R Markdown Output

Last run on: 2021-03-08 06:29:58
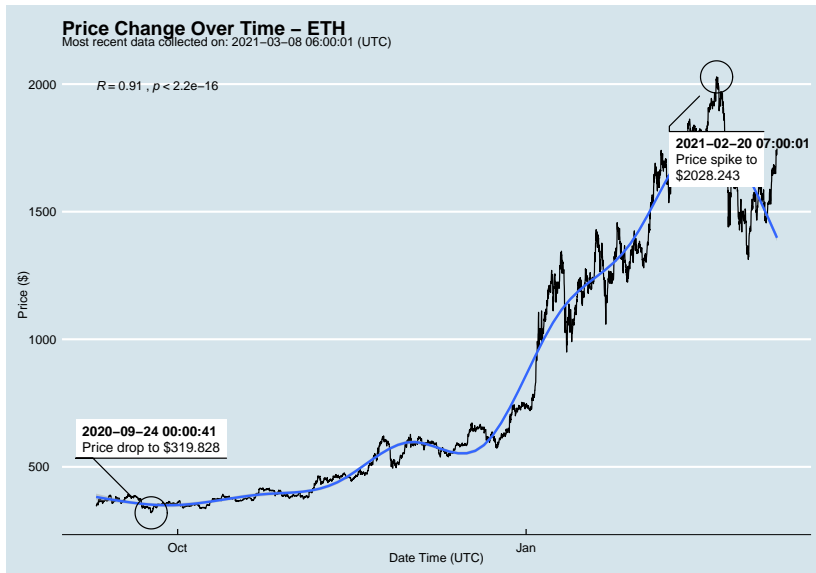
2021-03-08 06:29:58

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: 2021–03–08 06:00:01 (UTC)

$R = 0.91$, $p < 2.2e{-}16$

2021–02–20 07:00:01
Price spike to
$2028.243

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

Price ($)

Date Time (UTC)

Oct

Jan

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     1747.514  2021-03-08 06:00:01
## 1       BTCUSD     BTC    50735.980  2021-03-08 06:00:00
## 2       BTCUSD     BTC    50417.420  2021-03-08 05:00:01
## 3       ETHUSD     ETH     1727.204  2021-03-08 05:00:01
## 4       BTCUSD     BTC    50592.000  2021-03-08 04:00:01
## ...        ...     ...          ...                  ...
## 9201    BTCUSD     BTC    11972.900  2020-08-10 06:03:50
## 9202    BTCUSD     BTC    11985.890  2020-08-10 05:03:48
## 9203    BTCUSD     BTC    11997.470  2020-08-10 04:32:55
## 9204    BTCUSD     BTC    10686.880                  NaT
## 9205    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_percentil
## 0       ETH     1747.514  lower 50th percentile of price
## 1       BTC    50735.980  upper 50th percentile of price
## 2       BTC    50417.420  upper 50th percentile of price
## 3       ETH     1727.204  lower 50th percentile of price
## 4       BTC    50592.000  upper 50th percentile of price
```