee
Installing collected packages: peewee, multitasking, tzdata, numpy, lxml,
html5lib, pandas, yfinance
Successfully installed html5lib-1.1 lxml-5.3.0 multitasking-0.0.11 numpy-2.2.2
pandas-2.2.3 peewee-3.17.8 tzdata-2025.1 yfinance-0.2.52
                      Date      Open      High       Low     Close  \
0 2010-06-29 00:00:00-04:00  1.266667  1.666667  1.169333  1.592667
1 2010-06-30 00:00:00-04:00  1.719333  2.028000  1.553333  1.588667
2 2010-07-01 00:00:00-04:00  1.666667  1.728000  1.351333  1.464000
3 2010-07-02 00:00:00-04:00  1.533333  1.540000  1.247333  1.280000
4 2010-07-06 00:00:00-04:00  1.333333  1.333333  1.055333  1.074000

      Volume  Dividends  Stock Splits
0  281494500        0.0           0.0
1  257806500        0.0           0.0
2  123282000        0.0           0.0
3   77097000        0.0           0.0
4  103003500        0.0           0.0
```

[4]:
```python
import yfinance as yf
import pandas as pd


symbol = "GME"

gme = yf.Ticker(symbol)


gme_data = gme.history(period="max")


gme_data.reset_index(inplace=True)
print(gme_data.head())
```

```
                      Date      Open      High       Low     Close     Volume  \
0 2002-02-13 00:00:00-05:00  1.620129  1.693350  1.603296  1.691667   76216000
```

```
1 2002-02-14 00:00:00-05:00   1.712707   1.716074   1.670626   1.683250   11021600
2 2002-02-15 00:00:00-05:00   1.683250   1.687458   1.658002   1.674834    8389600
3 2002-02-19 00:00:00-05:00   1.666418   1.666418   1.578047   1.607504    7410400
4 2002-02-20 00:00:00-05:00   1.615920   1.662210   1.603296   1.662210    6892800

    Dividends   Stock Splits
0        0.0            0.0
1        0.0            0.0
2        0.0            0.0
3        0.0            0.0
4        0.0            0.0
```

[9]:
```python
import requests
import pandas as pd
from bs4 import BeautifulSoup


url = "https://www.macrotrends.net/stocks/charts/GME/gamestop/revenue"



soup = BeautifulSoup(response.text, "html.parser")



table = soup.find("table")
rows = table.find_all("tr")


data = []
for row in rows:
    cols = row.find_all("td")
    data.append([col.text.strip() for col in cols])


gme_revenue = pd.DataFrame(data)
print(gme_revenue.tail())
```

```
        0       1
12   2013   $8,887
13   2012   $9,551
14   2011   $9,474
15   2010   $9,078
16   2009   $8,806
```

[9]:
```python
!pip install matplotlib
```

```python
import matplotlib.pyplot as plt

def make_graph(data, title):
    plt.figure(figsize=(10,5))
    plt.plot(data["Date"], data["Stock Price"], marker='o', linestyle='-')
    plt.xlabel("Date")
    plt.ylabel("Stock Price (USD)")
    plt.title(title)
    plt.xticks(rotation=45)
    plt.grid()
    plt.show()

!pip install pandas matplotlib

import pandas as pd


data = {
    "Date": ["2024-01-01", "2024-01-02", "2024-01-03", "2024-01-04",␣
 ↪"2024-01-05"],
    "Stock Price": [230, 235, 228, 240, 245]
}

tesla_stock_data = pd.DataFrame(data)

