FinalAssignment

April 5, 2022

```
[ ]:
```

```python
[5]: import yfinance as yf
     import pandas as pd
     import requests
     from bs4 import BeautifulSoup
     import plotly.graph_objects as go
     from plotly.subplots import make_subplots
```

```python
[92]: def make_graph(stock_data, revenue_data, stock):
          fig = make_subplots(rows=2, cols=1, shared_xaxes=True,
       ↪subplot_titles=("Historical Share Price", "Historical Revenue"),
       ↪vertical_spacing = .3)
          stock_data_specific = stock_data[stock_data.Date <= '2021--06-14']
          revenue_data_specific = revenue_data[revenue_data.Date <= '2021-04-30']
          fig.add_trace(go.Scatter(x=pd.to_datetime(stock_data_specific.Date,
       ↪infer_datetime_format=True), y=stock_data_specific.Close.astype("float"),
       ↪name="Share Price"), row=1, col=1)
          fig.add_trace(go.Scatter(x=pd.to_datetime(revenue_data_specific.Date,
       ↪infer_datetime_format=True), y=revenue_data_specific.Revenue.
       ↪astype("float"), name="Revenue"), row=2, col=1)
          fig.update_xaxes(title_text="Date", row=1, col=1)
          fig.update_xaxes(title_text="Date", row=2, col=1)
          fig.update_yaxes(title_text="Price ($US)", row=1, col=1)
          fig.update_yaxes(title_text="Revenue ($US Millions)", row=2, col=1)
          fig.update_layout(showlegend=False,height=900, title=stock,
       ↪xaxis_rangeslider_visible=True)
          fig.show()
```

```python
[93]: Tesla= yf.Ticker("TSLA")
      tesla_data= Tesla.history(period="max")
      tesla_data.head()
      tesla_data.reset_index(inplace=True)
      print(tesla_data)
```

```
          Date      Open      High       Low     Close    Volume  \
0   2010-06-29  3.800000  5.000000  3.508000  4.778000  93831500
```

```
1     2010-06-30      5.158000      6.084000      4.660000      4.766000  85935500
2     2010-07-01      5.000000      5.184000      4.054000      4.392000  41094000
3     2010-07-02      4.600000      4.620000      3.742000      3.840000  25699000
4     2010-07-06      4.000000      4.000000      3.166000      3.222000  34334500
...          ...           ...           ...           ...           ...       ...
2958 2022-03-29   1107.989990   1114.770020   1073.109985   1099.569946  24538300
2959 2022-03-30   1091.170044   1113.949951   1084.000000   1093.989990  19955000
2960 2022-03-31   1094.569946   1103.140015   1076.640015   1077.599976  16330900
2961 2022-04-01   1081.150024   1094.750000   1066.640015   1084.589966  18012900
2962 2022-04-04   1089.380005   1149.910034   1073.000000   1145.449951  27298420

      Dividends   Stock Splits
0             0            0.0
1             0            0.0
2             0            0.0
3             0            0.0
4             0            0.0
...         ...            ...
2958          0            0.0
2959          0            0.0
2960          0            0.0
2961          0            0.0
2962          0            0.0

[2963 rows x 8 columns]
```

```python
[48]: url = "https://www.macrotrends.net/stocks/charts/TSLA/tesla/revenue"
      html_data = requests.get(url).text
```

```python
[ ]: soup = BeautifulSoup(html_data, "html.parser")
     soup.find_all('title')
```

```python
[50]: tesla_revenue = pd.DataFrame(columns = ['Date', 'Revenue'])

      for row in soup.find_all("tbody")[1].find_all("tr"):
          col = row.find_all("td")
          date = col[0].text
          revenue = col[1].text.replace("$", "").replace(",", "")

          tesla_revenue = tesla_revenue.append({"Date": date, "Revenue": revenue},
       ↪ignore_index = True)
```

```python
[51]: tesla_revenue.dropna(inplace=True)
      tesla_revenue = tesla_revenue[tesla_revenue['Revenue'] != ""]
      tesla_revenue.tail()
```

```
[51]:          Date  Revenue
      45  2010-09-30      31
      46  2010-06-30      28
      47  2010-03-31      21
      49  2009-09-30      46
      50  2009-06-30      27
```

```
[53]: import yfinance as yf
      Gamestop= yf.Ticker("GME")
      gme_data = Gamestop.history(period= 'max')
      gme_data.reset_index(inplace = True)
      gme_data.head()
```

```
[53]:          Date      Open      High       Low     Close     Volume  Dividends  \
      0 2002-02-13  6.480513  6.773399  6.413183  6.766665  19054000        0.0
      1 2002-02-14  6.850829  6.864295  6.682504  6.733001   2755400        0.0
      2 2002-02-15  6.733001  6.749833  6.632006  6.699336   2097400        0.0
      3 2002-02-19  6.665671  6.665671  6.312188  6.430016   1852600        0.0
      4 2002-02-20  6.463681  6.648839  6.413183  6.648839   1723200        0.0

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

