Prof. R. Wattenhofer
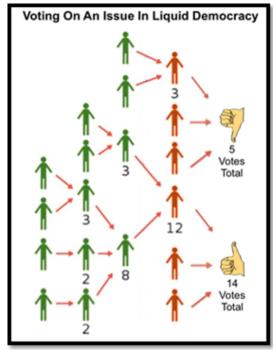
BA/SA/MA:

Democracy on the Blockchain

The usage of blockchain-based applications on blockchains such as Ethereum has skyrocketed in the past year. By now, many of the most prominent blockchain-based applications (Uniswap, Aave and Compound among others) have introduced a governance system to make important decisions concerning the application in a decentralized manner. Each protocol has issued a governance token and distributed it among the community. Token holders can now vote on proposals concerning changes to the protocol. These voting systems use a process called *liquid democracy*. Liquid democracy is a hybrid between direct and representative democracy. Token holders can either vote on proposals directly or delegate their tokens to another address that votes on their behalf. As blockchain-based applications become more and more relevant, so do their governance decisions.

A big advantage of a blockchain-based governance process is its transparency: All votes and token delegations can be publicly viewed in the blockchain. After acquiring the voting data for a number of governance systems, this project will be about analyzing and possibly visualizing the data. How are the governance tokens distributed? How are token holders voting and delegating their tokens? How much influence do certain token holders and delegates have on the decisions made? We can extend previous work on the distribution of governance tokens[1] and the use of liquid democracy by the Piratenpartei in Germany[2]. There is also room for you to come up with your own questions that can be investigated using the data.

Requirements: This project requires some programming experience. An interest in blockchain applications and/or voting systems is a plus. We will have weekly meetings to discuss open questions and determine the next steps.

Interested? Please contact us for more details!

Contacts

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[1] https://arxiv.org/abs/2102.10096
[2] https://www.aaai.org/ocs/index.php/ICWSM/ICWSM15/paper/viewFile/10566/10504