make_graph(tesla_stock_data, "Tesla Stock Price Over Time")
```

Requirement already satisfied: matplotlib in /opt/conda/lib/python3.12/site-
packages (3.10.0)
Requirement already satisfied: contourpy>=1.0.1 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (1.3.1)
Requirement already satisfied: cycler>=0.10 in /opt/conda/lib/python3.12/site-
packages (from matplotlib) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (4.55.8)
Requirement already satisfied: kiwisolver>=1.3.1 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (1.4.8)
Requirement already satisfied: numpy>=1.23 in /opt/conda/lib/python3.12/site-
packages (from matplotlib) (2.2.2)
Requirement already satisfied: packaging>=20.0 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (24.2)
Requirement already satisfied: pillow>=8 in /opt/conda/lib/python3.12/site-
packages (from matplotlib) (11.1.0)
Requirement already satisfied: pyparsing>=2.3.1 in
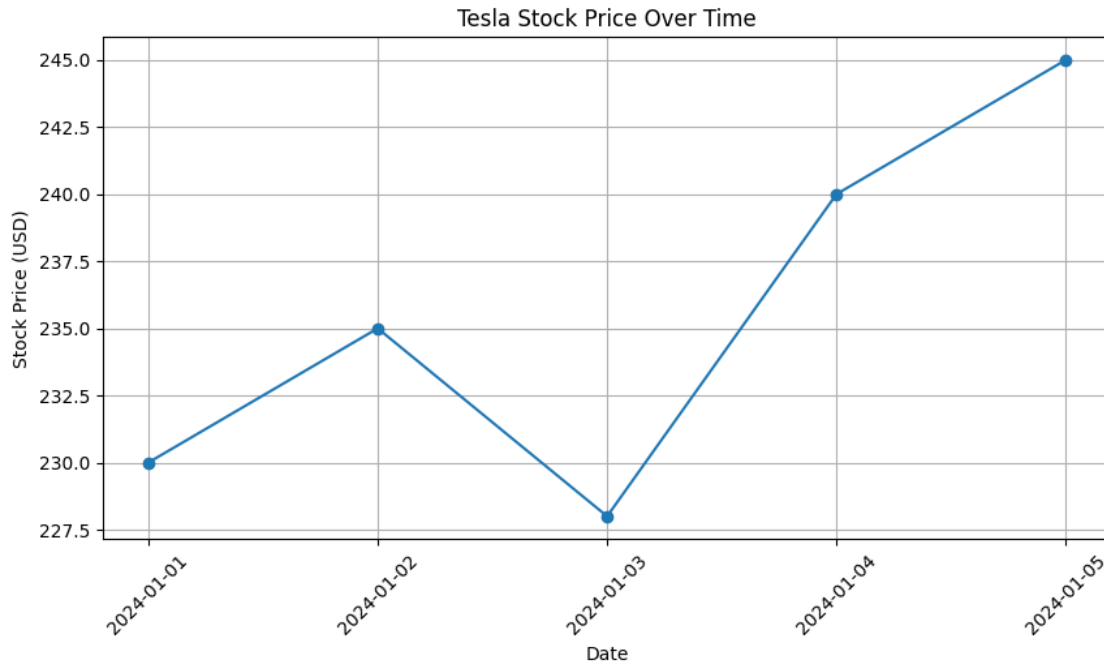/opt/conda/lib/python3.12/site-packages (from matplotlib) (3.2.1)
Requirement already satisfied: python-dateutil>=2.7 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (2.9.0.post0)
Requirement already satisfied: six>=1.5 in /opt/conda/lib/python3.12/site-

packages (from python-dateutil>=2.7->matplotlib) (1.17.0)
Collecting pandas
  Downloading
pandas-2.2.3-cp312-cp312-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata
(89 kB)
Requirement already satisfied: matplotlib in /opt/conda/lib/python3.12/site-
packages (3.10.0)
Requirement already satisfied: numpy>=1.26.0 in /opt/conda/lib/python3.12/site-
packages (from pandas) (2.2.2)
Requirement already satisfied: python-dateutil>=2.8.2 in
/opt/conda/lib/python3.12/site-packages (from pandas) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in /opt/conda/lib/python3.12/site-
packages (from pandas) (2024.2)
Collecting tzdata>=2022.7 (from pandas)
  Downloading tzdata-2025.1-py2.py3-none-any.whl.metadata (1.4 kB)
Requirement already satisfied: contourpy>=1.0.1 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (1.3.1)
Requirement already satisfied: cycler>=0.10 in /opt/conda/lib/python3.12/site-
packages (from matplotlib) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (4.55.8)
Requirement already satisfied: kiwisolver>=1.3.1 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (1.4.8)
Requirement already satisfied: packaging>=20.0 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (24.2)
Requirement already satisfied: pillow>=8 in /opt/conda/lib/python3.12/site-
packages (from matplotlib) (11.1.0)
Requirement already satisfied: pyparsing>=2.3.1 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (3.2.1)
Requirement already satisfied: six>=1.5 in /opt/conda/lib/python3.12/site-
packages (from python-dateutil>=2.8.2->pandas) (1.17.0)
Downloading
pandas-2.2.3-cp312-cp312-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (12.7
MB)
                          12.7/12.7 MB
142.4 MB/s eta 0:00:00
Downloading tzdata-2025.1-py2.py3-none-any.whl (346 kB)
Installing collected packages: tzdata, pandas
Successfully installed pandas-2.2.3 tzdata-2025.1

Tesla Stock Price Over Time

[10]:
```
!pip install matplotlib pandas yfinance

