

Bitcoin Market Cap Pattern Recognition

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For my Machine Learning project I will be attempting to make a program that will be able to predict what the Bitcoin market capitalisation will be in the future. For this I will be using the Coindesk's Bitcoin Price Index API (<https://www.coindesk.com/api/>). This dataset contains 1462 entries of the daily Bitcoin price between September 2013 and September 2017.

For this problem I will probably make use of Linear Regression. The technique I thought of goes as follows: I will be dividing up the data in m training examples. In these examples, the X will be an array of n consecutive days with the corresponding change that the price underwent during that day. The y will be the price change that Bitcoin underwent during the day after these days.

If you take a look at the example on the right, you can see what I mean exactly. In this example X exists out of ($n=$) 6 days with the first 4 being negative numbers, and the last two positive. The y value will also be a positive number, as shown in the graph.

The challenge in this problem will be finding the right scale on which to predict these values. In my example I took an X existing of 6 days, but maybe this is a bit too small of a scale, and the algorithm would for better on the scale of a month time.

