



Patent Search

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Abstract:

ABSTRACT BLOCKCHAIN-POWERED SECURE IDENTITY VERIFICATION SYSTEM A Blockchain-Powered Secure Identity Verification System (100) provides a decentralized for verifying digital identities using blockchain and cryptographic technologies. The system includes decentralized identity storage (102), an AI-driven fraud detection (104), a zero-knowledge proof engine (106), a time-bound selective disclosure smart contract (108), a cross-blockchain identity portability protocol (110), and a quantum cryptographic module (112). These components work together to ensure privacy-preserving, tamper-proof, and interoperable identity verification. The system integrates factor authentication, AI-based anomaly detection, and smart contract automation for secure, efficient verification. Advanced cryptography and decentralized recovery enhance data protection and user trust. This invention establishes a scalable, transparent, and privacy-compliant solution for digital identity management across various industries and jurisdictions.

Complete Specification

Description:BLOCKCHAIN-POWERED SECURE IDENTITY VERIFICATION SYSTEM

FIELD OF THE DISCLOSURE

[0001] The present invention relates to digital identity management and security systems. More particularly, it concerns a blockchain-powered secure identity verification system that provides decentralized, immutable, and privacy-preserving identity verification for users across multiple platforms, thereby enhancing digital trust, data protection, and authentication efficiency.

BACKGROUND

[0002] The subject matter discussed in the background section should not be assumed to be prior art merely as a result of its mention in the background section. Similarly, a problem mentioned in the background section or associated with the subject matter of the background section should not be assumed to have been previously recognized in the prior art. The subject matter in the background section merely represents different approaches, which in and of themselves may also correspond to implementations of the claimed technology.

[0003] Traditional identity verification mechanisms depend on centralized databases that often face vulnerabilities such as data breaches, unauthorized access, and manipulation of records. These systems create a single point of failure, allowing attackers to exploit weaknesses and compromise user data. The dependency on intermediaries in identity verification also increases operational costs and slows down processes in digital ecosystems.

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