```python
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
from fbprophet import Prophet

data = pd.read_csv("C://Users//Admin//Downloads//TSLA.csv")
data.head()
```

```
        Date        Open        High         Low       Close    Adj
Close  \
0  2021-04-07  687.000000  691.380005  667.840027  670.969971
670.969971
1  2021-04-08  677.380005  689.549988  671.650024  683.799988
683.799988
2  2021-04-09  677.770020  680.969971  669.429993  677.020020
677.020020
3  2021-04-12  685.700012  704.799988  682.090027  701.979980
701.979980
4  2021-04-13  712.700012  763.000000  710.659973  762.320007
762.320007

      Volume
0  26309400
1  23924300
2  21437100
3  29135700
4  44652800
```

```python
close = data['Close']
ax = close.plot(title='Tesla')
ax.set_xlabel('Date')
ax.set_ylabel('Close')
plt.show()
```

Tesla
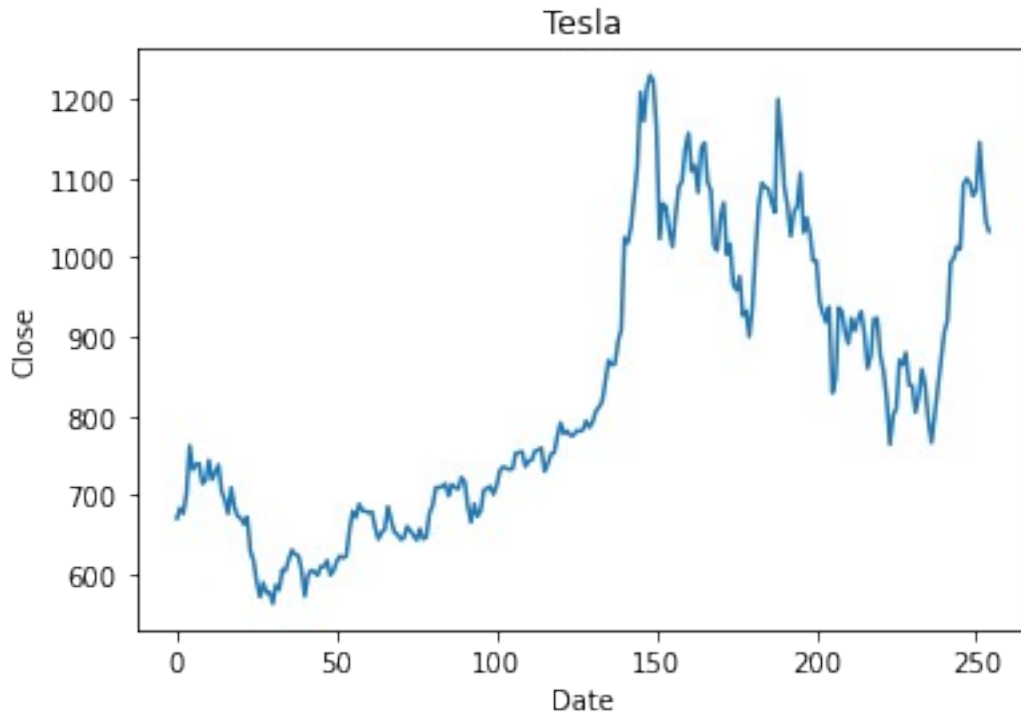
```python
data["Date"] = pd.to_datetime(data["Date"],
infer_datetime_format=True)
data = data[["Date", "Close"]]
data.describe()
```

```
            Close
count    255.000000
mean     830.990468
std      176.161168
min      563.460022
25%      680.510010
50%      781.530029
75%      997.690002
max      1229.910034
```

```python
data = data.rename(columns={"Date" : "ds", "Close" : "y" })

model = Prophet()
model.fit(data)
```

```
INFO:fbprophet:Disabling yearly seasonality. Run prophet with
yearly_seasonality=True to override this.
INFO:fbprophet:Disabling daily seasonality. Run prophet with
daily_seasonality=True to override this.
D:\Miniconda\lib\site-packages\fbprophet\forecaster.py:891:
FutureWarning: The frame.append method is deprecated and will be
removed from pandas in a future version. Use pandas.concat instead.
  components = components.append(new_comp)
```

```
<fbprophet.forecaster.Prophet at 0x1ef0a362910>

predict = model.make_future_dataframe(periods=365)

forcast = model.predict(predict)

D:\Miniconda\lib\site-packages\fbprophet\forecaster.py:891:
FutureWarning: The frame.append method is deprecated and will be
removed from pandas in a future version. Use pandas.concat instead.
  components = components.append(new_comp)
D:\Miniconda\lib\site-packages\fbprophet\forecaster.py:891:
FutureWarning: The frame.append method is deprecated and will be
removed from pandas in a future version. Use pandas.concat instead.
  components = components.append(new_comp)

forcast[["ds", "yhat", "yhat_lower", "yhat_upper"]].tail()

            ds         yhat  yhat_lower    yhat_upper
615 2023-04-03  622.505765   -7.448622   1225.429144
616 2023-04-04  616.310141  -26.516181   1203.547364
617 2023-04-05  617.277715   -9.423372   1206.442366
618 2023-04-06  609.311901  -31.904206   1176.299685
619 2023-04-07  605.401029  -34.016582   1198.750582

graph = model.plot(forcast, xlabel='Date', ylabel='Price')
plt.title('TESLA stock price estimation')

Text(0.5, 1.0, 'TESLA stock price estimation')
```