Untitled5

February 6, 2025

[1]:
```
import yfinance as yf
import pandas as pd
import requests
from bs4 import BeautifulSoup
from plotly.subplots import make_subplots
import plotly.graph_objects as go
```

[2]:
```
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=0.3)
    stock_data['Date'] = pd.to_datetime(stock_data['Date'])
    revenue_data['Date'] = pd.to_datetime(revenue_data['Date'])
    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=stock_data_specific['Date'],␣
 ↪y=stock_data_specific['Close'].astype("float"), name="Share Price"), row=1,␣
 ↪col=1)
    fig.add_trace(go.Scatter(x=revenue_data_specific['Date'],␣
 ↪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()
```

[3]:
```
tesla = yf.Ticker("TSLA")
tesla_data = tesla.history(period="max").reset_index()
```

[4]:
```
url = 'https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/
 ↪IBMDeveloperSkillsNetwork-PY0220EN-SkillsNetwork/labs/project/revenue.htm'
html_data = requests.get(url).text
soup = BeautifulSoup(html_data, "html5lib")
```

```
tesla_revenue = pd.DataFrame(columns=['Date', 'Revenue'])
tbody = soup.find_all("tbody")[1]
```

[5]:
```
for row in tbody.find_all('tr'):
    cols = row.find_all('td')
    if len(cols) > 1:
        date = cols[0].text.strip()
        revenue = cols[1].text.strip()
        temp_df = pd.DataFrame([{'Date': date, 'Revenue': revenue}])
        tesla_revenue = pd.concat([tesla_revenue, temp_df], ignore_index=True)
```

[6]:
```
tesla_revenue["Revenue"] = tesla_revenue['Revenue'].str.replace(r'[$,]', "",␣
 ↪regex=True)
tesla_revenue.dropna(inplace=True)
tesla_revenue = tesla_revenue[tesla_revenue['Revenue'] != ""]
```

[7]:
```
make_graph(tesla_data, tesla_revenue, "Tesla")
```

[9]:
```
GameStop = yf.Ticker("GME")
```

[10]:
```
gme_data = GameStop.history(period="max")
```

[11]:
```
gme_data.reset_index(inplace=True)
gme_data.head()
```

[11]:
```
                       Date      Open      High       Low     Close    Volume  \
0 2002-02-13 00:00:00-05:00  1.620128  1.693350  1.603296  1.691666  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  1.658001  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
```

[12]:
```
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
```

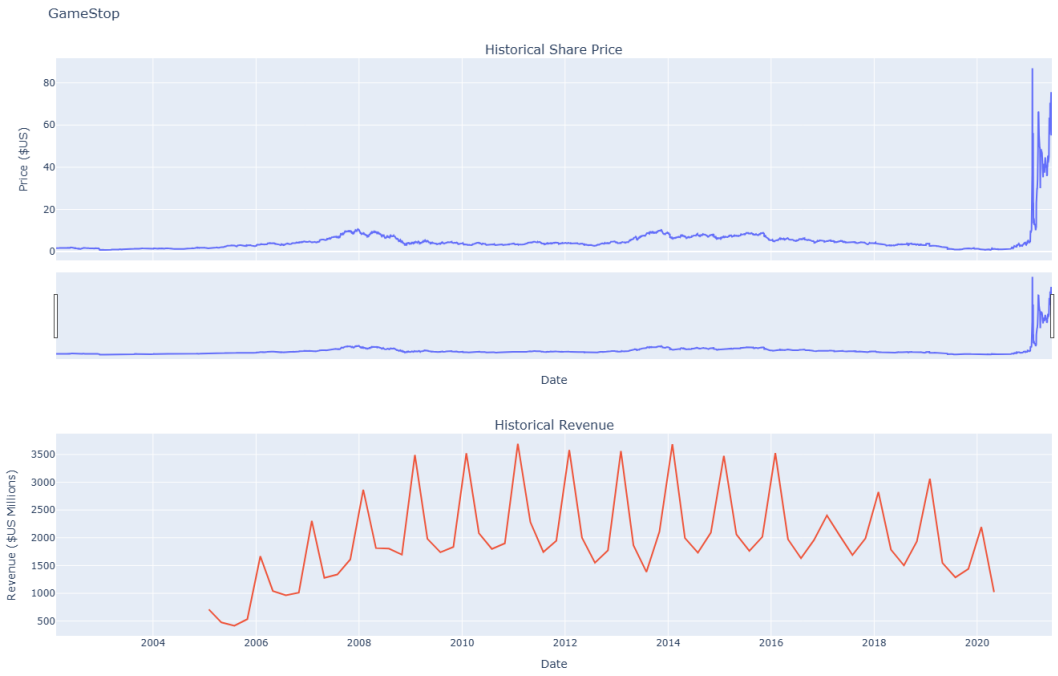
[13]:
```
soup = BeautifulSoup(html_data,"html5lib")
```

[14]:
```
data = []
tables = soup.find_all("table")
```

[15]:
```
for table in tables:
    header = table.find("th")
    if header and "GameStop Quarterly Revenue" in header.text:
        tbody = table.find("tbody")
        for row in tbody.find_all("tr"):
            cols = row.find_all("td")
            if len(cols) >= 2:
                date = cols[0].text.strip()
                revenue = cols[1].text.replace(',', '').replace('$', '').strip()
                data.append((date, revenue))
        break
```

[16]:
```
gme_revenue = pd.DataFrame(data, columns=["Date", "Revenue"])
```

[17]:
```
make_graph(gme_data, gme_revenue, 'GameStop')
```


GameStop
Historical Share Price
Price ($US)
0
20
40
60
80
Date
Historical Revenue
Revenue ($US Millions)
500
1000
1500
2000
2500
3000
3500
2004
2006
2008
2010
2012
2014
2016
2018
2020
Date

[ ]: