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LEADING DIRECTIONS OF BLOCKCHAIN TECHNOLOGY USE

Today, blockchain is a technology that is used in many industries. A computer network handles a special type of database called a blockchain, which uses distributed ledger technology to continuously add data, allowing, among other features, a verifiable record of cryptographically protected transactions, and ensuring consensus among the computers that manage this process.

In 2009, Bitcoin was created and proposed as a new monetary system managed by thousands of computers distributed around the world, making money less dependent on central authorities. The main function of the Bitcoin blockchain is to facilitate the transfer of Bitcoin and record this transaction in a way that cannot be changed or deleted retroactively. Since the inception of the Bitcoin blockchain, several developers have adopted the technology and added more features and uses. When the Ethereum blockchain was created in 2015, it introduced smart contracts, which allowed people to program contractual agreements that were not limited to payments. Nowadays, many blockchain use cases have been developed, with capabilities that expand depending on how an individual or organization intends to use it [1].

Nowadays, blockchain technology is solving problems faced by participants in a number of industries, ranging from finance to agriculture. There are now thousands of blockchain platforms in the world, ranging from truly decentralized operations such as Bitcoin to private corporate iterations that are controlled by a single company for specific purposes.

The most common use case for blockchain is in finance. What started as a distributed method of continuously recording transactions has evolved over time into countless crypto-financial services, ranging from simple one-touch purchases using cryptocurrency and trading to more complex functions such as decentralized finance (DeFi) for loans, savings, liquidity pools, and more.

From a financial point of view, cryptocurrencies are created to give people more freedom in earning and using money. Therefore, blockchain allows for more opportunities to provide financial services to more people around the world, especially those who have little or no access to traditional systems.

Among the many ways to use blockchain, let's highlight the most popular ones.

1. The gaming industry. As soon as cryptocurrencies became popular for payments and finance, developers created blockchain games to present the many solutions this technology can offer to solve problems in the gaming industry, such as economic manipulation by gaming companies, payment problems, possible disconnections or imbalances in the gameplay. By implementing a distributed and transparent open-source network for player participation, blockchain introduces innovations such as real asset ownership, consensus-based updates, decentralized markets, optimized tokens, and much more.

2. Real estate transactions. Blockchain has been successfully applied in the real estate industry, which faces problems such as slow transactions, administrative disputes, and distrust between buyers, sellers, and intermediaries. The introduction of blockchain in real estate has automated routine tasks and contracts, transparently recorded and tracked data, and reduced costs. In addition to improving service delivery, blockchain is opening up innovative business models for real estate, such as partial ownership of assets that are difficult to secure joint ownership, digitized contracts to speed up transactions, real estate crowdfunding through tokenization, and more.

3. Insurance. This industry is often characterized by inefficiency and vulnerability to fraud. As an industry with a large number of records, insurance takes advantage of blockchain by using its use cases such as improved fraud detection, record keeping, and reinsurance (insurer insurance). This is a promising area for the introduction of distributed ledger technology - currently, the process of receiving compensation for a delayed or canceled flight is fraught with many problems, causing travelers to lose time and money. Smart contracts can help in this situation, the specifics of which will allow to automatically pay insurance compensation to the victims, as well as to book new tickets [2] Blockchain also opens up innovations in insurance business models, allowing insurance companies to offer more complex versions of on-demand insurance products and microinsurance products.

4. Security. Security issues exist at all levels of human activity, from personal accounts to global levels, and blockchain has solutions for problems at every level. At the individual level, blockchain security solutions include self-sovereign identity, where individual users can take full control of their personal information, as well as secure data transfer, secure private messaging, and security layers for household Internet of Things devices such as thermostats and routers. At the organizational level, companies have implemented blockchain for distributed record keeping, preventing denial-of-service attacks at individual vulnerable points such as websites. Governments

in many countries (Australia, Malta, China) are using blockchain for security purposes.

5. Art. NFTs, or non-fungible tokens, have become a hot topic in the art world as works of art created with this technology have started to sell at auctions for millions of dollars. The development of NFTs has brought us crypto art and digital collecting, where artists, musicians, and influencers are increasingly using this technology to generate more revenue from their authentic, unique work. The use of NFTs can extend from digital art and music to document authentication for real assets such as artwork and jewelry.

6. Customer bases, loyalty programs, accommodation booking services, and airline ticket purchases. Blockchain can increase the efficiency of loyalty programs. For example, the hospitality industry (airlines, retail chains, hotels) relies heavily on loyalty programs. Blockchain can help with these programs by simplifying the process, allowing customers to more easily obtain information about their loyalty points, and allowing them to redeem them. It can also help fight fraud in this area [2]. In 2017, the travel market was valued at \$630 billion, and in 2022, it is expected to double, meaning that online travel agencies have contributed to the progress of the hospitality industry by establishing direct contacts between customers and properties.

7. Personal identification. Blockchain technology has the potential to become a standard for storing such information. Creating decentralized ID databases using a standard format so that companies can quickly and easily identify customers.

Blockchain is a concise example of the genius of modern fintech solutions. To say that blockchain is a universal technology is an understatement: chain technology has already been successfully implemented in the most diametrically opposite directions and is actively realizing its powerful potential

Information sources

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