Paper Title:
A Centralized Data Validation Approach For Distributed Healthcare Systems In Dew-Fog Computing Environment Using Blockchain

Paper Link:

1 Summary
1.1 Motivation/purpose/aims/hypothesis:
In this paper the author, Grace Simpson and Kester Quist-Aphetsi proposed an adaptation of a framework that will authenticate the centralized data stored in a distributed healthcare system in a dew-fog computing environment. The motivation of this paper is to store the patient's healthcare data in a distributed healthcare system securely and efficiently and to ensure the authorized personnel can access them seamlessly.

1.2 Contribution:
The contribution of this paper was to develop a centralized patient data validation for the healthcare system in a distributed manner. This synchronized data will be validated using the tiger hash function to ensure the data authenticity and integrity.

1.3 Methodology:
In this paper the proposed methodology was to use blockchain to generate, transfer, exchange patient digital data and to ensure integrity. This paper also used a tiger hash function to validate the data before being synchronized with the central healthcare system with a dew-fog environment, where the healthcare can perform different tasks with patient's data without the internet.

1.4 Conclusion:
To conclude, this paper proposed a framework to store patient digital healthcare data in a distributed healthcare system where authenticity, integrity, and availability will be ensured by using blockchain technology and tiger hash function.

2 Limitations
2.1 First Limitation/Critique:
One of the limitations of this paper is to use dew-fog computing. As the proposed framework can function without internet connectivity, there is a high chance that the patient's data synchronization will be delayed which may lead to potential inconsistencies in patient data.

2.2 Second Limitation/Critique:

Another limitation of this paper is to implement blockchain technology and tiger hash function in the existing healthcare facilities. To implement this technology, the healthcare facilities may need to upgrade their infrastructure which will increase the complexity and cost.

3 Synthesis:

The idea presented in paper has potential future scopes in the healthcare system. Healthcare facilities do not need to examine all the text summarizing patient's digital health records as they can be accessed centrally throughout the healthcare personnel, they are able to provide efficient and accurate healthcare decision making, especially in case of emergency. Furthermore, the use of blockchain and hash function to ensure the authenticity, and integrity of the healthcare data. Future improvement for this paper can be made by integrating new technology such as machine learning and artificial intelligence to manage and analyze the healthcare data.