Analyzing Gamestop's Historical Stock and Revenue Data

(assume appropriate packages and libraries have already been installed from the Tesla code)

Use Yfinance to extract Gamestop's stock data

# Create a ticker object, "gamestop", that takes in the stock data using the key "GME"
gamestop = yf.Ticker("GME")

# Extract stock information and save it in a dataframe named gme_data. The period parameter is set to max so we get information for the maximum amount of time.
gme_data = gamestop.history(period="max")
gme_data

Output:

Date	Open	High	Low	Close	Volume	Dividends	Stock Splits
2002-02-13	1.620128	1.693350	1.603296	1.691666	76216000	0.0	0.0
2002-02-14	1.712707	1.716074	1.670626	1.683251	11021600	0.0	0.0
2002-02-15	1.683250	1.687458	1.658002	1.674834	8389600	0.0	0.0
2002-02-19	1.666418	1.666418	1.578047	1.607504	7410400	0.0	0.0
2002-02-20	1.615920	1.662209	1.603296	1.662209	6892800	0.0	0.0
...	...	...	...	...	...	...	...
2023-04-24	20.150000	20.410000	19.809999	19.930000	2742400	0.0	0.0
2023-04-25	19.740000	20.040001	18.910000	19.000000	2560800	0.0	0.0
2023-04-26	18.980000	19.230000	18.650000	18.650000	2287600	0.0	0.0
2023-04-27	18.750000	19.340000	18.719999	18.940001	2238900	0.0	0.0
2023-04-28	18.920000	19.719999	18.879999	19.290001	2835200	0.0	0.0

# Reset the index and display the first 5 rows
gme_data.reset_index(inplace=True)
gme_data.head(5)

Output:

	Date	Open	High	Low	Close	Volume	Dividends	Stock Splits
0	2002-02-13	1.620128	1.693350	1.603296	1.691666	76216000	0.0	0.0
1	2002-02-14	1.712707	1.716074	1.670626	1.683251	11021600	0.0	0.0
2	2002-02-15	1.683250	1.687458	1.658002	1.674834	8389600	0.0	0.0
3	2002-02-19	1.666418	1.666418	1.578047	1.607504	7410400	0.0	0.0
4	2002-02-20	1.615920	1.662209	1.603296	1.662209	6892800	0.0	0.0

Use webscraping to extract Gamestop Revenue Data¶

Download the webpage https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBMDeveloperSkillsNetwork-PY0220EN-SkillsNetwork/labs/project/stock.html and save the text as a variable named html_data

```
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
soup = BeautifulSoup(html_data, 'html.parser')
```

```
# Use BeautifulSoup to extract the table with Gamestop Quarterly Revenue and store it into a dataframe named gme_revenue, with columns Date and Revenue
gme_revenue = pd.DataFrame(columns=["Date" , "Revenue"])
for table in soup.find_all('table'):
    if table.find('th').getText().startswith("GameStop Quarterly Revenue"):
        for row in table.find("tbody").find_all("tr"):
            col = row.find_all("td")
            date = col[0].text
            revenue = col[1].text
            gme_revenue = gme_revenue.append({"Date":date, "Revenue":revenue}, ignore_index=True)
```

```
# Remove the comma and dollar sign from the Revenue column
tesla_revenue["Revenue"] = tesla_revenue['Revenue'].str.replace(',|\$',"")
```

```
# Remove an null or empty strings in the Revenue column
tesla_revenue.dropna(inplace=True)
tesla_revenue = tesla_revenue[tesla_revenue['Revenue'] != ""]
tesla_revenue.tail(5)
```

```
gme_revenue["Revenue"] = gme_revenue['Revenue'].str.replace(',|\$',"")
gme_revenue.dropna(inplace=True)
gme_revenue = gme_revenue[gme_revenue['Revenue'] != ""]
gme_revenue.head(5)
gme_revenue.tail(5)
```

