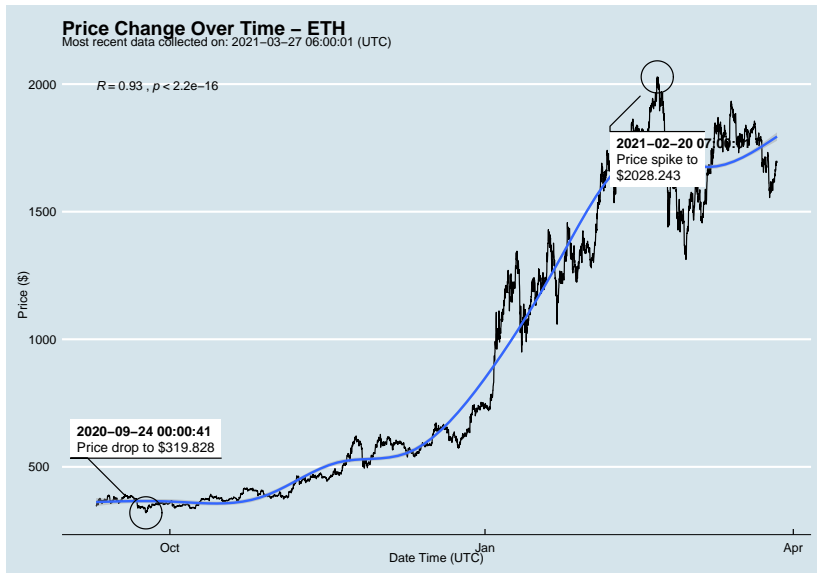# R Markdown Output

Last run on: 2021-03-27 06:14:49

2021-03-27 06:14:49

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: 2021–03–27 06:00:01 (UTC)

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

2021–02–20 07:00:01
Price spike to
$2028.243

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        BTCUSD    BTC    55164.000  2021-03-27 06:00:01
## 1        ETHUSD    ETH     1699.332  2021-03-27 06:00:01
## 2        BTCUSD    BTC    54952.000  2021-03-27 05:00:01
## 3        ETHUSD    ETH     1695.888  2021-03-27 05:00:01
## 4        ETHUSD    ETH     1692.493  2021-03-27 04:00:01
## ...         ...    ...          ...                   ...
## 10109    BTCUSD    BTC    11972.900  2020-08-10 06:03:50
## 10110    BTCUSD    BTC    11985.890  2020-08-10 05:03:48
## 10111    BTCUSD    BTC    11997.470  2020-08-10 04:32:55
## 10112    BTCUSD    BTC    10686.880                   NaT
## 10113    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    55164.000  upper 50th percentile of pric
## 1       ETH     1699.332  lower 50th percentile of pric
## 2       BTC    54952.000  upper 50th percentile of pric
## 3       ETH     1695.888  lower 50th percentile of pric
## 4       ETH     1692.493  lower 50th percentile of pric
```