Problem Statement Worksheet (Hypothesis Formation)

How can I create a multi-factor model to predict future ETH and BTC prices over certain economic regimes given historical prices, blockchain metrics and economic indicators. The model's performance will be measured by the accuracy of the prediction with a margin of error of within 15%

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1 Context

CoinMetrics is founded in 2017 and is becoming the leading platform for analyzing and monitoring crypto networks and assets. We will use CoinMetrics Python API to collect 5 years of historical daily metrics data on BTC and ETH. Including fundamental metrics on the blockchains will create a multi-factor model that is not simply limited to time series analysis on Price only. The model can also be further improved by joining data from traditional financial assets (Yahoo Finance) and Macro economic data (FRED StLouis FED). The goal is to create a multi-factor model for predicting future BTC and ETH prices

2 Criteria for success

Creating a prediction model that predicts prices within a 15% margin of error

3 Scope of solution space

The model is limited to only predicting BTC and ETH prices.

4 Constraints within solution space

The Dataset mimics a real world scenario where data is available through API and needs to be selected using domain knowledge of the field. The construction of data set will impact the results of the model. There is no guarantee that this particular data set will be able to generate a predictive model.

5 Stakeholders to provide key insight

Springboard Mentor – Branko Kovac

6 Key data sources

CoinMetrics python API: https://pypi.org/project/coinmetrics-api-client/

The data set will include prices and around 10 metrics that describe the fundamentals of the blockchain in study. All data observations will be adjusted to a daily frequency. Metrics need to contain data that goes back 5 years. The combined data will needed to be split into 70% training and 30% testing

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