

✓ CATULAY, WESLIE JEE L.

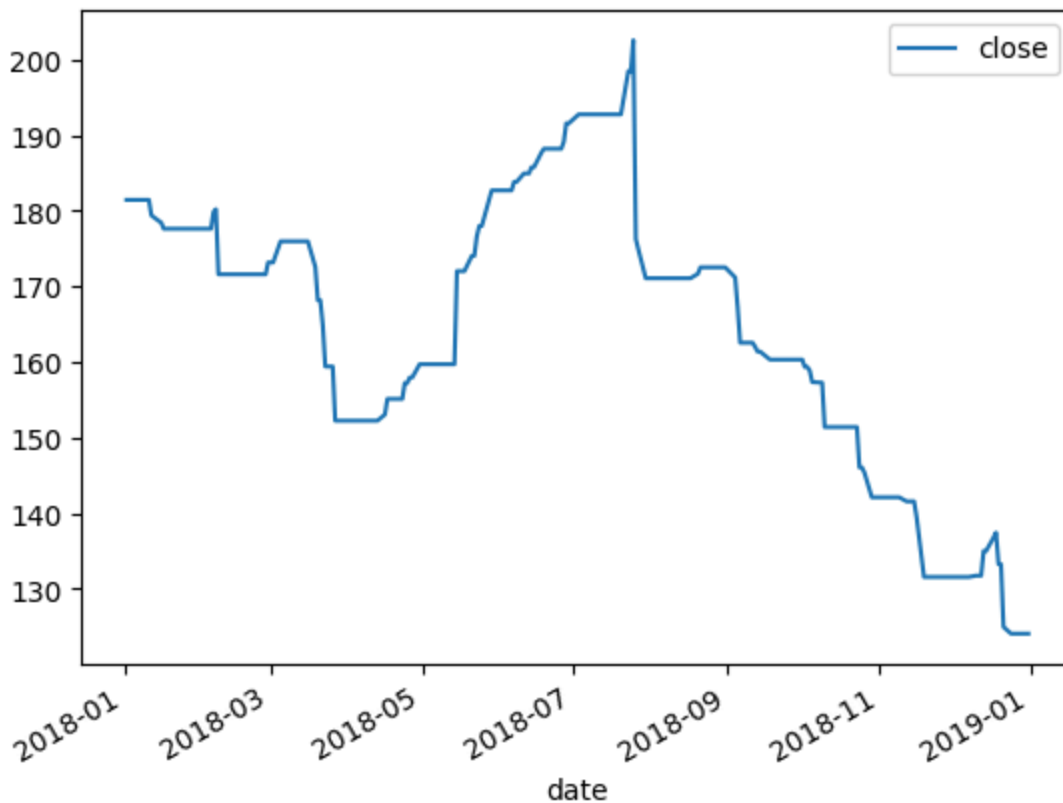
Supplementary

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

fb = pd.read_csv(
    'fb_stock_prices_2018.csv', index_col='date', parse_dates=True
)
eq = pd.read_csv('earthquakes-1.csv')
```

