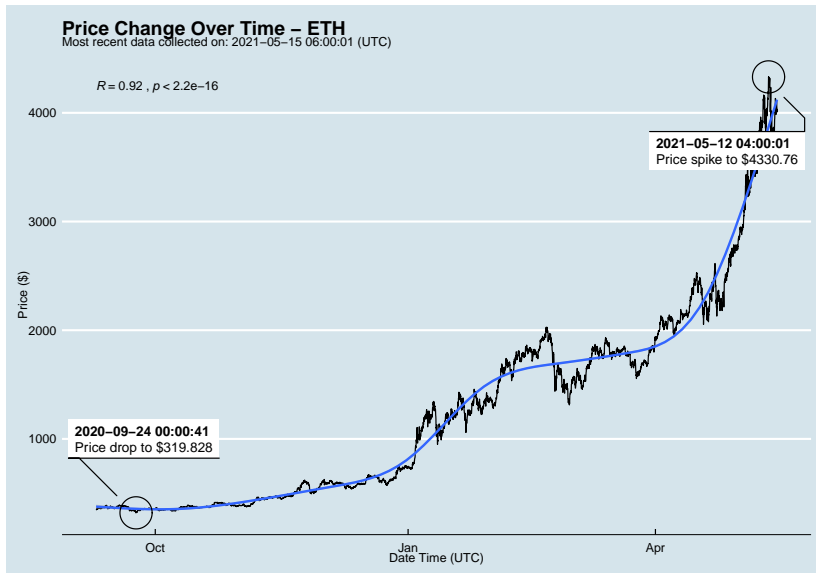# R Markdown Output

Last run on: 2021-05-15 06:11:26

2021-05-15 06:11:26

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: 2021−05−15 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 ($)

Oct   Jan
Date Time (UTC)   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     4037.047  2021-05-15 06:00:01
## 1          BTCUSD    BTC    49663.060  2021-05-15 06:00:00
## 2          ETHUSD    ETH     4007.166  2021-05-15 05:00:01
## 3          BTCUSD    BTC    49319.150  2021-05-15 05:00:00
## 4          ETHUSD    ETH     4026.181  2021-05-15 04:00:01
## ...           ...    ...          ...                  ...
## 12459      BTCUSD    BTC    11972.900  2020-08-10 06:03:50
## 12460      BTCUSD    BTC    11985.890  2020-08-10 05:03:48
## 12461      BTCUSD    BTC    11997.470  2020-08-10 04:32:55
## 12462      BTCUSD    BTC    10686.880                  NaT
## 12463      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     4037.047  lower 50th percentile of pric
## 1        BTC    49663.060  upper 50th percentile of pric
## 2        ETH     4007.166  lower 50th percentile of pric
## 3        BTC    49319.150  upper 50th percentile of pric
## 4        ETH     4026.181  lower 50th percentile of pric
```