

## R Markdown Output

Last run on: 2020-12-15 19:17:56

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# 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: 2020-12-15 19:00:01 (UTC)

$R = 0.89$ ,  $p < 2.2e-16$



## Python Code Example

```
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      BTCUSD   BTC      19530.830 2020-12-15 19:00:01
## 1      ETHUSD   ETH        589.274 2020-12-15 19:00:01
## 2      ETHUSD   ETH        585.940 2020-12-15 18:00:01
## 3      BTCUSD   BTC      19398.990 2020-12-15 18:00:00
## 4      ETHUSD   ETH        585.514 2020-12-15 17:00:01
## ...      ...      ...           ...           ...
## 5243 BTCUSD   BTC      11972.900 2020-08-10 06:03:50
## 5244 BTCUSD   BTC      11985.890 2020-08-10 05:03:48
## 5245 BTCUSD   BTC      11997.470 2020-08-10 04:32:55
## 5246 BTCUSD   BTC      10686.880                NaT
## 5247 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):

```
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_price'],
                                                  50,
                                                  '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_percentile               |
|------|--------|-------------|--------------------------------|
| ## 0 | BTC    | 19530.830   | upper 50th percentile of price |
| ## 1 | ETH    | 589.274     | lower 50th percentile of price |
| ## 2 | ETH    | 585.940     | lower 50th percentile of price |
| ## 3 | BTC    | 19398.990   | upper 50th percentile of price |
| ## 4 | ETH    | 585.514     | lower 50th percentile of price |