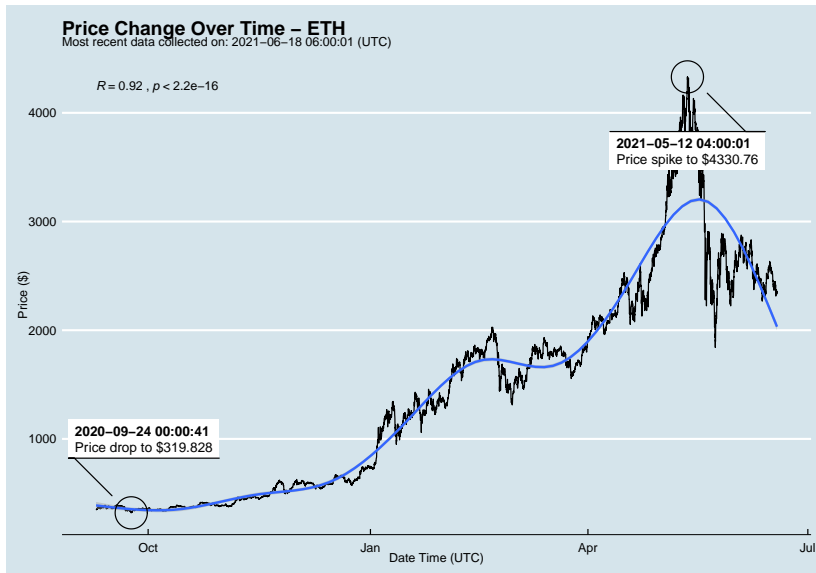# R Markdown Output

Last run on: 2021-06-18 06:10:25

2021-06-18 06:10:25

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: 2021–06–18 06:00:01 (UTC)

$R = 0.92$, $p < 2.2e{-}16$

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)

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     2337.798  2021-06-18 06:00:01
## 1         BTCUSD    BTC    37610.890  2021-06-18 06:00:00
## 2         ETHUSD    ETH     2358.991  2021-06-18 05:00:01
## 3         BTCUSD    BTC    37923.340  2021-06-18 05:00:00
## 4         ETHUSD    ETH     2341.358  2021-06-18 04:00:01
## ...          ...    ...          ...                      ...
## 14087     BTCUSD    BTC    11972.900  2020-08-10 06:03:50
## 14088     BTCUSD    BTC    11985.890  2020-08-10 05:03:48
## 14089     BTCUSD    BTC    11997.470  2020-08-10 04:32:55
## 14090     BTCUSD    BTC    10686.880                      NaT
## 14091     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         ETH     2337.798  lower 50th percentile of pric
## 1         BTC    37610.890  upper 50th percentile of pric
## 2         ETH     2358.991  lower 50th percentile of pric
## 3         BTC    37923.340  upper 50th percentile of pric
## 4         ETH     2341.358  lower 50th percentile of pric
```