binance

May 19, 2021

1 Final Project

1.1 Imports

[51]:
```
# <include-final_project/utils.py>
```

[52]:
```
# <imports>
import numpy as np
import pandas as pd
import plotly.io as pio


from final_project import utils

pd.options.plotting.backend = "plotly"
pio.templates.default = "seaborn"
```

1.1.1 Markets

[53]:
```
df_exch = utils.get_exchange_info()
df_exch.loc["BTCUSDT"]
```

[53]:
```
status                                                          TRADING
baseAsset                                                           BTC
baseAssetPrecision                                                    8
quoteAsset                                                         USDT
quotePrecision                                                        8
quoteAssetPrecision                                                   8
baseCommissionPrecision                                               8
quoteCommissionPrecision                                              8
orderTypes                  [LIMIT, LIMIT_MAKER, MARKET, STOP_LOSS_LIMIT, …
icebergAllowed                                                     True
ocoAllowed                                                         True
quoteOrderQtyMarketAllowed                                         True
isSpotTradingAllowed                                               True
isMarginTradingAllowed                                             True
filters                     [{'filterType': 'PRICE_FILTER', 'minPrice': '0…
```

```
permissions                                                    [SPOT, MARGIN]
Name: BTCUSDT, dtype: object
```

1.2 Contracts

[54]:
```
df_perpetual = utils.get_continuous_contracts(pair="BTCUSDT",␣
↪start_time="2021-05-01")
utils.make_price_volume_chart(df_perpetual, title="BTCUSDT Perpetual OHLC 8␣
↪Hour Intervals")
```

[55]:
```
df_perpetual = utils.get_continuous_contracts(pair="BTCUSDT",␣
↪start_time="2021-05-01", contract_type="CURRENT_QUARTER")
utils.make_price_volume_chart(df_perpetual, title="BTCUSDT Current Quarter OHLC␣
↪8 Hour Intervals")
```

1.3 Spot Prices

These are the same prices as above.

[56]:
```
df_spot = utils.get_klines(symbol="BTCUSDT", start_time="2021-05-01")
utils.make_price_volume_chart(df_spot, title="BTCUSDT OHLC 8 Hour Intervals")
```

1.4 Funding Rate

[57]:
```
df_funding = utils.get_funding_rate_history(symbol="BTCUSDT",␣
↪start_time="2021-04-30 16:00")
fig = df_funding.plot(title="BTCUSDT Funding Rate")
fig.update_layout(showlegend=False)
fig.show()
```

[58]:
```
fig = utils.make_subplots(specs=[[{"secondary_y": True}]])
fig.add_trace(utils.go.Scatter(x=df_perpetual.index, y= np.log(df_perpetual.
↪close / df_spot.close), name="spread"), secondary_y=False)
fig.add_trace(utils.go.Scatter(x=df_funding.index, y=df_funding.fundingRate,␣
↪name="funding_rate"), secondary_y=True)
fig.update_layout(title="Perpetual Price as a % of Spot vs. Funding Rate")
fig.show()
```