

Blockchain for Secure Identity Management: A Decentralized Approach to Digital Identity

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Abstract: *The growing demand for secure, user-centric identity solutions has exposed the limitations of centralized identity management systems, which are prone to unauthorized data exposure, personal information misuse, and restricted individual agency. Blockchain technology introduces a decentralized and tamper-resistant architecture that can mitigate these issues by enabling users to control their identities directly. This paper explores blockchain as a foundation for secure digital identity management, examining its architecture, benefits, current implementations, and challenges. Furthermore, it discusses emerging trends, technical considerations, and future research opportunities in the domain of decentralized identity.*

Keywords: Blockchain, Digital Identity, Self-Sovereign Identity, Decentralized Identifiers

