R Markdown Output

Last run on: 2021-05-05 06:30:42

2021-05-05 06:30:42

Overview

This document has code embedded throughout. In the next section we will create a visualization using the already loaded dataset eth_data:
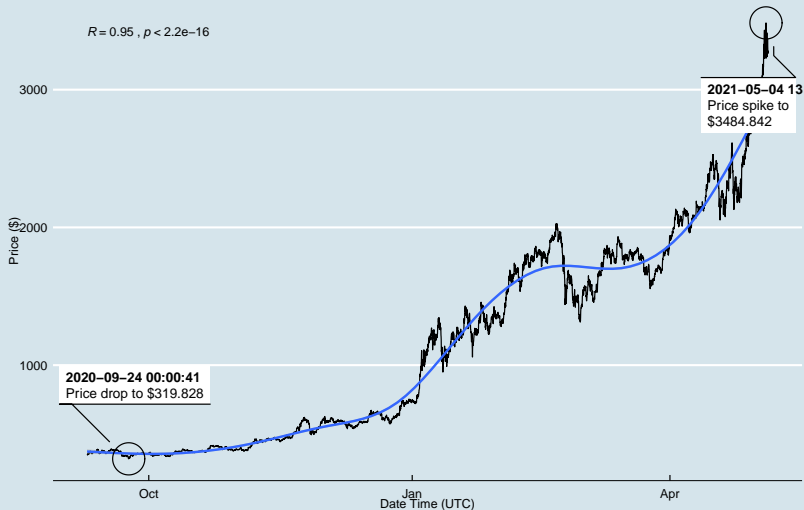
```
datatable(eth_data)
```

Price Chart - Ethereum

Price Change Over Time – ETH
Most recent data collected on: 2021–05–05 06:00:01 (UTC)

$R = 0.95$, $p < 2.2e{-}16$

2021–05–04 13
Price spike to
$3484.842

2020–09–24 00:00:41
Price drop to $319.828

Price ($)

Date Time (UTC)

Python Code Example

```python
import pandas as pd
# Create the Python object from R
df = r.cryptodata
# Show the new Python dataframe
df
```

```
##              pair symbol ask_1_price         date_time_utc
## 0        ETHUSD    ETH    3283.864  2021-05-05 06:00:01
## 1        BTCUSD    BTC   54741.080  2021-05-05 06:00:00
## 2        BTCUSD    BTC   54590.000  2021-05-05 05:00:01
## 3        ETHUSD    ETH    3263.297  2021-05-05 05:00:01
## 4        ETHUSD    ETH    3298.676  2021-05-05 04:00:01
## ...         ...    ...         ...                   ...
## 11979    BTCUSD    BTC   11972.900  2020-08-10 06:03:50
## 11980    BTCUSD    BTC   11985.890  2020-08-10 05:03:48
## 11981    BTCUSD    BTC   11997.470  2020-08-10 04:32:55
## 11982    BTCUSD    BTC   10686.880                   NaT
## 11983    ETHUSD    ETH     357.844                   NaT
```

One more Python example

The code below creates a new column `price_percentile` that specifies if the price for the row was in the upper or lower 50th percentile of prices (BTC should be upper and ETH lower):

```python
import numpy as np
# Create a new column based on the ask_1_price value:
df['price_percentile'] = np.where(df['ask_1_price'] >
                              np.percentile(df['ask_1_p
                        'upper 50th percentile of price
                        'lower 50th percentile of price
# Show modified dataframe:
df[['symbol', 'ask_1_price', 'price_percentile']]
```

```
##      symbol  ask_1_price                      price_percenti
## 0       ETH     3283.864  lower 50th percentile of pric
## 1       BTC    54741.080  upper 50th percentile of pric
## 2       BTC    54590.000  upper 50th percentile of pric
## 3       ETH     3263.297  lower 50th percentile of pric
## 4       ETH     3298.676  lower 50th percentile of pric
```