

## R Markdown Output

Last run on: 2020-12-23 06:31:28

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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: 2020-12-23 06:00:01 (UTC)

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



## 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      23525.000 2020-12-23 06:00:01
## 1      ETHUSD   ETH        615.130 2020-12-23 06:00:01
## 2      BTCUSD   BTC      23446.650 2020-12-23 05:00:01
## 3      ETHUSD   ETH        617.556 2020-12-23 05:00:01
## 4      ETHUSD   ETH        623.627 2020-12-23 04:00:01
## ...      ...      ...           ...           ...
## 5601 BTCUSD   BTC      11972.900 2020-08-10 06:03:50
## 5602 BTCUSD   BTC      11985.890 2020-08-10 05:03:48
## 5603 BTCUSD   BTC      11997.470 2020-08-10 04:32:55
## 5604 BTCUSD   BTC      10686.880                NaT
## 5605 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'],
                                                  'upper 50th percentile of price'),
                                  '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	0	BTC	23525.000	upper 50th percentile of price
## 1	1	ETH	615.130	lower 50th percentile of price
## 2	2	BTC	23446.650	upper 50th percentile of price
## 3	3	ETH	617.556	lower 50th percentile of price
## 4	4	ETH	623.627	lower 50th percentile of price