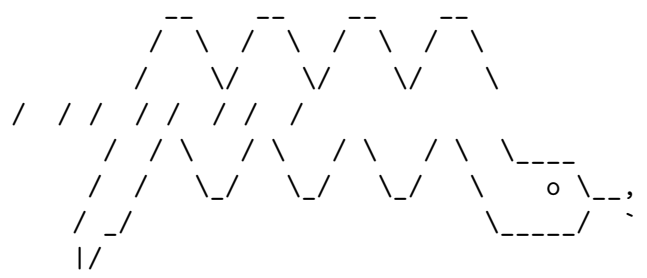
Stock_Revenue_Data

April 6, 2023

[1]:
```
#!pip install pandas==1.3.3
#!pip install requests==2.26.0
!mamba install bs4==4.10.0 -y
!mamba install html5lib==1.1 -y
!pip install lxml==4.6.4
#!pip install plotly==5.3.1
```



```
mamba (0.15.3) supported by @QuantStack

GitHub:  https://github.com/mamba-org/mamba
Twitter: https://twitter.com/QuantStack
```

```
Looking for: ['bs4==4.10.0']

pkgs/main/noarch         [>                   ] (--:--) No change
pkgs/main/noarch         [====================] (00m:00s) No change
pkgs/r/linux-64          [>                   ] (--:--) No change
pkgs/r/linux-64          [====================] (00m:00s) No change
pkgs/r/noarch            [>                   ] (--:--) No change
```

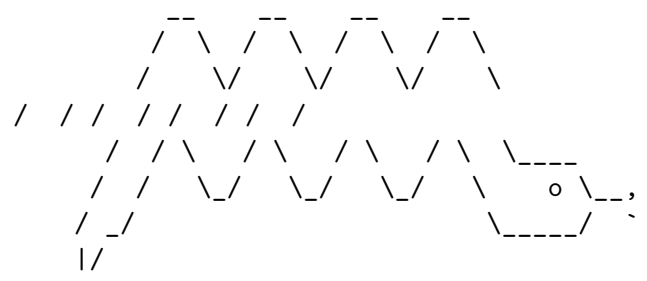
```
pkgs/r/noarch           [====================] (00m:00s) No change
pkgs/main/linux-64      [<=>                 ] (00m:00s)
pkgs/main/linux-64      [=>                ] (00m:00s) 664 KB / ?? (2.14 MB/s)
pkgs/main/linux-64      [<=>               ] (00m:00s) 664 KB / ?? (2.14 MB/s)
pkgs/main/linux-64      [ <=>                ] (00m:00s) 1 MB / ?? (3.01 MB/s)
pkgs/main/linux-64      [  <=>               ] (00m:00s) 1 MB / ?? (3.01 MB/s)
pkgs/main/linux-64      [  <=>               ] (00m:00s) 2 MB / ?? (3.51 MB/s)
pkgs/main/linux-64      [   <=>              ] (00m:00s) 2 MB / ?? (3.51 MB/s)
pkgs/main/linux-64      [   <=>              ] (00m:00s) 3 MB / ?? (3.72 MB/s)
pkgs/main/linux-64      [    <=>             ] (00m:00s) 3 MB / ?? (3.72 MB/s)
pkgs/main/linux-64      [    <=>             ] (00m:00s) 4 MB / ?? (3.91 MB/s)
pkgs/main/linux-64      [     <=>            ] (00m:00s) 4 MB / ?? (3.91 MB/s)
pkgs/main/linux-64      [     <=>            ] (00m:00s) 4 MB / ?? (4.05 MB/s)
pkgs/main/linux-64      [      <=>           ] (00m:00s) 4 MB / ?? (4.05 MB/s)
pkgs/main/linux-64      [      <=>           ] (00m:00s) 5 MB / ?? (4.16 MB/s)
pkgs/main/linux-64      [      <=>           ] (00m:01s) Finalizing…
pkgs/main/linux-64      [      <=>           ] (00m:01s) Done
pkgs/main/linux-64      [====================] (00m:01s) Done

Pinned packages:
  - python 3.7.*


Transaction

  Prefix: /home/jupyterlab/conda/envs/python

  All requested packages already installed
```



```
        mamba (0.15.3) supported by @QuantStack

        GitHub:  https://github.com/mamba-org/mamba
```

```
        Twitter: https://twitter.com/QuantStack


Looking for: ['html5lib==1.1']

pkgs/main/linux-64       Using cache
pkgs/main/noarch         Using cache
pkgs/r/linux-64          Using cache
pkgs/r/noarch            Using cache

Pinned packages:
  - python 3.7.*


Transaction

  Prefix: /home/jupyterlab/conda/envs/python

  All requested packages already installed

Requirement already satisfied: lxml==4.6.4 in
/home/jupyterlab/conda/envs/python/lib/python3.7/site-packages (4.6.4)
```

