

1. Plot 5 day Moving/Rolling Average of Volume Traded for every coin in given period: [01/01/20 – 31/01/20].

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In [ ]: import pandas as pd
import matplotlib.pyplot as plt
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In [ ]: bitcoin = pd.read_csv('D:\python\data\coin_Bitcoin.csv')
ethereum = pd.read_csv('D:\python\data\coin_Ethereum.csv')
ethereum = ethereum.sort_values('Date')
Litecoin = pd.read_csv('D:\python\data\coin_Litecoin.csv')
Monero = pd.read_csv('D:\python\data\coin_Monero.csv')
Ripple = pd.read_csv('D:\python\data\coin_Ripple.csv')
Ripple = Ripple.sort_values('Date')
Solana = pd.read_csv('D:\python\data\coin_Solana.csv')
Stellar = pd.read_csv('D:\python\data\coin_Stellar.csv')
Tether = pd.read_csv('D:\python\data\coin_Tether.csv')
Tron = pd.read_csv('D:\python\data\coin_Tron.csv')
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In [ ]: start_date = '2020-01-01'
end_date = '2020-01-31'
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In [ ]: bitcoin['Date'] = pd.to_datetime(bitcoin['Date'])
bitcoin.set_index('Date', drop=True, inplace=True)

ethereum['Date'] = pd.to_datetime(ethereum['Date'])
ethereum.set_index('Date', drop=True, inplace=True)

Litecoin['Date'] = pd.to_datetime(Litecoin['Date'])
Litecoin.set_index('Date', drop=True, inplace=True)

Monero['Date'] = pd.to_datetime(Monero['Date'])
Monero.set_index('Date', drop=True, inplace=True)

Ripple['Date'] = pd.to_datetime(Ripple['Date'])
Ripple.set_index('Date', drop=True, inplace=True)

Solana['Date'] = pd.to_datetime(Solana['Date'])
Solana.set_index('Date', drop=True, inplace=True)

Stellar['Date'] = pd.to_datetime(Stellar['Date'])
Stellar.set_index('Date', drop=True, inplace=True)

Tether['Date'] = pd.to_datetime(Tether['Date'])
Tether.set_index('Date', drop=True, inplace=True)

Tron['Date'] = pd.to_datetime(Tron['Date'])
Tron.set_index('Date', drop=True, inplace=True)
```

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In [ ]: fig, ax = plt.subplots(nrows=3 , ncols=3 , figsize=(16,8))
ethereum = ethereum.sort_values('Date')
Ripple = Ripple.sort_values('Date')
bitcoin['Bit_moving'] = bitcoin['Volume'].rolling(window=5).mean()
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```
a = bitcoin[start_date:end_date][['Volume', 'Bit_moving']]
ax[0][0].plot(a)

ethereum['Eth_moving'] = ethereum['Volume'].rolling(window=5).mean()
b = ethereum[start_date:end_date][['Volume', 'Eth_moving']]
ax[0][1].plot(b)

Litecoin['lite_moving'] = Litecoin['Volume'].rolling(window=5).mean()
c = Litecoin[start_date:end_date][['Volume', 'lite_moving']]
ax[0][2].plot(c)

Monero['Mon_moving'] = Monero['Volume'].rolling(window=5).mean()
d = Monero[start_date:end_date][['Volume', 'Mon_moving']]
ax[1][0].plot(d)

Ripple['Rpl_moving'] = Ripple['Volume'].rolling(window=5).mean()
e = Ripple[start_date:end_date][['Volume', 'Rpl_moving']]
ax[1][1].plot(e)

Solana['Sol'] = Solana['Volume'].rolling(window=5).mean()
f = Solana[start_date:end_date][['Volume', 'Sol']]
ax[1][2].plot(f)

Stellar['Stl'] = Stellar['Volume'].rolling(window=5).mean()
g = Stellar[start_date:end_date][['Volume', 'Stl']]
ax[2][0].plot(g)

Tether['tehr'] = Tether['Volume'].rolling(window=5).mean()
h = Tether[start_date:end_date][['Volume', 'tehr']]
ax[2][1].plot(h)

Tron['Tron'] = Tron['Volume'].rolling(window=5).mean()
i = Tron[start_date:end_date][['Volume', 'Tron']]
ax[2][2].plot(i)

for ax in fig.axes:
    plt.ylabel('Rolling Avg.')
    plt.xlabel('Duration')
    plt.sca(ax)
    plt.xticks(rotation=90)

fig.tight_layout()
```

