In [1]:

```
!pip install yfinance
!pip install pandas
!pip install requests
!pip install bs4
!pip install plotly
```

```
Requirement already satisfied: yfinance in d:\panda\lib\site-packages (0.
2.12)
Requirement already satisfied: requests>=2.26 in d:\panda\lib\site-package
s (from yfinance) (2.28.1)
Requirement already satisfied: lxml>=4.9.1 in d:\panda\lib\site-packages
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Requirement already satisfied: html5lib>=1.1 in d:\panda\lib\site-packages
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rom cryptography>=3.3.2->yfinance) (1.15.1)
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Requirement already satisfied: certifi>=2017.4.17 in d:\panda\lib\site-pac
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Requirement already satisfied: charset-normalizer<3,>=2 in d:\panda\lib\si
te-packages (from requests>=2.26->yfinance) (2.0.4)
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(from requests>=2.26->yfinance) (3.3)
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om cffi>=1.12->cryptography>=3.3.2->yfinance) (2.21)
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4)
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Requirement already satisfied: plotly in d:\panda\lib\site-packages (5.9.
0)
Requirement already satisfied: tenacity>=6.2.0 in d:\panda\lib\site-packag
es (from plotly) (8.0.1)
```

In [2]:

```
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
```

In [3]:

```
 Graphing Function
e_graph(stock_data, revenue_data, stock):
 = make_subplots(rows=2, cols=1, shared_xaxes=True, subplot_titles=("Historical Share Pri
.add_trace(go.Scatter(x=pd.to_datetime(stock_data.Date, infer_datetime_format=True), y=st
.add_trace(go.Scatter(x=pd.to_datetime(revenue_data.Date, infer_datetime_format=True), y=
.update_xaxes(title_text="Date", row=1, col=1)
.update_xaxes(title_text="Date", row=2, col=1)
.update_yaxes(title_text="Price ($US)", row=1, col=1)
.update_yaxes(title_text="Revenue ($US Millions)", row=2, col=1)
.update_layout(showlegend=False,
ght=900,
le=stock,
is_rangeslider_visible=True)
.show()
```

In [4]:

```
#Use yfinance to Extract Stock Data
```

In [5]:

```
tesla = yf.Ticker("TSLA")
tesla_data = tesla.history(period="max")
```

In [6]:

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

Out[6]:

	Date	Open	High	Low	Close	Volume	Dividends	Stock Splits
0	2010-06-29 00:00:00-04:00	1.266667	1.666667	1.169333	1.592667	281494500	0.0	0.0
1	2010-06-30 00:00:00-04:00	1.719333	2.028000	1.553333	1.588667	257806500	0.0	0.0
2	2010-07-01 00:00:00-04:00	1.666667	1.728000	1.351333	1.464000	123282000	0.0	0.0
3	2010-07-02 00:00:00-04:00	1.533333	1.540000	1.247333	1.280000	77097000	0.0	0.0
4	2010-07-06 00:00:00-04:00	1.333333	1.333333	1.055333	1.074000	103003500	0.0	0.0

In [7]:

```
# Use Webscraping to Extract Tesla Revenue Data
```

In [8]:

```
tesla_url = "https://www.macrotrends.net/stocks/charts/TSLA/tesla/revenue"
tesla_html_data = requests.get(tesla_url).text
```

In [9]:

```
tesla_soup = BeautifulSoup(tesla_html_data, "html5lib")
```

In [10]:

```
tesla_tables = tesla_soup.find_all('table')
```

In [11]:

```
for index,table in enumerate(tesla_tables):
    if ("Tesla Quarterly Revenue" in str(table)):
        tesla_table_index = index
```

In [12]:

```
tesla_revenue = pd.DataFrame(columns=["Date", "Revenue"])
```

In [13]:

```
for row in tesla_tables[tesla_table_index].tbody.find_all("tr"):
    col = row.find_all("td")
    if (col !=[]):
        date = col[0].text
        revenue = col[1].text.replace("$", "").replace(",", "")
        tesla_revenue = tesla_revenue.append({"Date" : date, "Revenue" : revenue}, ignor
        tesla_revenue = tesla_revenue[tesla_revenue['Revenue'] != ""]
tesla_revenue
```

```
9.py:6: FutureWarning: The frame.append method is deprecated and will b
e removed from pandas in a future version. Use pandas.concat instead.
  tesla_revenue = tesla_revenue.append({"Date" : date, "Revenue" : reve
nue}, ignore_index=True)
C:\Users\Vikas Vishwakarma\AppData\Local\Temp\ipykernel_14104\36566845
9.py:6: FutureWarning: The frame.append method is deprecated and will b
e removed from pandas in a future version. Use pandas.concat instead.
  tesla_revenue = tesla_revenue.append({"Date" : date, "Revenue" : reve
nue}, ignore_index=True)
C:\Users\Vikas Vishwakarma\AppData\Local\Temp\ipykernel_14104\36566845
9.py:6: FutureWarning: The frame.append method is deprecated and will b
e removed from pandas in a future version. Use pandas.concat instead.
  tesla_revenue = tesla_revenue.append({"Date" : date, "Revenue" : reve
nue}, ignore_index=True)
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9.py:6: FutureWarning: The frame.append method is deprecated and will b
e removed from pandas in a future version. Use pandas.concat instead.
  tesla_revenue = tesla_revenue.append({"Date" : date, "Revenue" : reve
nue}, ignore_index=True)
C:\Users\Vikas Vishwakarma\AppData\Local\Temp\ipykernel_14104\36566845
9.py:6: FutureWarning: The frame.append method is deprecated and will b
```

In [14]:

```
tesla_revenue.tail()
```

Out[14]:

	Date	Revenue
49	2010-09-30	31
50	2010-06-30	28
51	2010-03-31	21
52	2009-09-30	46
53	2009-06-30	27

In [15]:

```
# Use yfinance to Extract Stock Data
```

In [16]:

```
gamestop = yf.Ticker("GME")
```

In [17]:

```
gme_data = gamestop.history(period="max")
```

In [18]:

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

Out[18]:

	Date	Open	High	Low	Close	Volume	Dividends	Stock Splits
0	2002-02-13 00:00:00-05:00	1.620129	1.693350	1.603296	1.691667	76216000	0.0	0.0
1	2002-02-14 00:00:00-05:00	1.712707	1.716074	1.670626	1.683251	11021600	0.0	0.0
2	2002-02-15 00:00:00-05:00	1.683250	1.687458	1.658002	1.674834	8389600	0.0	0.0
3	2002-02-19 00:00:00-05:00	1.666418	1.666418	1.578047	1.607504	7410400	0.0	0.0
4	2002-02-20 00:00:00-05:00	1.615920	1.662210	1.603296	1.662210	6892800	0.0	0.0

In [19]:

```
# Use Webscraping to Extract GME Revenue Data
```

In [20]:

```
gme_url = "https://www.macrotrends.net/stocks/charts/GME/gamestop/revenue"
gme_html_data = requests.get(gme_url).text
```

In [21]:

```
gme_soup = BeautifulSoup(gme_html_data, "html5lib")
```

In [22]:

```
gme_tables = gme_soup.find_all('table')
```

In [23]:

```
for index,table in enumerate(gme_tables):
    if ("GameStop Quarterly Revenue" in str(table)):
        gme_table_index = index
```

In [24]:

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

In [25]:

```
for row in gme_tables[gme_table_index].tbody.find_all("tr"):
    col = row.find_all("td")
    if (col !=[]):
        date = col[0].text
        revenue = col[1].text.replace("$", "").replace(",", "")
        gme_revenue = gme_revenue.append({"Date" : date, "Revenue" : revenue}, ignore_in
```

```
C:\Users\Vikas Vishwakarma\AppData\Local\Temp\ipykernel_14104\182627974
8.py:6: FutureWarning: The frame.append method is deprecated and will b
e removed from pandas in a future version. Use pandas.concat instead.
  gme_revenue = gme_revenue.append({"Date" : date, "Revenue" : revenu
e}, ignore_index=True)
C:\Users\Vikas Vishwakarma\AppData\Local\Temp\ipykernel_14104\182627974
8.py:6: FutureWarning: The frame.append method is deprecated and will b
e removed from pandas in a future version. Use pandas.concat instead.
  gme_revenue = gme_revenue.append({"Date" : date, "Revenue" : revenu
e}, ignore_index=True)
C:\Users\Vikas Vishwakarma\AppData\Local\Temp\ipykernel_14104\182627974
8.py:6: FutureWarning: The frame.append method is deprecated and will b
e removed from pandas in a future version. Use pandas.concat instead.
  gme_revenue = gme_revenue.append({"Date" : date, "Revenue" : revenu
e}, ignore_index=True)
C:\Users\Vikas Vishwakarma\AppData\Local\Temp\ipykernel_14104\182627974
8.py:6: FutureWarning: The frame.append method is deprecated and will b
e removed from pandas in a future version. Use pandas.concat instead.
  gme_revenue = gme_revenue.append({"Date" : date, "Revenue" : revenu
```

In [26]:

```
gme_revenue.tail()
```

Out[26]:

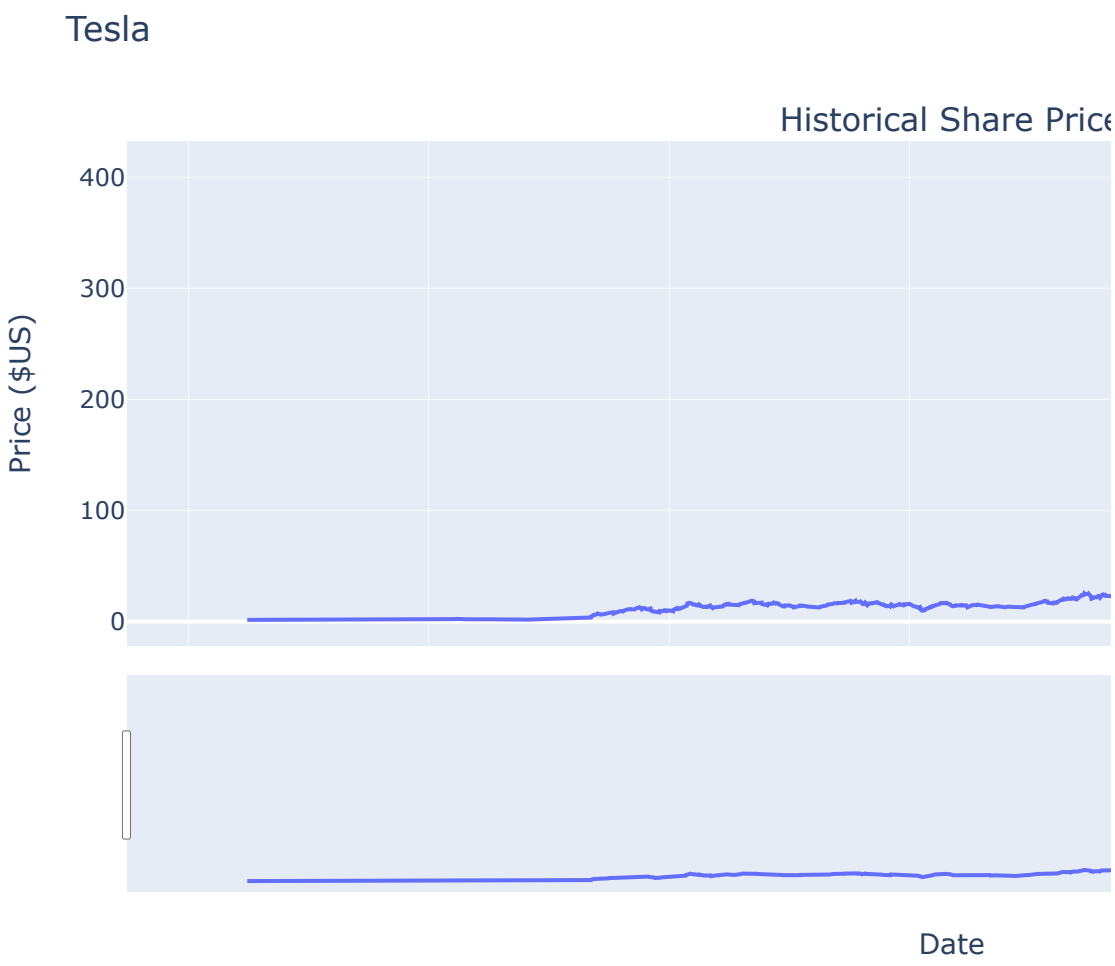
	Date	Revenue
51	2010-01-31	3524
52	2009-10-31	1835
53	2009-07-31	1739
54	2009-04-30	1981
55	2009-01-31	3492