```
[54]: url = "https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/
       ↪IBMDeveloperSkillsNetwork-PY0220EN-SkillsNetwork/labs/project/stock.html"
      html_data = requests.get(url).text
```

```
[55]: soup = BeautifulSoup(html_data, "html.parser")
      soup.find_all('title')
```

```
[55]: [<title>GameStop Revenue 2006-2020 | GME | MacroTrends</title>]
```

```
[57]: gme_revenue = pd.DataFrame(columns = ['Date', 'Revenue'])

      for row in soup.find_all("tbody")[1].find_all("tr"):
          col = row.find_all("td")
          date = col[0].text
          revenue = col[1].text.replace("$", "").replace(",", "")

          gme_revenue = gme_revenue.append({"Date": date, "Revenue": revenue},␣
        ↪ignore_index = True)
          tesla_revenue.dropna(inplace=True)
      tesla_revenue = tesla_revenue[tesla_revenue['Revenue'] != ""]
```
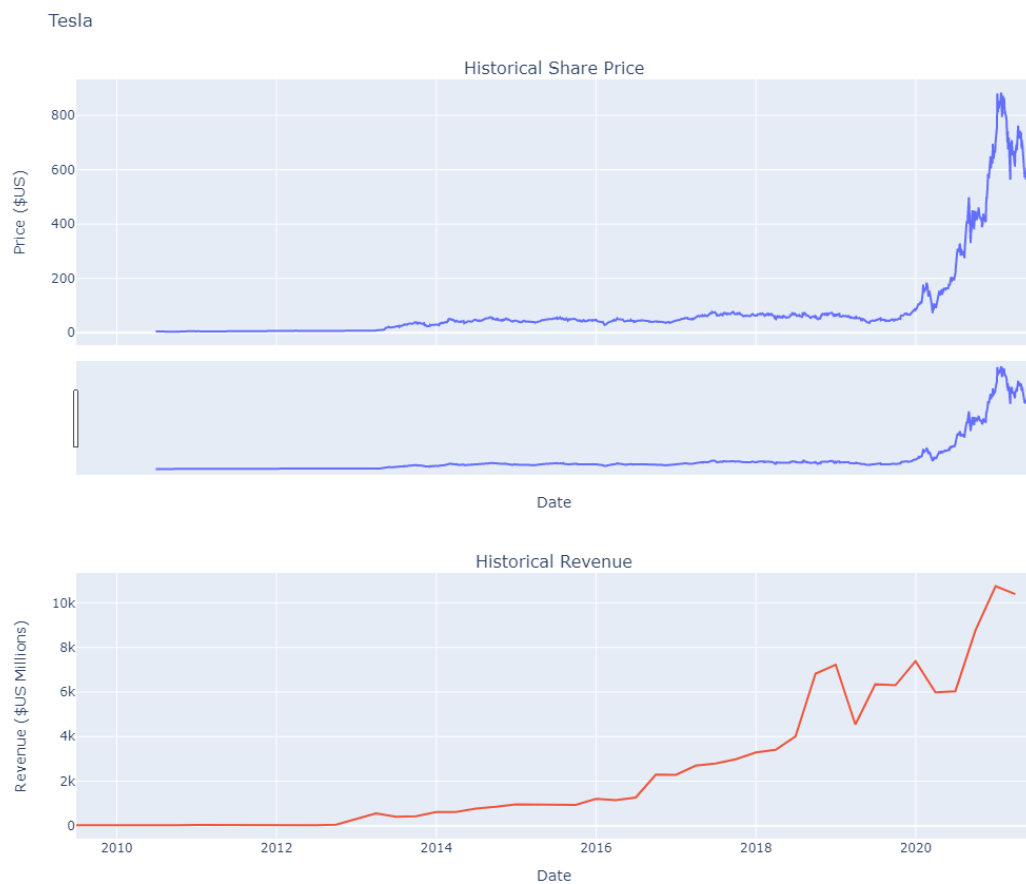
```
gme_revenue.tail()
```

[57]:

	Date	Revenue
57	2006-01-31	1667
58	2005-10-31	534
59	2005-07-31	416
60	2005-04-30	475
61	2005-01-31	709

[94]:
```python
import yfinance as yf
import pandas as pd
import requests
from bs4 import BeautifulSoup
import plotly.graph_objects as go
from plotly.subplots import make_subplots
make_graph(tesla_data, tesla_revenue, 'Tesla')
```


[95]:
```python
make_graph(gme_data, gme_revenue, 'GameStop')
```

GameStop

Historical Share Price

Historical Revenue

[ ]: