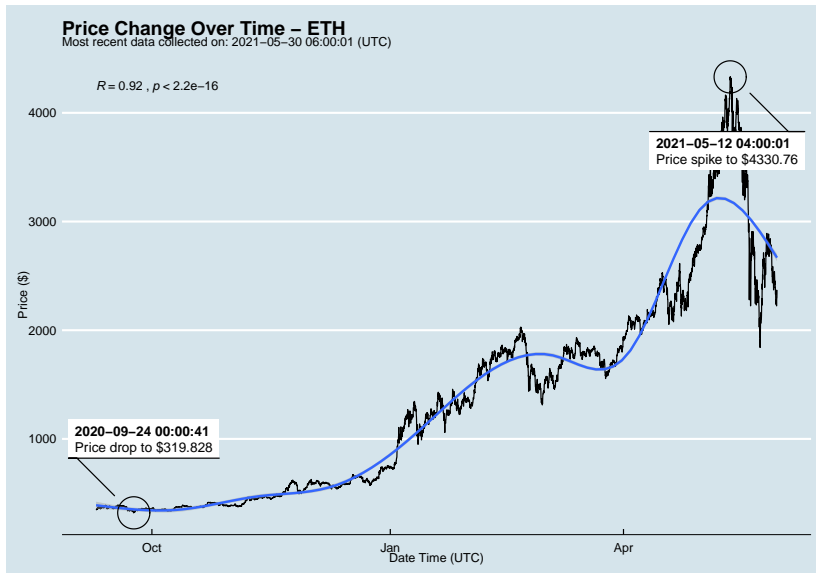# R Markdown Output

Last run on: 2021-05-30 06:42:14

2021-05-30 06:42:14

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: 2021–05–30 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)

Oct   Jan   Apr

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     2370.768   2021-05-30 06:00:01
## 1       BTCUSD    BTC    35319.110   2021-05-30 06:00:00
## 2       BTCUSD    BTC    34752.540   2021-05-30 05:00:01
## 3       ETHUSD    ETH     2298.838   2021-05-30 05:00:01
## 4       BTCUSD    BTC    34775.440   2021-05-30 04:00:01
## ...        ...    ...          ...                     ...
## 13175   BTCUSD    BTC    11972.900   2020-08-10 06:03:50
## 13176   BTCUSD    BTC    11985.890   2020-08-10 05:03:48
## 13177   BTCUSD    BTC    11997.470   2020-08-10 04:32:55
## 13178   BTCUSD    BTC    10686.880                     NaT
## 13179   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     2370.768  lower 50th percentile of pric
## 1       BTC    35319.110  upper 50th percentile of pric
## 2       BTC    34752.540  upper 50th percentile of pric
## 3       ETH     2298.838  lower 50th percentile of pric
## 4       BTC    34775.440  upper 50th percentile of pric
```