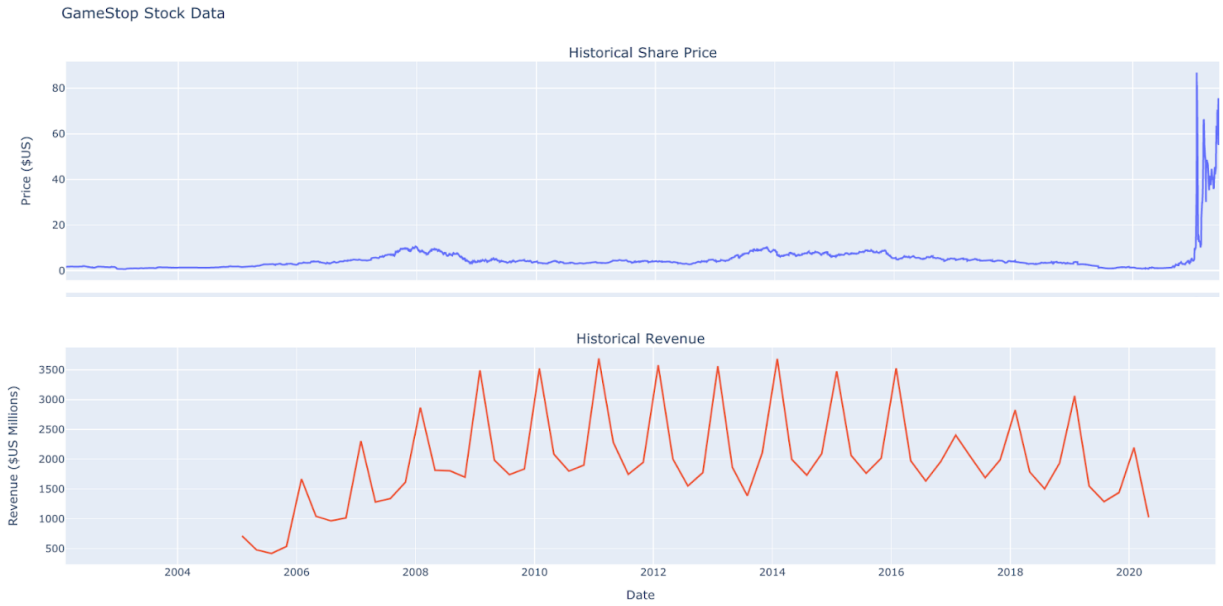
Output:

	Date	Revenue
0	2020-04-30	1021
1	2020-01-31	2194
2	2019-10-31	1439
3	2019-07-31	1286
4	2019-04-30	1548

	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

# Graph the Gamestop Stock Data. The graph will only show data up to June 2021
make_graph(gme_data, gme_revenue, 'GameStop Stock Data')

Output:
Gamestop Stock Data



Analysis:

<u>Gamestop's Historical Share Price:</u>

Gamestop's historical share price shows a mostly constant slope hovering around stock prices of $2-$5 with a couple of minor increases in 2008 and between 2014-2016, showing prices rise to about $10. It wasn't until 2021 that Gamestop experienced an immense spike. In 2021, many people short-sold the stock under the assumption that the stock price would go down. Thanks in part to a subreddit group and a number of hedge funds who decided to make several posts and articles persuading people to purchase the Gamestop shares, the number of short-selling increased dramatically and triggered a dramatic increase in stock price. This daunting price increase caused short sellers to attempt to cover their positions by buying the stock, causing the demand to increase so much that it was far higher than Gamestop's supply. A short-squeeze took place.

<u>Gamestop's Historical Revenue:</u>

Gamestop's up & down historical revenue is likely due to two things: seasonal market changes and the release of new gaming consoles and games. It seems that a single increase in revenue happens around the beginning of the holiday season and then lowers down in a pretty consistent manner each year. This suggests that more products are bought during the holiday season and tend to be at a low throughout the rest of the year. Additionally, when new consoles or popular games are released, there is a surge in demand, leading to higher revenues. Games are typically released at least once a year, and consoles- every few years, often during holiday season.