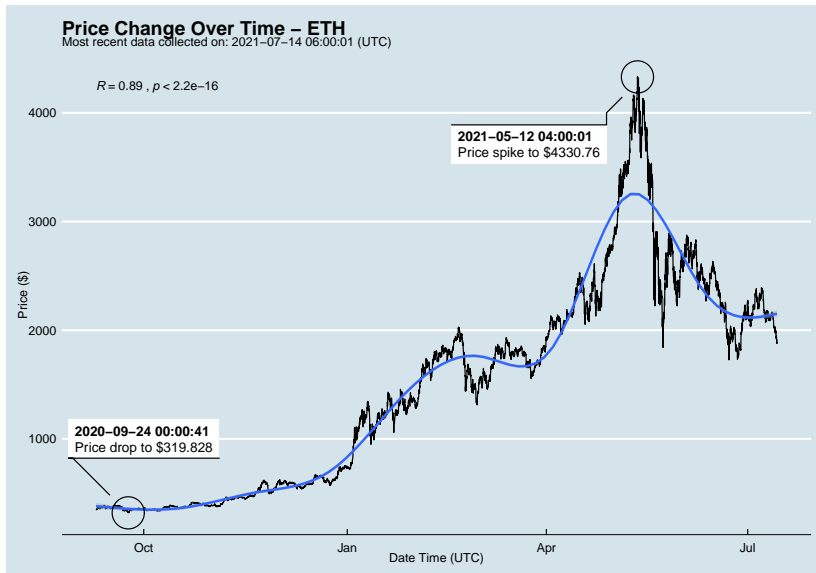# R Markdown Output

Last run on: 2021-07-14 06:11:17

2021-07-14 06:11:17

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: 2021–07–14 06:00:01 (UTC)

$R = 0.89$, $p < 2.2e\text{-}16$

2021–05–12 04:00:01
Price spike to $4330.76

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

Price ($)

Date Time (UTC)

Oct   Jan   Apr   Jul

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      1873.179    2021-07-14 06:00:01
## 1       BTCUSD    BTC     31812.290    2021-07-14 06:00:00
## 2       ETHUSD    ETH      1891.046    2021-07-14 05:00:01
## 3       BTCUSD    BTC     31939.360    2021-07-14 05:00:00
## 4       ETHUSD    ETH      1883.044    2021-07-14 04:00:01
## ...        ...    ...           ...                    ...
## 15196   BTCUSD    BTC     11893.640    2020-08-15 04:03:56
## 15197   BTCUSD    BTC     11898.730    2020-08-15 03:03:55
## 15198   BTCUSD    BTC     11915.360    2020-08-15 02:03:56
## 15199   BTCUSD    BTC     11915.800    2020-08-15 01:03:55
## 15200   BTCUSD    BTC     11782.580    2020-08-15 00:03:56
```

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     1873.179  lower 50th percentile of pric
## 1        BTC    31812.290  upper 50th percentile of pric
## 2        ETH     1891.046  lower 50th percentile of pric
## 3        BTC    31939.360  upper 50th percentile of pric
## 4        ETH     1883.044  lower 50th percentile of pric
```