



## Mining and Visualizing Ethereum

With the rise of decentralized finance, NFT's, games on the blockchain and more, the design and optimization of robust and efficient decentralized platforms has become crucial. However, little is known so far on the nature of the tasks such a decentralized computing platform needs to be able to sustain. In this project we aim to explore the frequency of transactions to certain smart-contracts as well as the dependencies between smart-contracts themselves. This could lead to the detection of disjoint communities and clusters of smart-contracts and their users, providing crucial insights for current and future developments.

The main task of this project is thus to mine data by adapting an existing Ethereum client. We will be replaying blocks on our own modified client in order to extract the transaction calls and learn the dependencies between smart-contracts. In a second step we will use this data for an analysis of the Ethereum computation workload. Time permitting, many extensions are possible: You can visualize the data, analyze possible speedups through concurrency, or come up with your own interesting metrics.



This project will allow you to gain a deep insight into the core of Ethereum and the world of blockchains.

**Requirements:** The project will be in either Rust or Go. An interest and experience with blockchain is a plus. We will have weekly meetings to discuss open questions and determine the next steps.

**Interested? Please contact us for more details!**

### Contact

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