



# AarogyCoin

## **AarogyaCoin: Secure and Scalable Blockchain-based Electronic Health Records Management**

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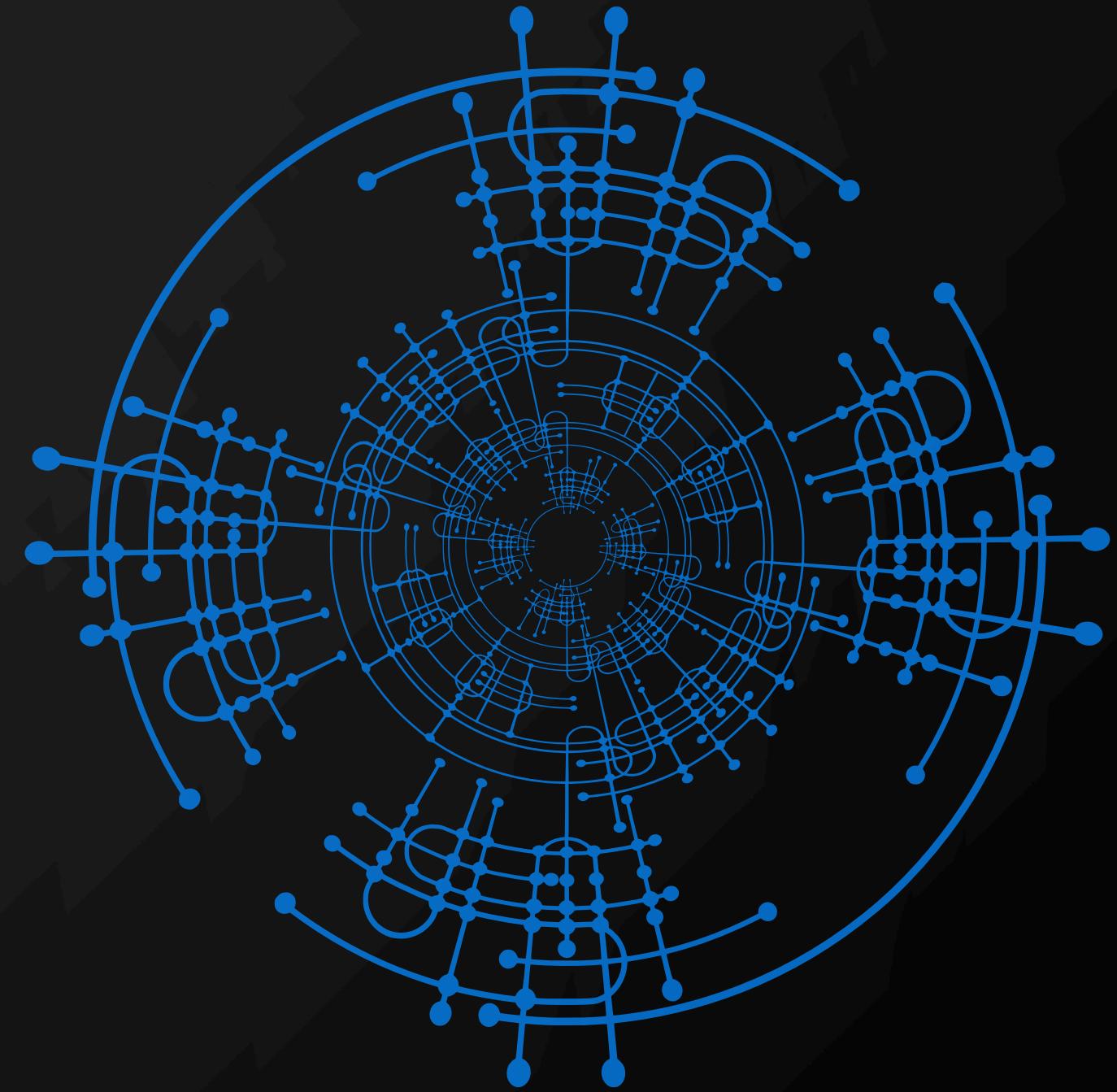
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# Challenges of Traditional EHR Systems

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## Blockchain-based Data Storage

Discussing the benefits of storing EHR data on the blockchain, ensuring its immutability and transparency, and providing fine-grained control over the data through smart contracts.

## Off-chain Data Storage

Exploring the use of IPFS for off-chain storage of large medical records, addressing the scalability limitations of blockchain and enhancing the efficiency of data management.

## Interoperability

Discussing the framework's adherence to healthcare data standards and its provision of secure data exchange mechanisms, ensuring seamless integration with existing healthcare systems.

