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Shutter Launches First-of-Its-Kind Autonomous Agents Experiment to Combat $1.4 Billion in Crypto Manipulation

Revealed at Singapore FinTech Festival, Shutter's innovative use of AI accelerates the development of solutions to tackle malicious trading tactics on Ethereum.

Singapore – Shutter, an open-source protocol focused on preventing harmful Maximal Extractable Value (MEV) attacks and censorship, today announced a first-of-its-kind AI-powered experiment with Olas and Isotropic Solutions to address crypto transaction manipulation. This experiment, running on Gnosis Chain—an EVM-based blockchain—uses autonomous AI agents in Shutter's encrypted network environment, accelerating MEV prevention research that would otherwise be unfeasible to conduct.

Shutter aims to prevent malicious MEV attacks, specifically front-running and sandwich attacks, which have cost traders on Ethereum over [$1.4 billion since 2020](). MEV attacks manipulate the order of transactions to maximize profits for attackers, often adding hidden costs for regular traders. One common tactic, the "sandwich attack," allows an attacker to place their transactions around a victim's, artificially inflating prices to profit at the victim's expense. Shutter tackles these vulnerabilities with advanced threshold encryption technology, concealing pending transactions in the mempool—a temporary holding area—until they are finalized and decrypted. By encrypting the mempool, Shutter makes it nearly impossible for attackers to view or exploit transaction details to their advantage.

Experiment Highlights

This experiment is the first to use autonomous agents in a live environment to accelerate MEV prevention research and transaction ordering strategies. By harnessing Olas' advanced AI agents, Shutter moves beyond theoretical research, creating a dynamic testing setup that fast-tracks the development of resolutions against malicious trading tactics. In this environment, some AI agents operate within Shutter's encrypted mempool, while others interact with an open mempool, enabling a direct, side-by-side comparison of transaction security.

This unique approach allows Shutter to rapidly evaluate different transaction ordering strategies and measure how effectively the encrypted mempool mitigates manipulation. The real-world data gathered from this setup will provide critical insights into the economic advantages of Shutter's encryption, demonstrating its scalability and readiness for high-activity environments, including the Ethereum mainnet.

Beyond MEV prevention, this novel autonomous agent system opens new possibilities for highly dynamic, adaptable stress-testing of economic systems. The autonomous agents can simulate extreme market conditions, testing transaction ordering resilience and identifying vulnerabilities

in a live, secure environment. This capability is not limited to decentralized finance—its advanced stress-testing could eventually benefit traditional finance, enhancing the robustness of complex economic systems under pressure.

Key project milestones include:

- **August:** Shutter DAO 0x36, a fully decentralized on-chain Decentralized Autonomous Organization ran an RFP to select and fund Isotropic to build the system.
- **November**: Launch of initial real-world trading simulations.
- **December**: Full deployment of autonomous agents and launch of a real-time dashboard to track insights and performance.
- **Potential Project Extension**: Evaluation and refinement of MEV strategies, testing scalability, and initial exploration of cross-chain MEV opportunities.

Luis Bezzenberger, Product Manager for Shutter said: "This integration of autonomous agents isn't just about research; it's about accelerating progress towards a fairer blockchain ecosystem," said Luis. "By combining autonomous agents with the encrypted mempool, we're uncovering insights into transaction ordering and MEV at an unprecedented speed. The implications of this integration extend far beyond research as it's a leap forward in understanding and mitigating these tactics. Each insight our system uncovers brings us closer to a future where value extraction serves the many, not the few and we're witnessing the emergence of a more transparent, equitable blockchain ecosystem where malicious MEV tactics and censorship by centralized actors can no longer thrive in the shadows."

Visit the Shutter Forum to learn more about the experiment:
https://shutternetwork.discourse.group/t/ai-agent-driven-mev-and-transaction-ordering-simulator-on-gnosis-chain-olas-x-shutter-dao-0x36-isotropic-solutions-rfp-response/462

About Shutter

Shutter is a threshold encryption protocol with diverse applications, including MEV prevention, censorship resistance, voting integrity, and gaming fairness.

About brainbot

brainbot GmbH develops, distributes, licenses, and operates open-source blockchain software, with a focus on advancing fair and secure decentralized technology. As the core development team behind Shutter, brainbot leads the charge in blockchain innovation.

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