ETH
Eidgenössische Technische Hochschule Zürich
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Distributed Computing

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SA:

Clustering Ethereum Addresses

In the absence of Know-Your-Customer (KYC) policies, e.g., verification of government-issued identification documents, a single entity may operate several Ethereum addresses without the knowledge of others. A handful of works present clustering heuristics for addresses on Ethereum and Bitcoin exist [2, 1], but the rise of decentralized finance (DeFi) has caused a shift in the landscape.

Not only does DeFi bring about the potential for novel clustering heuristics, but it also increases the implications of users operating multiple addresses. Users might choose to operate several addresses to hide their trading strategies, as the blockchain's public nature would otherwise allow for other users to easily copy their strategies. Additionally, the rise of on-chain governance raises questions about the distribution of voting power.

We want to implement existing and new clustering heuristics mapping Ethereum addresses to users. In a second step, we want to provide further insights regarding the presence of and control held by big players in DeFi.

Requirements: This project will involve programming in a language of your choice, preferably Python. 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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References

[1] Sarah Meiklejohn et al. "A fistful of bitcoins: characterizing payments among men with no names". In: *Proceedings of the 2013 conference on Internet measurement conference*. 2013, pp. 127–140.

[2] Friedhelm Victor. "Address clustering heuristics for Ethereum". In: *International conference on financial cryptography and data security*. Springer. 2020, pp. 617–633.