[90]:
```
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
```

[91]:
```
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()
```

[92]:
```
Tesla = yf.Ticker("TSLA")
tesla_data  = Tesla.history(period='max')
tesla_data.reset_index(inplace=True)
tesla_data.head(5)
```

[92]:

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

[93]:
```
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
```

[94]:
```
soup = BeautifulSoup(html_data, 'html5lib')
```

[95]:
```
tesla_revenue_html = pd.read_html(str(soup))
tesla_revenue = tesla_revenue_html[1]
```

[96]:
```
tesla_revenue= tesla_revenue.rename(columns={'Tesla Quarterly Revenue(Millions␣
↪of US $)':'Date','Tesla Quarterly Revenue(Millions of US $).1':'Revenue'})
```

[97]:
```
tesla_revenue["Revenue"] = tesla_revenue['Revenue'].str.replace(',|\$',"")
```

```
/home/jupyterlab/conda/envs/python/lib/python3.7/site-
packages/ipykernel_launcher.py:1: FutureWarning:

The default value of regex will change from True to False in a future version.
```

[98]:
```
tesla_revenue.dropna(inplace=True)
tesla_revenue = tesla_revenue[tesla_revenue['Revenue'] != ""]
```

[99]:
```
tesla_revenue.tail(5)
```

[99]:

	Date	Revenue
48	2010-09-30	31
49	2010-06-30	28
50	2010-03-31	21
52	2009-09-30	46
53	2009-06-30	27

[100]:
```
GameStop = yf.Ticker("GME")
gme_data = GameStop.history(period='max')
gme_data.reset_index(inplace=True)
gme_data.head(5)
```

[100]:

	Date	Open	High	Low	Close	Volume	Dividends	Stock Splits
0	2002-02-13	1.620128	1.693350	1.603296	1.691667	76216000	0.0	0.0
1	2002-02-14	1.712708	1.716074	1.670626	1.683251	11021600	0.0	0.0
2	2002-02-15	1.683251	1.687459	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	1.615921	1.662210	1.603296	1.662210	6892800	0.0	0.0

[53]:
```
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, 'html5lib')
```

[67]:
```
gme_revenue_html = pd.read_html(str(soup))
gme_revenue = gme_revenue_html[1]
gme_revenue = gme_revenue.rename(columns={'GameStop Quarterly Revenue(Millions␣
↪of US $)':'Date','GameStop Quarterly Revenue(Millions of US $).1':'Revenue'})
```

[68]:
```
gme_revenue["Revenue"] = gme_revenue['Revenue'].str.replace(',|\$','')
```

```
/home/jupyterlab/conda/envs/python/lib/python3.7/site-
packages/ipykernel_launcher.py:1: FutureWarning: The default value of regex will
change from True to False in a future version.
```

