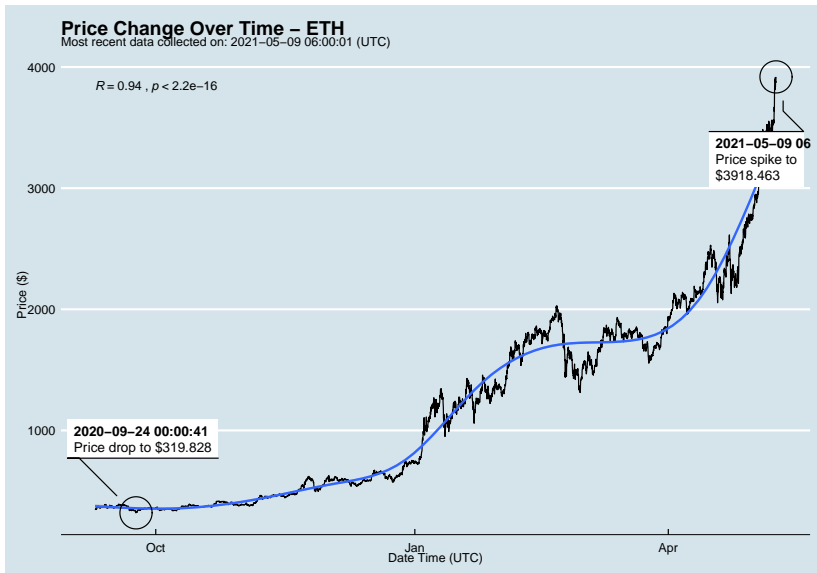# R Markdown Output

Last run on: 2021-05-09 06:29:03

2021-05-09 06:29:03

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: 2021–05–09 06:00:01 (UTC)

$R = 0.94$, $p < 2.2e{-}16$

2021–05–09 06
Price spike to
$3918.463

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        BTCUSD    BTC    58462.830  2021-05-09 06:00:01
## 1        ETHUSD    ETH     3918.463  2021-05-09 06:00:01
## 2        ETHUSD    ETH     3896.728  2021-05-09 05:00:01
## 3        BTCUSD    BTC    58151.860  2021-05-09 05:00:00
## 4        ETHUSD    ETH     3870.973  2021-05-09 04:00:01
## ...         ...    ...          ...                    ...
## 12171    BTCUSD    BTC    11972.900  2020-08-10 06:03:50
## 12172    BTCUSD    BTC    11985.890  2020-08-10 05:03:48
## 12173    BTCUSD    BTC    11997.470  2020-08-10 04:32:55
## 12174    BTCUSD    BTC    10686.880                    NaT
## 12175    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       BTC    58462.830  upper 50th percentile of pric
## 1       ETH     3918.463  lower 50th percentile of pric
## 2       ETH     3896.728  lower 50th percentile of pric
## 3       BTC    58151.860  upper 50th percentile of pric
## 4       ETH     3870.973  lower 50th percentile of pric
```