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A Review on Data De-duplication using Blockchain and Advanced Security using Cloud Computing

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Abstract: *In the modern era of data-driven technologies, the efficient management, storage, and security of vast data volumes are paramount. Traditional data storage solutions often face redundancy issues, leading to increased costs, storage inefficiencies, and security vulnerabilities. This paper explores an innovative approach to data deduplication using blockchain technology, coupled with advanced security measures in cloud computing. Blockchain, with its decentralized ledger and immutable properties, offers a robust mechanism for identifying and removing redundant data while ensuring traceability and security. Cloud computing's scalability and advanced security features provide a complementary layer to secure and manage deduplicated data effectively. Our proposed framework leverages blockchain for transparent deduplication and integrates cloud-based security measures to protect data integrity, privacy, and access control. Experimental results demonstrate the framework's effectiveness in reducing storage costs, improving data retrieval speeds, and enhancing data security, making it a promising solution for industries that handle large datasets, such as healthcare, finance, and IoT networks.*

Keywords: Data Deduplication, Blockchain Technology, Cloud Computing Security, Decentralized Data Management, Data Integrity, Storage Optimization, Privacy Preservation, Immutable Ledger, Cloud Scalability, Access Control