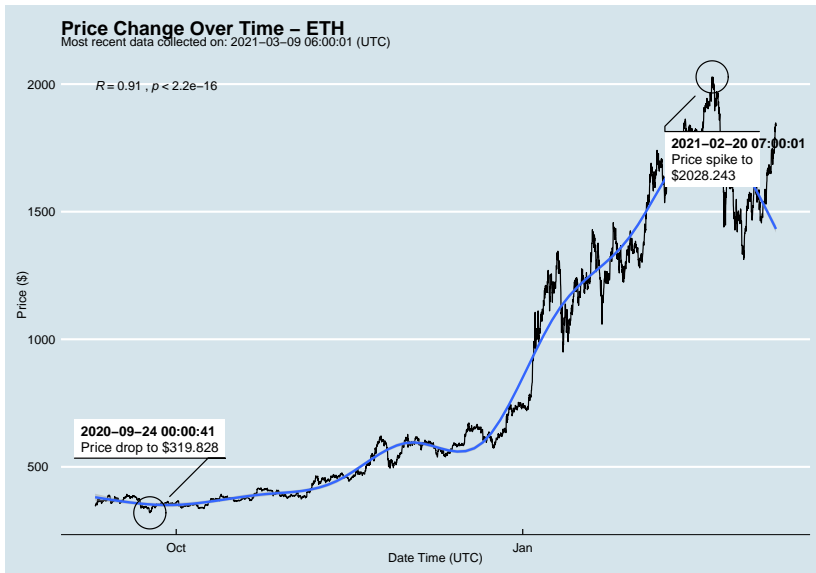# R Markdown Output

Last run on: 2021-03-09 06:28:22

2021-03-09 06:28:22

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: 2021–03–09 06:00:01 (UTC)

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

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

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    54245.940   2021-03-09 06:00:01
## 1        ETHUSD     ETH     1840.860   2021-03-09 06:00:01
## 2        BTCUSD     BTC    53678.290   2021-03-09 05:00:01
## 3        ETHUSD     ETH     1836.104   2021-03-09 05:00:01
## 4        ETHUSD     ETH     1847.999   2021-03-09 04:00:01
## ...         ...     ...          ...                   ...
## 9249     BTCUSD     BTC    11972.900   2020-08-10 06:03:50
## 9250     BTCUSD     BTC    11985.890   2020-08-10 05:03:48
## 9251     BTCUSD     BTC    11997.470   2020-08-10 04:32:55
## 9252     BTCUSD     BTC    10686.880                   NaT
## 9253     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    54245.940  upper 50th percentile of price
## 1       ETH     1840.860  lower 50th percentile of price
## 2       BTC    53678.290  upper 50th percentile of price
## 3       ETH     1836.104  lower 50th percentile of price
## 4       ETH     1847.999  lower 50th percentile of price
```