BLOCK CHAIN ANALYTICS

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INTRODUCTION

Block chain is going to lead majority of data storage and information sharing for upcoming IT industry. Block chain is a chain of blocks that talk about digital information (the "*block*") stored in a public database (the "*chain*").

Blocks store information about transactions like the date, time, and dollar amount of most recent purchases. They store information about participants in transactions. They store information that distinguishes them from other blocks. Even though the details of new transaction would look identical to earlier purchase, the blocks are apart because of their unique codes.

When one pays another for goods using bitcoin, computers on the Bitcoin network race to verify the transaction. In order to do so, users run a program on their computers and try to solve a complex mathematical problem, called a "*hash*." When a computer solves the problem by "*hashing*" a block, its algorithmic work will verify the block's transactions, referred to as "*mining*." (Jimi, 2018).

Although transactions are publicly recorded on the blockchain, user data is not—or, at least not in full. In order to conduct transactions on the Bitcoin network, participants run a program called "*wallet*." Each wallet consists of two unique and distinct cryptographic keys: a public and a private key. The public key is the location where transactions are deposited to and withdrawn from. It also appears on the blockchain ledger as the user's digital signature.

Even if a user receives a payment in bitcoins to their public key, they will not be able to withdraw them with the private counterpart. A user's public key is a shortened version of their private key, created through a complicated mathematical algorithm. This technology is confidential due to the complexity and is impossible to reverse the process and generate a private key from a public key Lim (2021).

Applications of Blockchain

Health Care

Blockchain can provide safe opportunities for sharing patient data between insurers, providers and multiple doctors. It promises to improve information accuracy and sharing and helps in preventing fraud in health care.

Supply Chain

Complex supply chains can be tracked consistently and securely for all interested parties, including purchasers and regulators. Grocery supply chains have been early adopters of blockchain to improve food safety (Ming,2021)

Banking

Banks can share parts of a blockchain with each other to keep track of suspicious activity and track the flow of transactions. Permissioned blockchains can be used to re-engineer business processes, like moving transactions from front to middle to back office while

eliminating the need for data reconciliation. Emerging uses include blockchain for trade finance, global payments, securities settlement and commercial real estate.

Transportation

Blockchain   helps coordinate routes and modes of transportation. A blockchain network works across any mode of transportation   to plan the best multimode route for customers, ensuring smooth transitions between vehicles and offering a single payment for users.

Insurance

With validation and privacy, blockchain implementations in the insurance industry include smart contracts and smart claims processing. Implementing blockchain   reduce fraudulent claims and allow all parties – insurers, providers and customers – to view accurate claim updates simultaneously.

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