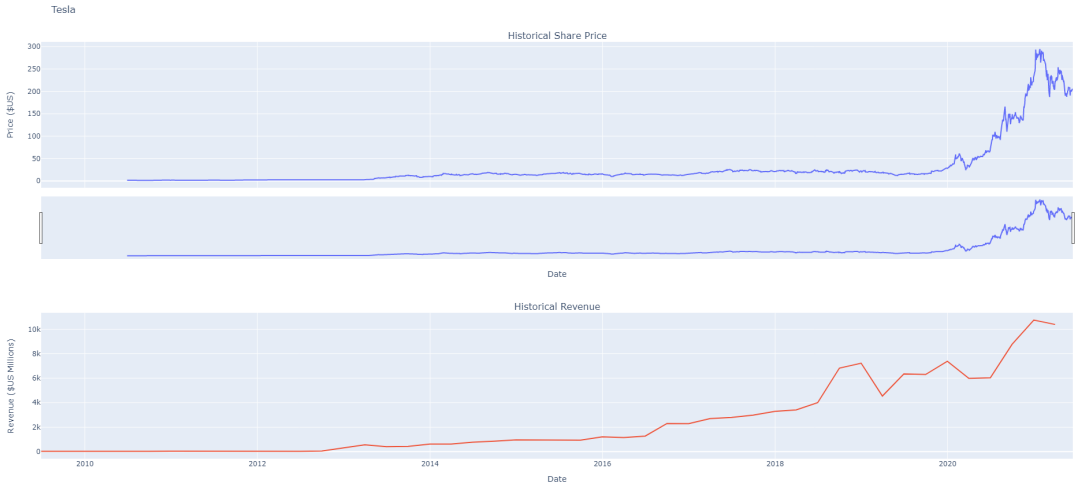
```
    """Entry point for launching an IPython kernel.
```

[69]:
```
gme_revenue.tail(5)
```

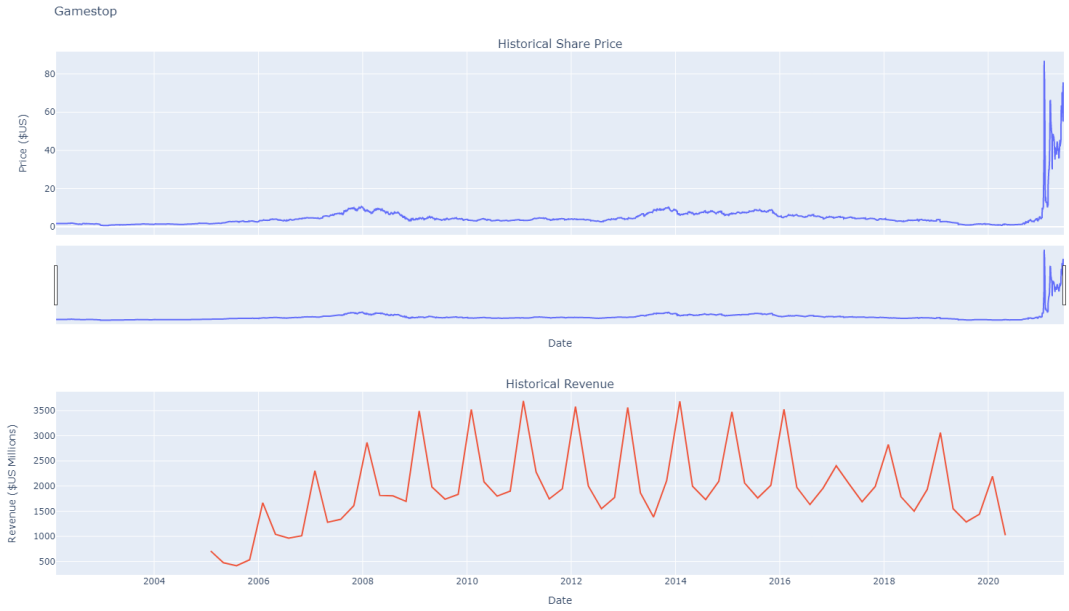
[69]:

	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

[89]:
```
make_graph(tesla_data,tesla_revenue, 'Tesla')
```



[101]:
```
make_graph(gme_data,gme_revenue, 'Gamestop')
```


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

[ ]: