Litecoin Price History

Tutorial

This tutorial, inspired by the obsolete by now post on https://notebooks.ai, we're going to pull Bitcoin cryptocurrency prices from a public API and download them as Excel files. I need to import two libraries first: *requests* (to pull data from the web) and *pandas* to process it. May require `pip install requests`

In [ ]:
```
import requests
# !pip install -q pandas
import pandas as pd
import matplotlib.pyplot as plt
```

I have a predefined function that simplifies the process of importing data from Cryptocompare (for reference, check their website and documentation).

In [ ]:
```
def get_historic_price(symbol, exchange='bitfinex', days=100):
    url = f'https://min-api.cryptocompare.com/data/v2/histoday'
    params = {
        'fsym': symbol,
        'tsym': 'USD',
        'limit': days,  # maximum records per request
        #'exchange': exchange
    }

    resp = requests.get(url, params=params)
    resp.raise_for_status()

    data_dict = resp.json()['Data']['Data']
    df = pd.DataFrame(data_dict)
    df['time'] = pd.to_datetime(df['time'], unit='s')
    df.set_index('time', inplace=True)
    df = df[['open', 'high', 'low', 'close', 'volumeto']]
    df.columns = ['OpenPrice', 'HighPrice', 'LowPrice', 'ClosePrice', 'Volume']

    return df
```

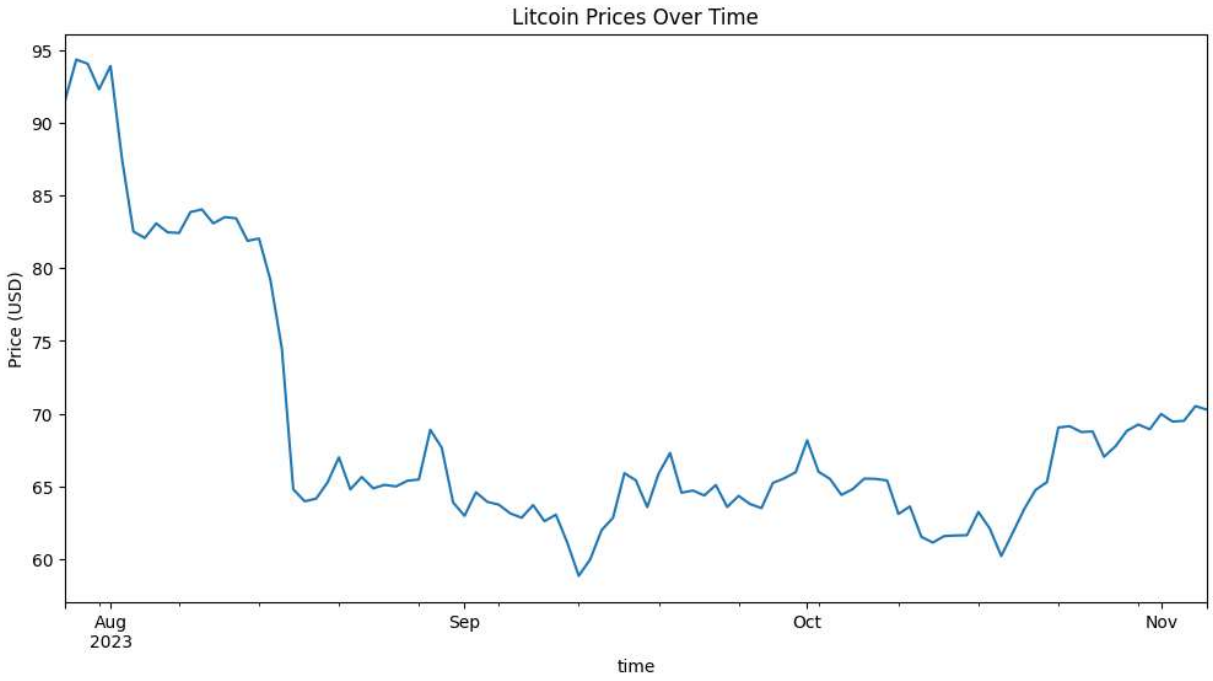
We will now pull data from Bitcoin, the most popular cryptocurrencies, for the last 100 days, and plot it:

In [ ]:
```
# Example call
df = get_historic_price('LTC', days = 100)
display(df.head())

# Plotting OHLC Prices
df['ClosePrice'].plot(figsize=(12, 6))
plt.title("Litcoin Prices Over Time")
```

```
plt.ylabel("Price (USD)")
plt.show()
```

time	OpenPrice	HighPrice	LowPrice	ClosePrice	Volume
2023-07-28	90.58	91.97	90.52	91.47	11544906.69
2023-07-29	91.47	94.90	90.86	94.33	13509490.00
2023-07-30	94.33	98.78	91.09	94.04	56683056.35
2023-07-31	94.04	95.10	91.10	92.28	29001372.31
2023-08-01	92.28	94.00	88.02	93.89	41722852.86



Dynamic plots with Bokeh

May need to `pip install bokeh`

In [ ]:
```
!pip install -q bokeh
from bokeh.plotting import figure, output_file, show
from bokeh.io import output_notebook
output_notebook()

p1 = figure(x_axis_type="datetime", title="Crypto Prices")
p1.height=400
p1.grid.grid_line_alpha=0.3
p1.xaxis.axis_label = 'Date'
p1.yaxis.axis_label = 'Price $'
p1.line(df.index, df['ClosePrice'], color='#f2a900', legend_label='Litecoin')
p1.legend.location = "top_left"
```

```
show(p1)
```

```
[notice] A new release of pip is available: 23.3 -> 23.3.1
[notice] To update, run: python -m pip install --upgrade pip
```

BokehJS 3.3.0 successfully loaded.

Exporting to Excel

In [ ]:
```
!pip install -q openpyxl
import openpyxl
writer = pd.ExcelWriter('LitCoin_history.xlsx')
df.to_excel(writer, sheet_name='LitCoin')
writer.close()
```

```
[notice] A new release of pip is available: 23.3 -> 23.3.1
[notice] To update, run: python -m pip install --upgrade pip
```

Exporting to CSV

In [ ]:
```
df.to_csv('LitCoin_history.csv')
```