Beyond hype and speculation, blockchain technology actually has significant potential to do useful things: Various aspects of the financial system are being built in an open and decentralized manner. Among the relevant applications that have already gained traction, some notable examples include:

- **Decentralized exchanges (DEXs)** like Uniswap or Curve allow traders to swap tokens without trusting a third party such as Coinbase. Instead of using traditional order books, these protocols use a novel market design – automated market maker mechanisms. In addition, some DEXs such as CoWSwap utilize batch auctions.

- **Algorithmic stablecoins** such as DAI aim to track a FIAT currency like as the USD in price, without actually being backed by this amount of currency.

- **Liquid staking tokens**, most notably Lido’s stETH and Rocket pool’s rETH, give users the possibility to utilize their tokens even while these are staked. One possibility is using them in other DeFi applications, such as lending protocols.

Exploring these protocols unveils a whole new field of research. This includes empirically studying their current utilization as well as theoretically evaluating their functionality along with exploring opportunities for improvements. A particularly appealing aspect of this area is the abundance of openly available data, since all transactions are accessible from the blockchain.

Do you have a question or problem (theoretical or empirical) related to DeFi that you would like to research deeper?

**Requirements:** You will need to be able to work independently. 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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