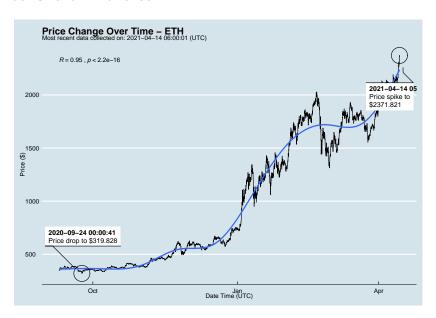# R Markdown Output

Last run on: 2021-04-14 06:13:46

2021-04-14 06:13:46

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: 2021-04-14 06:00:01 (UTC)

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

2021-04-14 05
Price spike to
$2371.821

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

Price ($)

2000

1500

1000

500

Oct
Jan
Apr

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       BTCUSD    BTC    64030.000 2021-04-14 06:00:01
## 1       ETHUSD    ETH     2362.220 2021-04-14 06:00:01
## 2       ETHUSD    ETH     2371.821 2021-04-14 05:00:01
## 3       BTCUSD    BTC    64259.700 2021-04-14 05:00:00
## 4       ETHUSD    ETH     2347.038 2021-04-14 04:00:01
## ...        ...    ...          ...                 ...
## 10973   BTCUSD    BTC    11972.900 2020-08-10 06:03:50
## 10974   BTCUSD    BTC    11985.890 2020-08-10 05:03:48
## 10975   BTCUSD    BTC    11997.470 2020-08-10 04:32:55
## 10976   BTCUSD    BTC    10686.880                 NaT
## 10977   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       BTC    64030.000  upper 50th percentile of pric
## 1       ETH     2362.220  lower 50th percentile of pric
## 2       ETH     2371.821  lower 50th percentile of pric
## 3       BTC    64259.700  upper 50th percentile of pric
## 4       ETH     2347.038  lower 50th percentile of pric
```