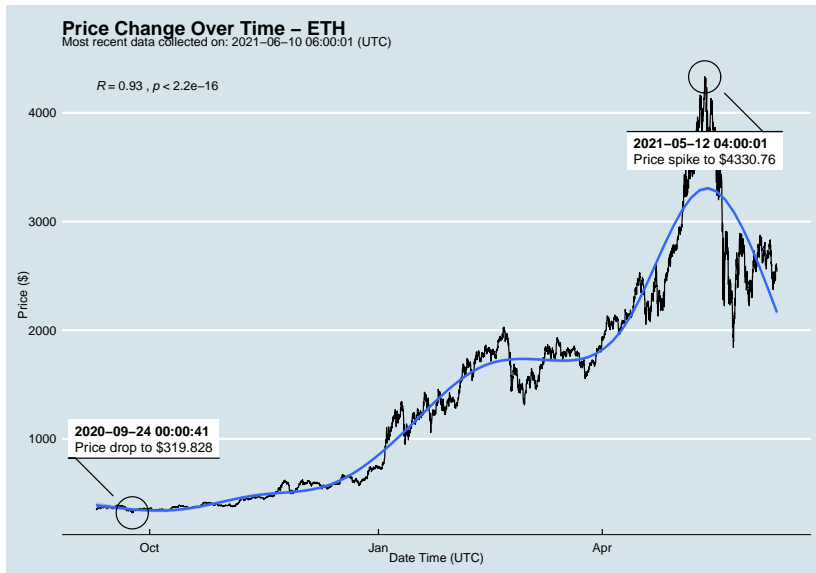# R Markdown Output

Last run on: 2021-06-10 06:15:20

2021-06-10 06:15:20

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: 2021–06–10 06:00:01 (UTC)

$R = 0.93$, $p < 2.2e{-}16$

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   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         ETHUSD     ETH      2537.995  2021-06-10 06:00:01
## 1         BTCUSD     BTC     36846.530  2021-06-10 06:00:00
## 2         ETHUSD     ETH      2545.658  2021-06-10 05:00:01
## 3         BTCUSD     BTC     36790.940  2021-06-10 05:00:00
## 4         ETHUSD     ETH      2563.144  2021-06-10 04:00:01
## ...          ...     ...           ...                    ...
## 13703     BTCUSD     BTC     11972.900  2020-08-10 06:03:50
## 13704     BTCUSD     BTC     11985.890  2020-08-10 05:03:48
## 13705     BTCUSD     BTC     11997.470  2020-08-10 04:32:55
## 13706     BTCUSD     BTC     10686.880                    NaT
## 13707     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     2537.995  lower 50th percentile of pric
## 1       BTC    36846.530  upper 50th percentile of pric
## 2       ETH     2545.658  lower 50th percentile of pric
## 3       BTC    36790.940  upper 50th percentile of pric
## 4       ETH     2563.144  lower 50th percentile of pric
```