```
fb.rolling('20D').agg({'close':'min'}).plot()
```

↔ <Axes: xlabel='date'>



```
DataInfos = 'earthquakes-1.csv'
import pandas as pd
import numpy as np
data = pd.read_csv(DataInfos)
data
```



	mag	magType	time	place	tsunami	parsed_place
0	1.35	ml	1539475168010	9km NE of Aguanga, CA	0	California
1	1.29	ml	1539475129610	9km NE of Aguanga, CA	0	California
2	3.42	ml	1539475062610	8km NE of Aguanga, CA	0	California
3	0.44	ml	1539474978070	9km NE of Aguanga, CA	0	California
4	2.16	md	1539474716050	10km NW of Avenal, CA	0	California
...
9327	0.62	md	1537230228060	9km ENE of Mammoth Lakes, CA	0	California
9328	1.00	ml	1537230135130	3km W of Julian, CA	0	California
9329	2.40	md	1537229908180	35km NNE of Hatillo, Puerto Rico	0	Puerto Rico
9330	1.10	ml	1537229545350	9km NE of Aguanga, CA	0	California
9331	0.66	ml	1537228864470	9km NE of Aguanga, CA	0	California



Next steps:

[View recommended plots](#)

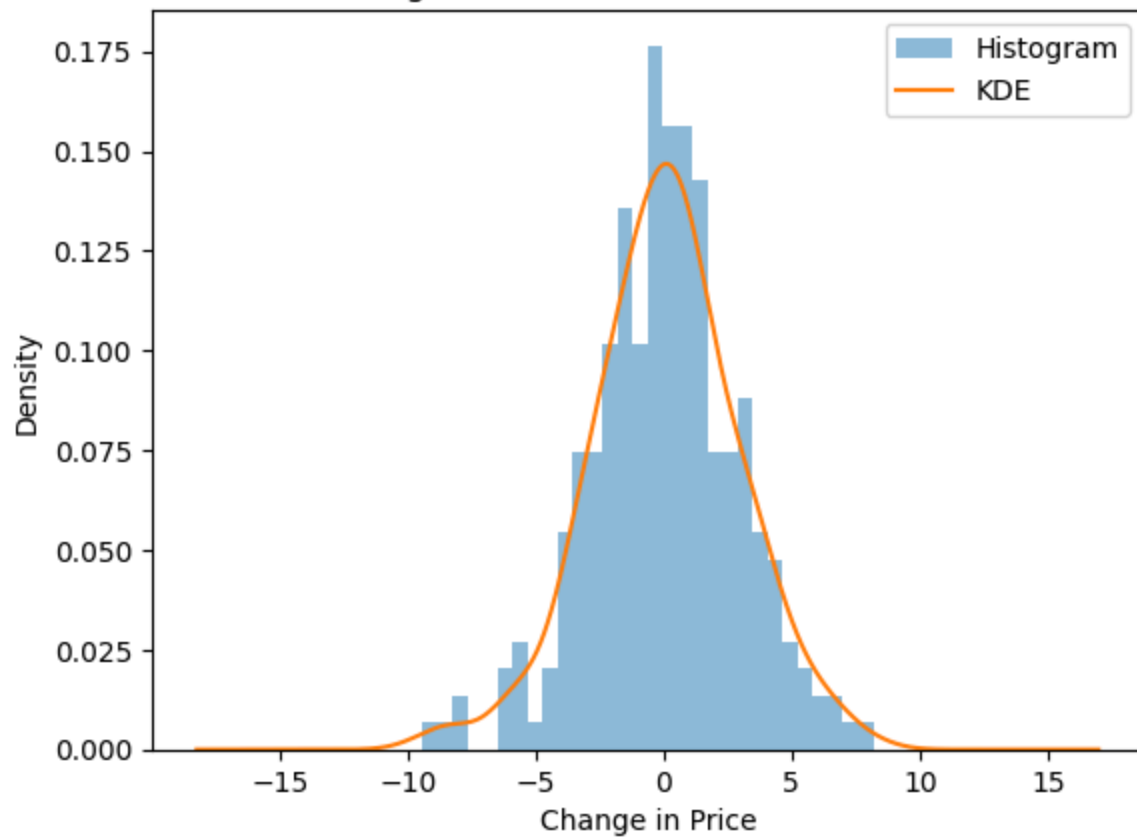
```

fb['open_close_change'] = fb['close'] - fb['open']
fb['open_close_change'].plot(kind='hist', density=True, alpha=0.5, bins=30)
fb['open_close_change'].plot(kind='kde')
plt.title('The Histogram and KDE in Facebook Stock Price')
plt.xlabel('Change in Price')
plt.ylabel('Density')
plt.legend(['Histogram', 'KDE'])
plt.show()

```



The Histogram and KDE in Facebook Stock Price

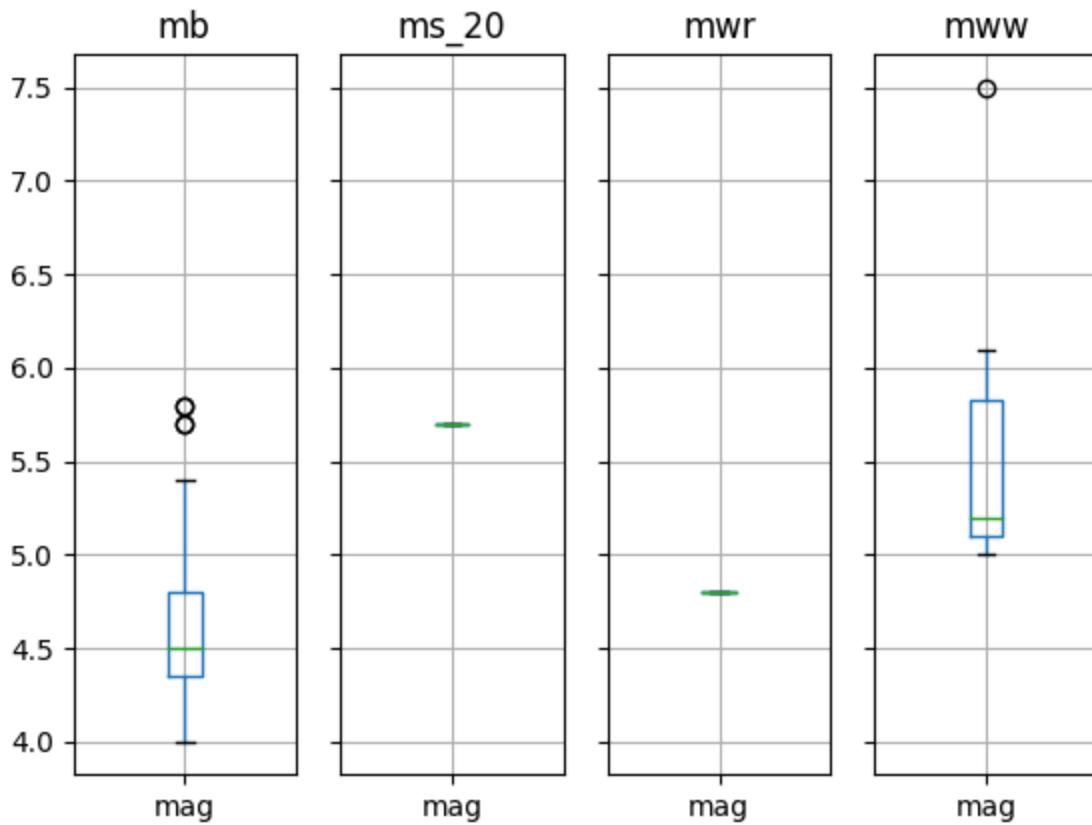