# Introduction to Aarogyacoin

## Challenges in Traditional EHR Systems

The centralized nature of traditional EHR systems poses significant challenges in terms of data security, privacy, and interoperability, hindering the digital transformation in healthcare.

## Aarogyacoin Framework

Introducing the Aarogyacoin framework, a revolutionary solution leveraging blockchain technology to address the pressing issues of traditional EHR systems and provide a secure, scalable, and interoperable solution for EHR management.

## Benefits of Aarogyacoin

Exploring the benefits of Aarogyacoin in transforming the management of electronic health records, ultimately improving patient outcomes and enhancing the overall healthcare experience.

# TechStack



## Immutability and Traceability

Understanding how the core of the AarogyaCoin system, a blockchain-based architecture, ensures the immutability and traceability of EHR data, enhancing data security and transparency.



## Smart Contracts

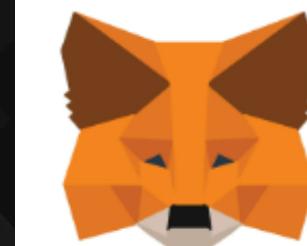
Exploring the utilization of Ethereum blockchain for the deployment and execution of smart contracts, defining access control rules and data management policies for the EHR system, ensuring secure and efficient data management.



## Ganache and Metamask

Introducing the use of Ganache, a local Ethereum blockchain development environment, and Metamask, a browser extension enabling secure connection between the user interface and the Ethereum blockchain.

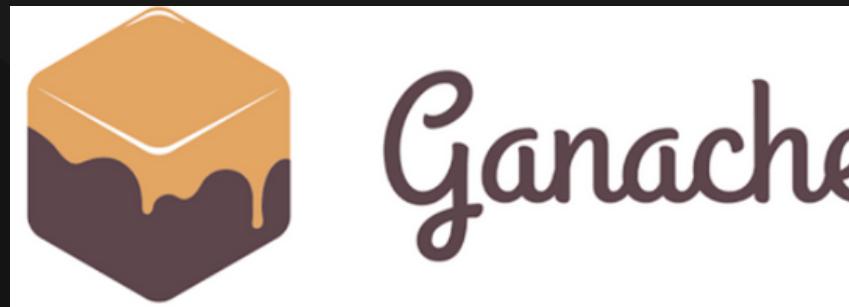
# TechStack



METAMASK



SOLIDITY



Ganache



ethereum



Web3.js



IPFS

# Framework Overview

## Blockchain Technology

Understanding the core of the AarogyaCoin system, a blockchain-based architecture ensuring the immutability and traceability of EHR data, enhancing data security and transparency.

## Ethereum and Smart Contracts

Understanding the utilization of Ethereum blockchain for the deployment and execution of smart contracts, defining access control rules and data management policies for the EHR system, ensuring secure and efficient data management.

## InterPlanetary File System (IPFS)

Exploring the use of IPFS for off-chain storage of large medical records, providing a scalable and decentralized approach to data management, addressing the scalability limitations of blockchain.

# Advantages of Aarogyacoin

## » **Multi-layered Approach**

Exploring the multi-layered approach of the AarogyaCoin framework, including blockchain-based data storage, off-chain data storage, interoperability, and robust user access control mechanisms.

## » **User Access Control**

Understanding the robust user access control mechanism implemented in the AarogyaCoin framework, allowing patients to granularly control the permissions and sharing of their health records, empowering patients to take control of their own health data.

## » **Potential Impact**

Discussing the potential impact of AarogyaCoin in transforming the management, sharing, and security of medical records, ultimately improving patient outcomes and enhancing the overall healthcare experience.



# Off-chain Data Storage with IPFS

## Scalability Solutions

Exploring the use of IPFS for off-chain storage of large medical records, providing a scalable and decentralized approach to data management, addressing the scalability limitations of blockchain.

## Decentralized Data Management

Understanding how IPFS is used for the off-chain storage of large medical records, providing a decentralized approach to data management, enhancing the scalability and efficiency of the system.

## Integration with Blockchain

Discussing how IPFS integrates with the blockchain, recording the hashes of off-chain medical records on the blockchain, ensuring data integrity and security.

