

# Implementing Blockchain Smart Contracts for Secure Electronic Health Records

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## Abstract

One of the most critical aspects of information systems is the method of data storage, especially when it involves sharing and collecting data from various individuals and entities. Trust in their information is paramount. Typically, central databases are used to address this issue, requiring all partners to trust the organization that maintains the database as the central authority managing the data.

However, when it comes to storing medical health records, centralizing information introduces the risk of patient data manipulation. Blockchain technology, which has been in use for several years, offers a solution by enabling the sharing of information without relying on a central database, ensuring trust in both the data and the participants.

This project aims to create a private blockchain to implement Blockchain Smart Contracts for storing sensitive patient data, specifically Electronic Health Records (EHRs), in a medical application. This approach guarantees the immutability and integrity of these records.

**key-words:** Blockchain, Trust, Private Blockchain, Electronic Medical Record, access control, Smart contract, IPFS.