**Cryptocurrency Price Prediction**

**Similar Projects:**

Due to cryptocurrency price forecasting being somewhat of a profit driven subject, there are numerous projects out there that attempt to forecast cryptocurrency. I identified three similar projects that are not locked behind a “paywall”.

The first project is a capstone from Berkley.[1] The details are unavailable, however, the project summary is. I found that they use intuitive inputs that are similar to mine. They are also claimed a high degree of success using the random forest method, so I feel comfortable that the data I am using will also be of high utility. They also focused purely on Bitcoin.

The second project is a research paper titled “The digital traces of bubbles: feedback cycles between socio-economic signals in the Bitcoin economy.”[6] This project attempted to make a cryptocurrency price forecast from social media data. Again, they used similar data (exchange and social media trends) to generate a model with predictive ability and were able to identify a feedback loop between social media and pricing. They also focused purely on Bitcoin.

The third paper[7] purely draws from exchange data and tried out numerous machine learning models in an attempt to model short term price predictions for various cryptocurrencies offered at the “OKcoin” exchange. This paper shares my objective, but uses less data than what I intend. The authors recommend Extreme Gradient Tree as the best model to use.

The largest takeway I gathered was that you really only need historical data from an exchange to support a semi-accurate machine learning model. However, the more data you can gather the more accurate the model can become. It is therefore, my goal, to have as much utilizable elements as possible.

**Preliminary Exploratory Data Analysis results**

Through my preliminary analysis I discovered that Ethereum transaction fees can explain at least part of Ethereum’s price. I also uncovered five features out of my 38 feature dataset that I want to use in my machine learning model. Transaction count, transaction cost, addresses, unique addresses, and Google trend. I also discovered a high correlation between change in Ethereum price with change in price in other cryptocurrencies, with the correlation decreasing as the market capitalization of the other crypto decreases.

References:

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