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Blockchain Malware Detection Tool Based on Signature Technique

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Abstract
Downloading software or files from the internet can be risky as it is hard to know if they are safe and do not contain viruses. Traditional anti-virus software uses a centralized database to identify malware, but this method has drawbacks due to its centralized design, which creates a single point of failure. Blockchain technology has become a solution to many problems faced in the tech industry, including the need for a decentralized and secure way for users to verify and confirm the presence of malware in a file. The decentralized database, permanence, immutability, anonymity, and auditability of blockchain technology make it an ideal solution for malware detection. In fact, malware data has been compiled in databases that antivirus manufacturers use to identify malware. However, blockchain technology provides a more secure and decentralized way to store this data, which can be shared between users and allow them to rapidly update whether a file is safe or not. This paper presents a blockchain-based malware detection tool designed to enhance security and prevent the spread of malware in digital networks. The tool based on Java programming language incorporates signature-based methods to effectively identify and detect malicious codes in malware. The proposed tool contributes to the field of cybersecurity by leveraging blockchain technology to enhance malware detection process. © 2023 Siti Husna Abdul Rahman, et al.

Author Keywords
Blockchain; Decentralization; Malware; Malware detection; Signature-based detection

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