In [27]:

```
# Plot Stock Graphs
```

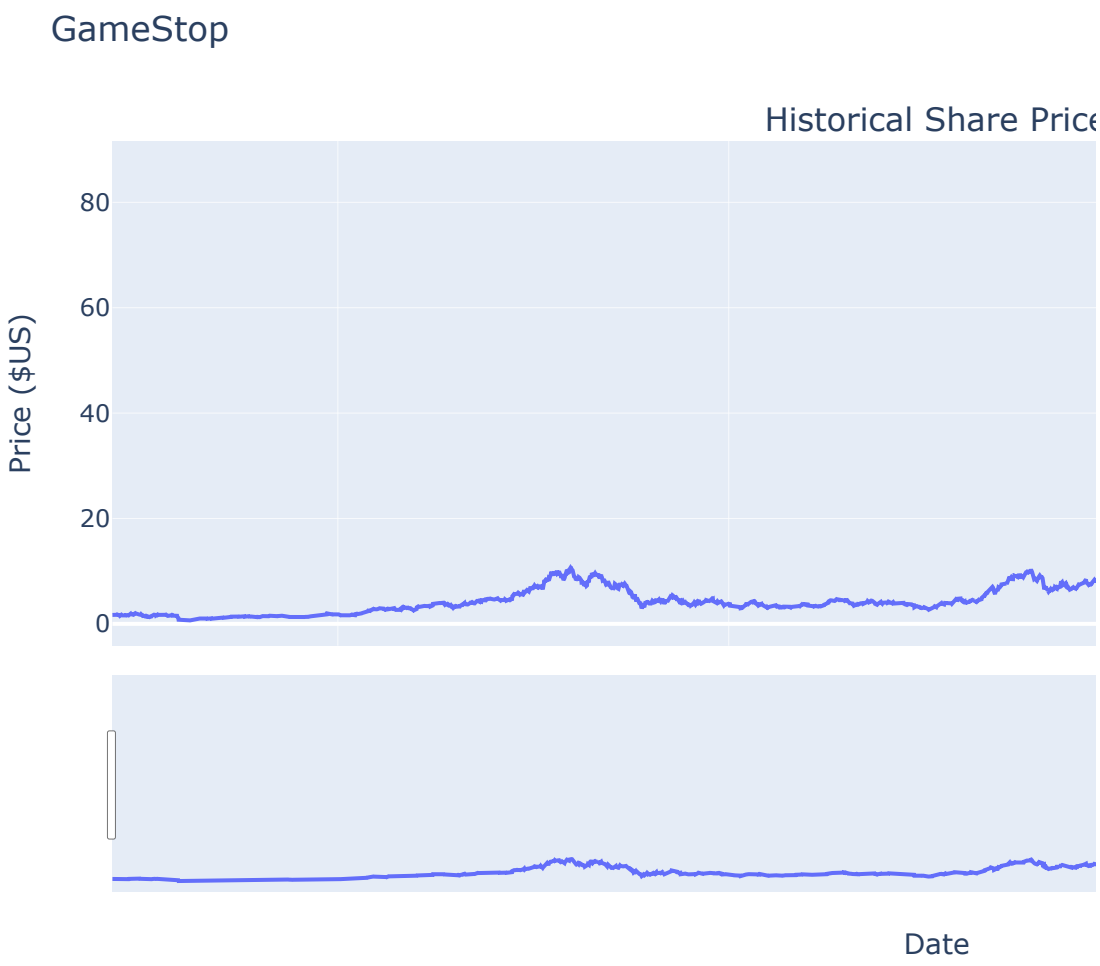
In [29]:

```
make_graph(tesla_data, tesla_revenue, 'Tesla')
```



