Economic Value of Blockchain in Healthcare

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Introduction

- Blockchain is a public distributed ledger developed as a base technology for the cryptocurrency Bitcoin by Satoshi Nakamoto in his white paper

- It can store information pertaining to the transactions happening over a peer-to-peer network.

- With the help of this technology, two parties could transact directly without the involvement of a third party vendor to perform the transact

- The timestamps associated with each transaction in the network intensifies the security thus preventing data infringement. This exclusive properties of the blockchain made the implementation of technology across different domains and industries.

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- Since this technology relies on trust and transparency in a decentralised environment, its application has been extended to different areas like Marketing, Operations, Human Resources, Supply Chain etc

- Healthcare is yet another industry which has undergone disruptive change due to implementation of blockchain technology

- Healthcare practitioners suffer with fragmented patient data which becomes difficult to keep track of and thus poses a major challenge in proper diagnosis and treatment of patient.

- With the implementation of blockchain technology in the Healthcare, the data will be streamlined which will benefit both, the patient and the physicians.

Blockchain in Healthcare

- There are relevant areas of applications where blockchain finds its use in Healthcare industry.

- One should analyse the existing real time prototype of blockchain working in healthcare. This will help in understanding the economic implications of blockchain in Healthcare.

- Most important use of blockchain technology in the industry has been for maintaining the Electronic Health Records

- Patient data is very sensitive in nature, hence, its integrity needs to be maintained for future reference as well as while sharing it to different stakeholders with due permissions.

- Blockchain comes with a feature of trust, transparency and traceability which is implemented with cryptography and time stamping the transactions happening over the network

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- Drug Supply Chain is yet another important part of the Healthcare industry where data safety, security is vital. Blockchain inspires important innovations with respect to drug supply chain

- In this case, the traceability property of the blockchain becomes a key property in avoiding the fake drugs reaching the customer. It also ensures that the genuine drugs are powered for the end users

- Another area in Healthcare where the blockchain implementation becomes fruitful is biomedical research especially in the area of clinical trials and maintaining the data sanctity

- Blockchain also promotes the remote patient monitoring with the help of which the population residing in rural and difficult terrains can also access the best healthcare.

Economic Implications of Blockchain in Healthcare

- Blockchain technology is often seen as a long time investment in the Healthcare industry.

- Researchers suggest that the major three areas in which the blockchain technology can bring revolution is Clinical Trials, Supply Chain Management and Quality Control

- The technology will not only reduce the cost of individual transaction, it will also reduce the frequent expenses done by the patient over medical activities.

- Blockchain technology has got the potential to transform healthcare by placing the patient at the centre of the healthcare system and enhance the overall safety and security of the system

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- Blockchain helps in maintaining the patient data over a distributed network. Thus, the physicians and patients can access the data from any location.

- Blockchain technology enables patients with a Remote Patient Monitoring. The patients located in remote locations will be able to consult best of the physicians who might be located at the far off places.

- This connection saves the travel cost of the patients and also connects the patients and physicians at an economical cost without much trouble

- Remote Patient Monitoring not only enhances the business in the healthcare industry, it also helps in proper diagnosis and treatment of the patients even though located at remote places

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- Blockchain in drug supply chain helps in tracking the source of the drugs that the patient is consuming. It also helps patients in knowing the complete history of the drugs

- The complete information about the medicine helps patient in deciding the right medicine suited for the patient.

- This will save the patient with lot of costs involving buying the costly alternate medicine which are prescribed by the physicians for the greed of commission

- Health Insurance is another domain of interest in healthcare. Implementation of technology for health insurance will remove all the redundant paper work that the insurer and the company has to go through.

- The availability of all the paperwork over the distributed network will help in maintaining all the documents at a single place so that both the company and the insurers are aware of it.

- This prevents any fraudulent activities associated in reclaiming of the policies and helps patients in getting their insurance claim if they are entitled to it

Conclusion

- Despite all the economical advantages that the blockchain technology facilitates to the healthcare industry, there are limitations associated with it.

- It obviously comes with a huge initial investment cost to implement the technology in the Healthcare Industry

- Another problem arises how technology friendly are the stakeholders in operating the entire process over a network. The stakeholders may not be comfortable with using the system unlike they are now with the manual work.

- One of the most prominent challenge is if the patients are really ready to share their sensitive medical data over a distributed network

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