```
eq.query('parsed_place == "Indonesia"]').groupby('magType').boxplot(  
    column = 'mag',  
    layout = (1,4)  
)
```

```

⇒ mb      Axes(0.1,0.15;0.173913x0.75)
ms_20     Axes(0.308696,0.15;0.173913x0.75)
mwr       Axes(0.517391,0.15;0.173913x0.75)
mww       Axes(0.726087,0.15;0.173913x0.75)
dtype: object

```



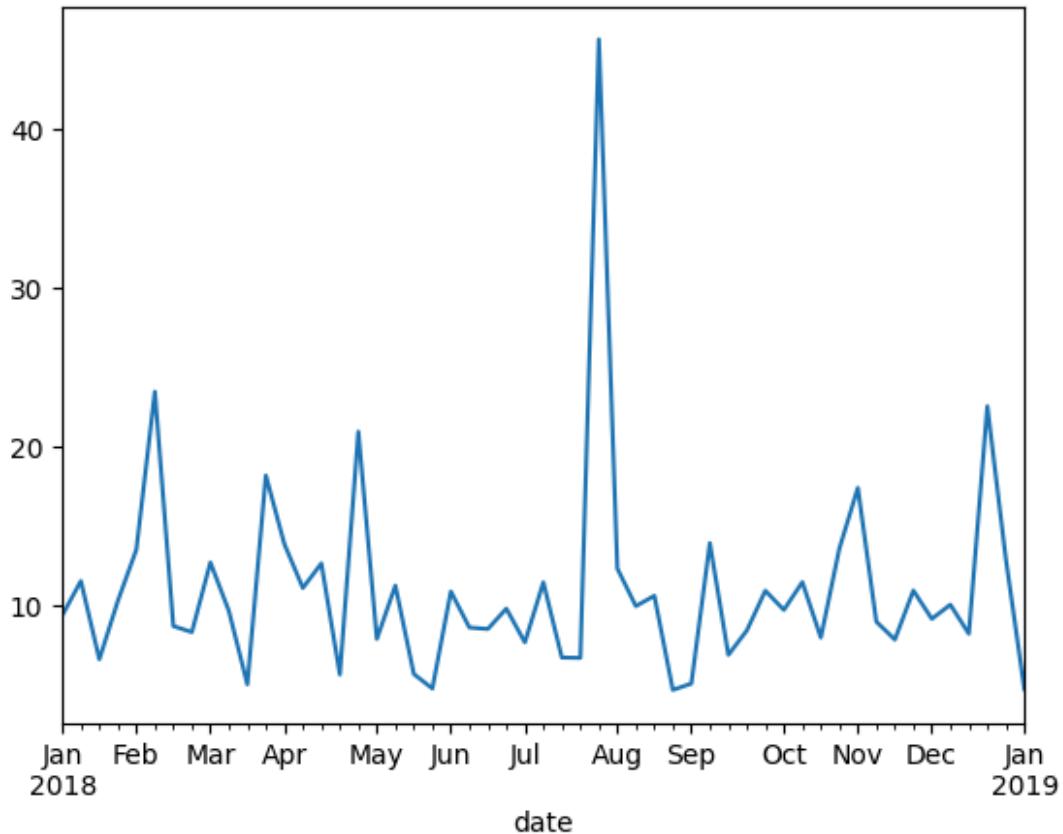
```

weekly_high = fb.high.resample('W').max()
weekly_low = fb.low.resample('W').min()
diff = weekly_high-weekly_low
diff.plot()
plt.title('Weekly Difference Between Maximum High and Minimum Low Price for Facebook')

```

```
Text(0.5, 1.0, 'Weekly Difference Between Maximum High and Minimum Low Price for Facebook')
```

Weekly Difference Between Maximum High and Minimum Low Price for Facebook



```
plot, ax = plt.subplots(2, figsize = [10,10]) #creating a subplot

graph = fb['open'] - fb['close']
bar = graph.resample('M').sum()

#setting colors
colors = ['red', 'blue', 'red', 'blue', 'red', 'blue', 'red', 'blue', 'red', 'blue', 'red',

graph.plot(ax = ax[0])
ax[0].set_title('Daily Difference between Opening and Closing Price')
ax[0].set_xlabel('Dates')
ax[0].set_ylabel('Values')

bar.plot(kind = 'bar', ax = ax[1], color = colors)
ax[1].set_title('Monthly Net Effect')
ax[1].set_xlabel('Dates')
ax[1].set_ylabel('Values')
ax[1].set_xticklabels(bar.index.strftime('%b'))

plot.tight_layout()
```

