ETH
Eidgenössische Technische Hochschule Zürich
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Distributed Computing

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MEV on Solana

Since Bitcoin first introduced a decentralized alternative to traditional finance, blockchain technology has paved the way for innovative, parallel financial systems. In this rapidly growing ecosystem, decentralized finance (DeFi) emerged to let users trade, lend, and earn yields, effectively building a robust marketplace outside traditional banking. Against this backdrop, Solana has gained prominence as a high-performance blockchain—especially with the rise of memecoins and the intensifying crypto market. Its swift transactions and low fees make MEV (Maximal Extractable Value) on Solana a key area of interest, as traders and validators exploit these network characteristics for strategic gain.

This research explores potential MEV opportunities on Solana and related blockchains, reviewing literature on the subject, examining Solana's technical foundations, and analyzing key DeFi protocols and liquidity providers. The scope includes developing detection methods for various MEV patterns, simulating vulnerabilities like sandwiching, and proposing strategies to mitigate exploitative trading behaviors. As the project evolves, additional aspects such as private mempools, validator participation, and new market niches (e.g., meme-coin trading) may be considered. Ultimately, this work aims to synthesize current findings into a report that could inform both academic and industry audiences on MEV's broader implications in Solana's ecosystem.

Requirements: The project will be mostly practical. Thus, an interest in blockchain and decentralized finance is required. We will have bi-weekly meetings to discuss open questions and determine the next steps.

Interested? Please contact us for more details!

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