

Paper Title: A Matching Scheme from Supply and Demand Sides of Electronic Health Records Based on Blockchain

Paper Link: <https://ieeexplore.ieee.org/document/9778725>

1 Summary

1.1 Motivation

The motivation behind the research lies in addressing the inefficiencies and privacy concerns within existing healthcare systems, aiming to revolutionize Electronic Health Records (EHRs) management by leveraging blockchain technology.

1.2 Contribution

The paper introduces a novel double-chains-parallelized EHR matching system empowered by smart contracts and blockchain. It offers a decentralized, secure, and efficient platform for connecting medical record suppliers with demanders, thus bridging the gap between healthcare providers and patients.

1.3 Methodology

The methodology involves proposing and implementing a comprehensive EHR matching system utilizing blockchain technology. It details a four-contract framework for secure data sharing, outlining steps for registration, matching, and supervisory measures to ensure the integrity and privacy of medical records.

1.4 Conclusion

The research presents a pioneering blockchain-based solution for improving healthcare data management by enhancing the matching and accessibility of EHRs. The system's implementation demonstrates its potential to effectively connect medical resources and facilitate secure data sharing.

2 Limitations

2.1 First Limitation

The primary limitation of the research lies in the current focus on theoretical analysis and pseudo-code-based evaluations.

2.2 Second Limitation

Another limitation stems from the need for further practical implementations and extensive computational evaluations

3 Synthesis

Overall, the research offers an innovative approach by proposing a blockchain-based EHR matching system, revolutionizing healthcare data management. Despite limitations in empirical assessments, the system's architecture and methodology pave the way for enhanced healthcare data security and accessibility. Further empirical evaluations are warranted to validate its real-world performance thoroughly.