FUTURISTIC TRENDS IN ARTIFICIAL INTELLIGENCE

HOW DOES BLOCK CHAIN TECHNOLOGY WORK?

It has been hundreds of thousands of years since human beings stepped foot in the planet. It is an undeniable fact that evolution in humans has not been confined just to biological transformations but also in various social and political aspects. But in spite of all this, if one thing has survived throughout the little time that humans spent in the geological clock, it is trade and commerce. Though it underwent its share of changes, the essence of the concept remains unaltered where, a person in need of a commodity exchanges it with someone who sells that commodity.

Coin exchange replaced barter system which was in turn replaced by Paper currency which was yet again replaced by an organized system of exchange called Banks which is still the widely used system of transaction. But a centralized system such as bank, though very efficient offers little room for individual access of every record which are distributed across various spreadsheets. Introduction of net banking and other online transactions as an extension of bank has also been proven hackable as fraud reports and cyber crimes are filed in this regard frequently.

This is where, block chain comes into play. In this system, Transaction is carried out through digital currencies like bitcoins and details of transactions are stored in the form of a ledger where every computer involved in the system receives a copy of the ledger. The moment another verified transaction takes place, the update is reflected in each and every copy of the ledger. The fact that every computer has a copy of the ledger offers accessibility. The transaction while is recorded in a ledger, is organized as blocks. Collection of connected blocks is what brings the name 'Block chain'.

When a transaction's detail needs to be verified, the computer not only checks the computer's copy of the ledger, but the copy of every single system involved in the blockchain. The details displayed in majority of computers decides the credibility of the transaction that needs to be verified.

Each block contains detains of the names of sender and receiver, a unique code to identify the transaction named hash and also the hash of the previous block.

The part where each block contains the hash of the previous block is what makes the blockchain technology almost unhackable. When a hacker tries to illegally edit the data of a transaction in their copy of the ledger, then as

discussed above, majority of the computer displays the unhacked data and so the transaction remains invalid. It can also be understood in the form that, since each block consists of the hash of the previous block, trying to tamper with the transaction data in a block changes the hash of the block which would means the consecutive block turns out to be invalid as the previous hash as per the consecutive block does not match the actual hash of the previous block. This makes every following block invalid and hacking majority of computers simultaneously to display hashes as per liking is, in my opinion, not a practically possible thing to do, atleast not with the existing technology. But seeing the growth of technology in recent times, this might not be very far from happening.

Blockchains, though seems to offer a lot of advantages over many other existing system of transaction, it would take humanity time to accept and accommodate it as a common day to day system of transaction. The idea of digital assets and currencies like bitcoin, altcoins etc. with the idea of fluctuating value automatically lets people relate it to stockmarket and the limitations of it but, the advantages that this technology offers seems to outweigh it all and provide an even more transparent system of trade and commerce.

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