Blockchain In Healthcare: Enabling Trustless Collaboration

Healthcare innovators are constantly looking for ways to make the system more efficient and affordable. A rapidly evolving field, the blockchain technology has created quite a rage and the disruptive technology is all set to transform the healthcare sector.

What is Blockchain technology?

The Blockchain encompasses a distributed network built out of linked blocks and stored in a digital ledger. It can be compared to a database which stores immutable or unchangeable data, located in a network of personal computers called nodes. Even though the data is decentralised and shared publicly, the contents of each data are only accessible to those with permission. Private key cryptography, the distributed ledger system and the process of authentication allow data shared through blockchain to be absolutely secure.

Backed by cryptographic techniques

Blockchain relies on the utilisation of cryptography or sophisticated algorithms and secret keys to secure the integrity of data. Thus it ensures authentication and anonymity of any data usage activity.

Enables trustless collaboration between the different stakeholders

Blockchain has the potential to develop a "trustless" system. The utilisation of cryptographic techniques enables trust among the different network participants. The various interactions within the blockchain require verification by all the stakeholders, which is done via consensus protocols. They also maintain immutable records or audit trails of all interactions, which further secure the system.

How will Blockchain help the healthcare sector?

Blockchain boasts of increasing the security, privacy, and interoperability of health data. It will make the exchange of health information more secure, efficient and will certainly remove the intermediaries from the loop. Another point of mention is that the technology has the potential to improve patient centricity. Placing the patient at the centre of the health care ecosystem is the need of the hour and has resulted in a paradigm shift in the healthcare sector.

A potential application of blockchain in Pharma includes drug traceability. The whole supply chain between drug manufacturers, wholesalers, pharmacists and patients can be tracked using blockchain. This secure system will be game-changing for business transactions and consumer and patient interactions.

Blockchain via the use of smart contracts can enforce trust in clinical trials and help eradicate the risk of data manipulation. Thus blockchain can be a novel technological solution to ensure data transparency and traceability in the whole process.

Precision medicine is yet another area of interest. The blockchain technology can help democratize genomic data sequencing and enable sharing of these data across the globe. Patients, researchers and providers can collaborate to develop individualised care and blockchain can thus offer a shared platform that decentralizes these interactions.

Long way to go!

While still far from being a panacea, blockchain technology surely holds potential for solving a plethora of healthcare problems. A wave of positively definitely surround this technology. However, more experimentation, proof-of-concept testing and most importantly investment for the same are warranted.