import matplotlib.pyplot as plt
import yfinance as yf

gamestop_data = yf.download("GME", start="2024-01-01", end="2025-01-01")
plt.figure(figsize=(10,6))
plt.plot(gamestop_data['Close'], label='GameStop Stock Price')
plt.title('GameStop Stock Price')
plt.xlabel('Date')
plt.ylabel('Price (USD)')
plt.grid(True)
plt.legend()
plt.show()
```

Requirement already satisfied: matplotlib in /opt/conda/lib/python3.12/site-packages (3.10.0)
Requirement already satisfied: pandas in /opt/conda/lib/python3.12/site-packages (2.2.3)
Collecting yfinance
  Downloading yfinance-0.2.52-py2.py3-none-any.whl.metadata (5.8 kB)
Requirement already satisfied: contourpy>=1.0.1 in /opt/conda/lib/python3.12/site-packages (from matplotlib) (1.3.1)
Requirement already satisfied: cycler>=0.10 in /opt/conda/lib/python3.12/site-packages (from matplotlib) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in

/opt/conda/lib/python3.12/site-packages (from matplotlib) (4.55.8)
Requirement already satisfied: kiwisolver>=1.3.1 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (1.4.8)
Requirement already satisfied: numpy>=1.23 in /opt/conda/lib/python3.12/site-
packages (from matplotlib) (2.2.2)
Requirement already satisfied: packaging>=20.0 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (24.2)
Requirement already satisfied: pillow>=8 in /opt/conda/lib/python3.12/site-
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Requirement already satisfied: pyparsing>=2.3.1 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (3.2.1)
Requirement already satisfied: python-dateutil>=2.7 in
/opt/conda/lib/python3.12/site-packages (from matplotlib) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in /opt/conda/lib/python3.12/site-
packages (from pandas) (2024.2)
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packages (from pandas) (2025.1)