# Access Control and Data Security

## Robust User Access Control

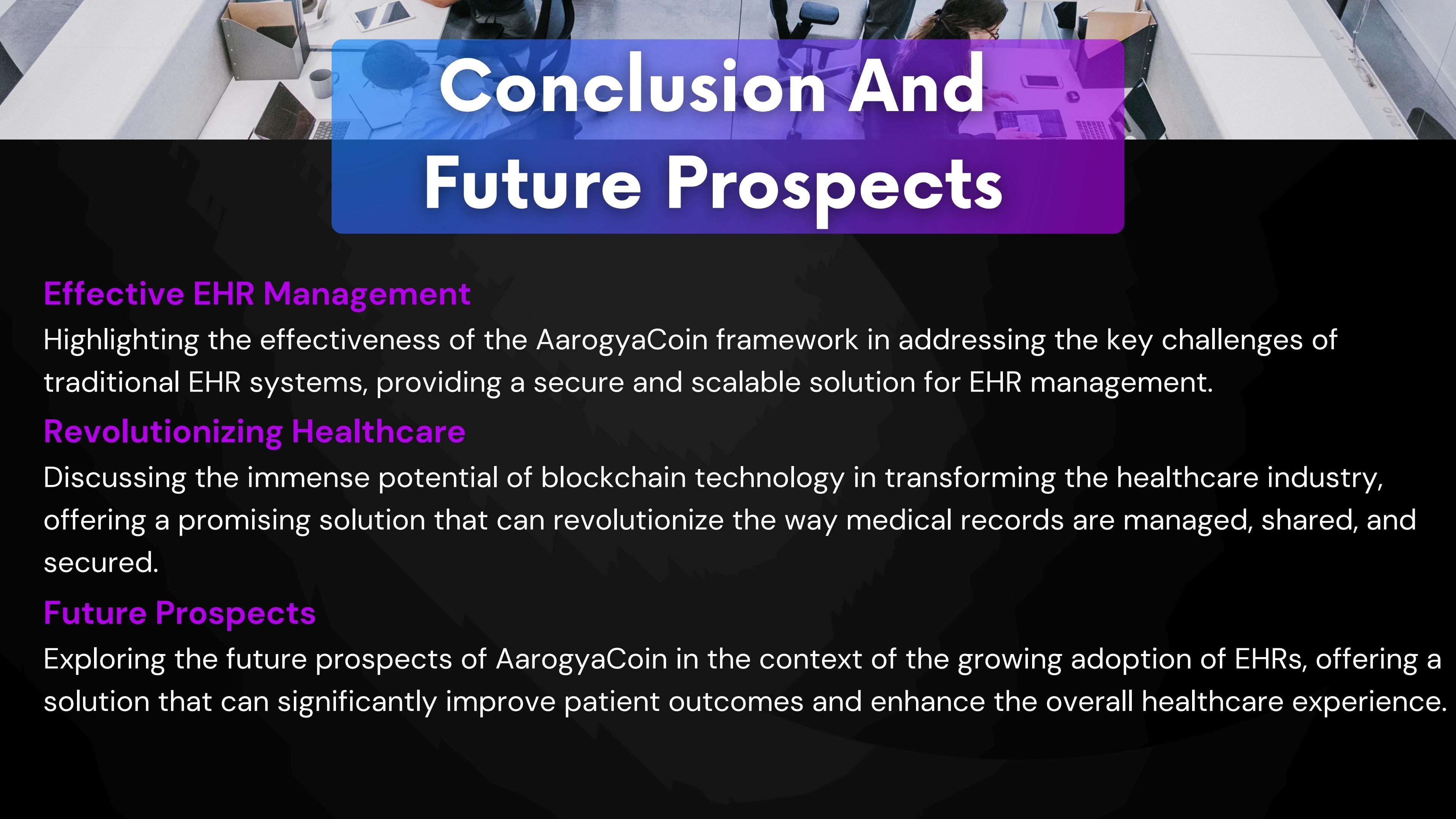
Exploring the implementation of a robust user access control mechanism in the AarogyaCoin framework, allowing patients to granularly control the permissions and sharing of their health records, empowering patients to take control of their own health data.

## Data Security and Privacy

Discussing how the blockchain-based architecture and the implementation of fine-grained access control mechanisms ensure the security and privacy of EHR data, addressing the pressing concerns of traditional EHR systems.

## Enhanced User Experience

Highlighting the intuitive user interface and the ability for patients to manage their own health records, contributing to an enhanced user experience.



# Conclusion And Future Prospects

## Effective EHR Management

Highlighting the effectiveness of the AarogyaCoin framework in addressing the key challenges of traditional EHR systems, providing a secure and scalable solution for EHR management.

## Revolutionizing Healthcare

Discussing the immense potential of blockchain technology in transforming the healthcare industry, offering a promising solution that can revolutionize the way medical records are managed, shared, and secured.

## Future Prospects

Exploring the future prospects of AarogyaCoin in the context of the growing adoption of EHRs, offering a solution that can significantly improve patient outcomes and enhance the overall healthcare experience.

# THANK YOU