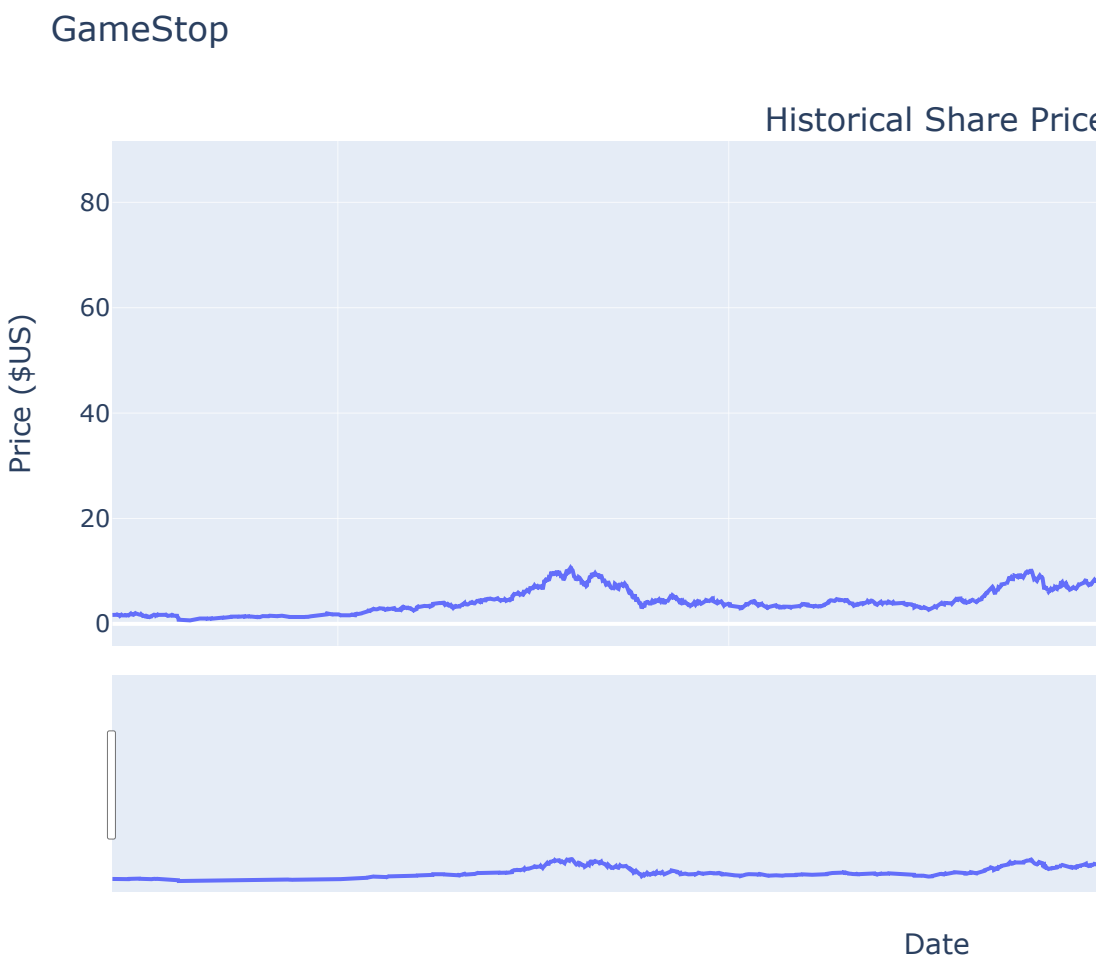
In [30]:

```
make_graph(gme_data, gme_revenue, 'GameStop')
```



In [31]:

```
make_graph(gme_data, gme_revenue, 'GameStop')
```



In [ ]:

```
```