

Application Bachelor Thesis

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Supervisor:

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Title:

Which are the patterns of mining concentration and capital accumulation of Bitcoin?

Bitcoin has been a hot topic in public and academic debate lately. Aspects like its volatility have been all over the media. But there are some topics which are way more fundamental and have not been researched upon really carefully. In my thesis I am going over two individual topics, the first being the mining concentration and the second being capital accumulation.

The analysis is done by using the public blockchain data, stored in python objects I received. A lot of the work involves understanding code I receive from my supervisor and making changes to fit my needs.

In the mining section I am going over the biggest mining pools and their development over time. As a measure of decentralization I will have a look at the aggregated share of the biggest mining pools. Furthermore, I am try to identify the miners and use this result in the second part of my thesis.

In the capital accumulation part of my thesis I am analyzing the wealth distribution of the miners. I measure the inequality of the wealth, inputs and outputs of the miners with the help of the gini index. I represent this in a graphical manner over time.

As a third part I try to find a correlation between the mining pool concentration and the inequality of wealth of the miners. With this we can see if and how the centralization aspect of Bitcoin mining correlates to the inequality in wealth of its miners.