

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

*import your CSV file into Python: use your file address instead of ***** below

```
data = pd.read_csv(r'C:\Users\***** \TSLA.csv')
```

*Now, let's inspect our data by looking at the columns and check the descriptive summary of it

```
data.head(5)
data.describe()
```

Next, we need to rename our date and closing price variables to more simple names. Here I changed the name from *Date* and *Close* to *ds* and *y* respectively.

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

Next, we need to install the Facebook Prophet package

```
pip install ruamel.yaml
pip install fbprophet
```

Then we import the fbprophet and other needed packages into Python

```
from fbprophet import Prophet
from matplotlib import pyplot as plt
from matplotlib.dates import MonthLocator, num2date
from matplotlib.ticker import FuncFormatter
```

Next, we indicate the model and find the best fit model

```
m = Prophet(daily_seasonality=True)
m.fit(data)
```

In the next sets of codes, we make the prediction using column *ds* and set our forecasting window. Next we plot our results. You can change the highlighted number to any number of days that you want to forecast in the future (e.g., 365)

```
future = m.make_future_dataframe(periods=90) #we need to specify the number of days in future
```

```
prediction = m.predict(future)
```

```
m.plot(prediction)
```

```
plt.title("Prediction of the Tesla Stock Price using the Prophet")
```

```
plt.xlabel("Date")
```

```
plt.ylabel("Close Stock Price")
```

```
plt.show()
```

Lastly, we decompose our forecast into its trend and seasonality components

```
m.plot_components(prediction)
```

```
plt.show()
```