PyCoinGecko

April 2, 2025

[2]:
```
import pandas as pd
```

[3]:
```
from pycoingecko import CoinGeckoAPI
```

[4]:
```
cga = CoinGeckoAPI()
```

[5]:
```
#Assigning the bitcoin data of 90 days in USD
bitcoin_data = cga.get_coin_market_chart_by_id(
    id='bitcoin',
    vs_currency='usd',
    days=90
)
```

[6]:
```
#Assigning the ethereum data of 90 days in USD
ethereum_data = cga.get_coin_market_chart_by_id(
    id='ethereum',
    vs_currency='usd',
    days=90
)
```

[7]:
```
#Converting  JSON file to data frame
b_df= pd.DataFrame(
    bitcoin_data['prices'],
    columns=['Timestamp','Prices']
                  )
```

[8]:
```
b_df.head()
```

[8]:

	Timestamp	Prices
0	1735805028685	95718.778413
1	1735808626305	96000.772732
2	1735812235758	96427.253640
3	1735815838397	96481.025485
4	1735819438190	96653.952201

[9]:
```
#Converting  JSON file to data frame
e_df= pd.DataFrame(
```

```
    ethereum_data['prices'],
    columns=['Timestamp','Prices']
                 )
```

[10]:
```
e_df.head()
```

[10]:
```
        Timestamp       Prices
0  1735808624336  3432.312658
1  1735812233796  3446.195773
2  1735815835214  3462.735037
3  1735819434942  3468.975545
4  1735823037299  3475.726316
```

[11]:
```
# Converting Time stamps to Date
b_df['Date']=pd.to_datetime(b_df['Timestamp'], unit = 'ms')
```

[12]:
```
# Converting Time stamps to Date
e_df['Date']=pd.to_datetime(e_df['Timestamp'], unit = 'ms')
```

[13]:
```
b_df.head()
```

[13]:
```
        Timestamp        Prices                     Date
0  1735805028685  95718.778413 2025-01-02 08:03:48.685
1  1735808626305  96000.772732 2025-01-02 09:03:46.305
2  1735812235758  96427.253640 2025-01-02 10:03:55.758
3  1735815838397  96481.025485 2025-01-02 11:03:58.397
4  1735819438190  96653.952201 2025-01-02 12:03:58.190
```

[14]:
```
e_df.head()
```

[14]:
```
        Timestamp       Prices                     Date
0  1735808624336  3432.312658 2025-01-02 09:03:44.336
1  1735812233796  3446.195773 2025-01-02 10:03:53.796
2  1735815835214  3462.735037 2025-01-02 11:03:55.214
3  1735819434942  3468.975545 2025-01-02 12:03:54.942
4  1735823037299  3475.726316 2025-01-02 13:03:57.299
```

[15]:
```
# Grouping Prices as minimum, maximum, first and Last value of each day
bd_group = b_df.groupby(b_df.Date.dt.date).agg({'Prices':['min', 'max',␣
 ↪'first', 'last']})
```

[16]:
```
# Grouping Prices as minimum, maximum, first and Last value of each day
ed_group = e_df.groupby(e_df.Date.dt.date).agg({'Prices':['min', 'max',␣
 ↪'first', 'last']})
```

[17]:
```
bd_group.head()
```

[17]:

	Prices			
	min	max	first	last
Date				
2025-01-02	95718.778413	97433.160066	95718.778413	96839.913680
2025-01-03	96010.075390	98547.435498	96897.897739	98273.148214
2025-01-04	97647.466574	98597.697785	98150.883784	98318.610635
2025-01-05	97597.295638	98674.471779	98210.984491	98674.471779
2025-01-06	98260.455544	102183.669137	98349.761456	102079.847212

[18]:
```
ed_group.head()
```

[18]:

	Prices			
	min	max	first	last
Date				
2025-01-02	3432.312658	3492.241973	3432.312658	3439.052969
2025-01-03	3425.505902	3617.920696	3451.217443	3615.269761
2025-01-04	3583.109664	3658.600389	3607.371132	3657.115221
2025-01-05	3608.126312	3656.822200	3656.822200	3650.182257
2025-01-06	3622.128722	3714.584702	3635.087446	3682.122032

[19]:
```
#import plotly.graph_objects
import plotly.graph_objects as go
```

[20]:
```
#assigning fig
fig = go.Figure( data = [
    go.Candlestick(x=bd_group.index,
                   open = bd_group['Prices']['first'],
                   high = bd_group['Prices']['max'],
                   low = bd_group['Prices']['min'],
                   close = bd_group['Prices']['last']
                  )
])
```

[21]:
```
fig.update_layout(xaxis_rangeslider_visible = False, xaxis_title = 'Date',
                  yaxis_title='Prices (USD $)', title = 'Bitcoin Candle stick␣
 ↪Chart over past 90 Days'
                  )
```

[22]:
```
#assigning fig2
fig2 = go.Figure( data = [
    go.Candlestick(x=ed_group.index,
                   open = ed_group['Prices']['first'],
                   high = ed_group['Prices']['max'],
                   low = ed_group['Prices']['min'],
                   close = ed_group['Prices']['last']
                  )
])
```

[23]:
```
fig2.update_layout(xaxis_rangeslider_visible = False, xaxis_title = 'Date',
                   yaxis_title='Prices (USD $)', title = 'Ethereum Candle stick␣
 ↪Chart over past 90 Days'
                   )
```

[25]:
```
fig
```

[26]:
```
fig2
```