Requirement already satisfied: requests>=2.31 in /opt/conda/lib/python3.12/site-
packages (from yfinance) (2.32.3)
Collecting multitasking>=0.0.7 (from yfinance)
  Downloading multitasking-0.0.11-py3-none-any.whl.metadata (5.5 kB)
Collecting lxml>=4.9.1 (from yfinance)
  Downloading lxml-5.3.0-cp312-cp312-manylinux_2_28_x86_64.whl.metadata (3.8 kB)
Requirement already satisfied: platformdirs>=2.0.0 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (4.3.6)
Requirement already satisfied: frozendict>=2.3.4 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (2.4.6)
Collecting peewee>=3.16.2 (from yfinance)
  Downloading peewee-3.17.9.tar.gz (3.0 MB)
                       3.0/3.0 MB
98.5 MB/s eta 0:00:00
  Installing build dependencies … one
  Getting requirements to build wheel … done
  Preparing metadata (pyproject.toml) … done
Requirement already satisfied: beautifulsoup4>=4.11.1 in
/opt/conda/lib/python3.12/site-packages (from yfinance) (4.12.3)
Collecting html5lib>=1.1 (from yfinance)
  Downloading html5lib-1.1-py2.py3-none-any.whl.metadata (16 kB)
Requirement already satisfied: soupsieve>1.2 in /opt/conda/lib/python3.12/site-
packages (from beautifulsoup4>=4.11.1->yfinance) (2.5)
Requirement already satisfied: six>=1.9 in /opt/conda/lib/python3.12/site-
packages (from html5lib>=1.1->yfinance) (1.17.0)
Requirement already satisfied: webencodings in /opt/conda/lib/python3.12/site-
packages (from html5lib>=1.1->yfinance) (0.5.1)
Requirement already satisfied: charset_normalizer<4,>=2 in
/opt/conda/lib/python3.12/site-packages (from requests>=2.31->yfinance) (3.4.1)
Requirement already satisfied: idna<4,>=2.5 in /opt/conda/lib/python3.12/site-
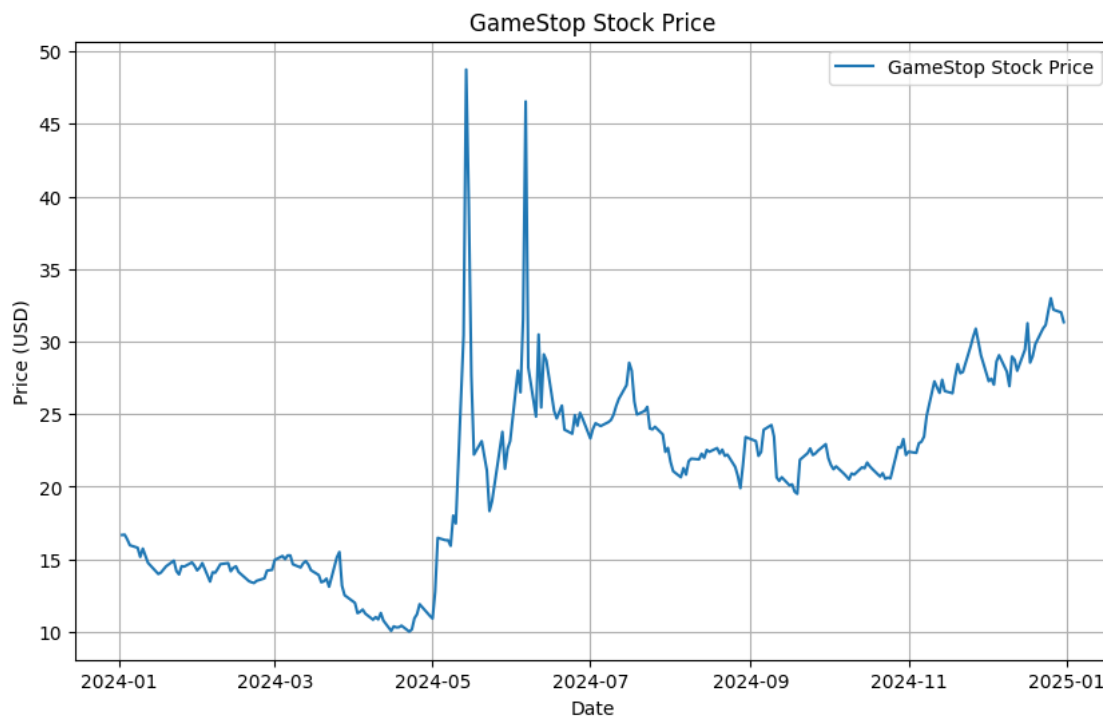packages (from requests>=2.31->yfinance) (3.10)

11

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[ ]:
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