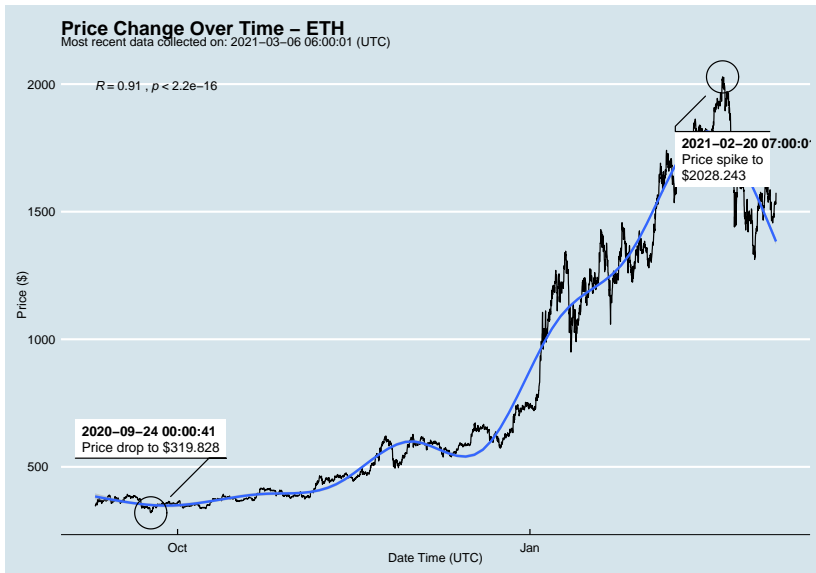# R Markdown Output

Last run on: 2021-03-06 06:27:19

2021-03-06 06:27:19

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: 2021–03–06 06:00:01 (UTC)

$R = 0.91$, $p < 2.2e{-}16$

2021–02–20 07:00:0
Price spike to
$2028.243

2020–09–24 00:00:41
Price drop to $319.828

Price ($)

Date Time (UTC)

Oct

Jan

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    48496.000  2021-03-06 06:00:01
## 1      ETHUSD    ETH     1574.102  2021-03-06 06:00:01
## 2      BTCUSD    BTC    48454.070  2021-03-06 05:00:01
## 3      ETHUSD    ETH     1529.876  2021-03-06 05:00:01
## 4      ETHUSD    ETH     1530.085  2021-03-06 04:00:01
## ...       ...    ...          ...                  ...
## 9105   BTCUSD    BTC    11972.900  2020-08-10 06:03:50
## 9106   BTCUSD    BTC    11985.890  2020-08-10 05:03:48
## 9107   BTCUSD    BTC    11997.470  2020-08-10 04:32:55
## 9108   BTCUSD    BTC    10686.880                  NaT
## 9109   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_percentil
## 0       BTC    48496.000  upper 50th percentile of price
## 1       ETH     1574.102  lower 50th percentile of price
## 2       BTC    48454.070  upper 50th percentile of price
## 3       ETH     1529.876  lower 50th percentile of price
## 4       ETH     1530.085  lower 50th percentile of price
```