International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 06 Issue: 11 | November - 2022 Impact Factor: 7.185 ISSN: 2582-3930

How Blockchain can Transform the World?

Manish Mehta

Guide: Gauri Ansurkar

Keraleeya Samajam's Model College, Dombivli (East), Kanchangaon, Maharashtra

Abstract

So far, blockchain technology has been heard most prominently in relation to cryptocurrencies. It is known around the world as the technology that made Bitcoin and Ethereum possible. But the bigger story lies in blockchain technology's potential to transform other key sectors such as education, voting, medical records, and agriculture. Bitcoin and blockchain were two terms used interchangeably by many people around the world just a few years ago. But over the past few years, as the world has learned more about the technology, the space between blockchain and cryptocurrency has widened and better non-crypto blockchain use cases have emerged.

Keywords: Blockchain, Agriculture, Education, Medicine, Healthcare.

Introduction

Blockchain is a secure method that allows people to transact directly with each other. Blockchain aims to record and distribute digital information, but not edit it. In this way, a blockchain is a foundation for immutable ledgers or transaction records that cannot be altered, erased, or destroyed. It is a public digital ledger that records information in a way that makes it difficult to hack or alter. The list of records is called block. All of these blocks are linked by cryptography.

History

The history of blockchain technology dates back to the early 1990s, when a group of researchers developed a system for secure communication that would later be known as "hashcash." In the years that followed, a number of different blockchain-based systems were developed, which includes "bit gold" and "b-money." However, it wasn't until 2009 that the first truly decentralized blockchain was created, with the launch of Bitcoin. Since then, blockchain technology has continued to evolve, with new applications and use cases being discovered all the time. Today, blockchain is being used for everything from online payments to supply chain management. And with the launch of Ethereum in 2015, blockchain's potential has only grown further.

How does blockchain work?

Blockchain aims to allow digital information to be recorded and distributed, but not edited. Blockchain is a kind of shared database that differs from a typical database in the way that it stores information; Blockchains store data in blocks, which are then linked using cryptography. As new data is entered, it is entered into a new block. Once the block is filled with data, it is concatenated with the previous block, thus linking the data in chronological order.

Blockchain in Education:

One-way blockchain can be used in education is to create a decentralized database of student records. This would allow students to have complete control over their own data, and would make it much more difficult for data to be tampered with or lost. A blockchain-based system would also make it easier to verify the authenticity of transcripts and other documents.

Another potential use case for blockchain in education is the creation of digital credentials. Currently, students often need to submit paper copies of their transcripts and other credentials when applying to colleges or for jobs. With a blockchain-

based system, these credentials could be stored securely and verified easily. This would not only save time and money but would also help to prevent fraud.

Finally, blockchain could also be used to create a decentralized marketplace for educational resources. This would allow students and educators to buy and sell resources directly, without having to go through a middleman. This would not only save money but would also make it easier to find and use high-quality resources.

While there are many potential uses for blockchain in education, these are just a few of the most promising. As technology continues to develop, we are likely to see even more innovative and transformative uses for blockchain in education.

Blockchain in Voting

There are many potential applications for blockchain technology in voting. For example, blockchain-based voting could be used to increase transparency and reduce the risk of fraud in elections. Additionally, blockchain could create a secure and tamper-proof record of votes cast, which could help increase confidence in the electoral process.

One way in which blockchain could be used for voting is through the use of smart contracts. Smart contracts are self-executing contracts that are stored on the blockchain. This means that they cannot be altered or tampered with once they have been created.

Using smart contracts for voting could potentially increase the security and transparency of the voting process, as well as reduce the risk of fraud. Additionally, smart contracts could be used to automate the counting of votes, which would further increase the efficiency of the voting process.

Another way in which blockchain could be used for voting is through the use of blockchain-based voting systems. These systems could be used to create a secure and tamper-proof record of votes cast. Additionally, blockchain-based voting systems could potentially provide a higher level of security than traditional voting systems, as well as be more transparent and efficient.

Overall, blockchain technology has the potential to revolutionize the voting process. By using blockchain-based systems, we could potentially create a more secure, transparent, and efficient way of voting that would help to increase confidence in the electoral process.

Blockchain in Healthcare

Blockchain technology can be used to create a secure, decentralized database of medical records. This would allow patients to control their data and give them more privacy and security. In addition, it would make it easier for doctors and other medical professionals to access and share information.

There are a few different ways that blockchain could be used for medical records. One option is to create a decentralized database that is open to all patients and doctors. This could be done using a public blockchain, such as Ethereum. Patients could add their medical records to the blockchain, and doctors could query the blockchain to find the records they need.

Another option is to create a private blockchain that is only accessible to authorized medical professionals. This would give patients more control over their data, as they would be the only ones who could add or remove records from the blockchain. However, it would also make it more difficult for doctors to access information, as they would need to be granted permission by the patient.

Blockchain technology could also be used to create a secure messaging system for doctors and patients. This would allow patients to communicate with their doctors without having to worry about their data being intercepted or hacked. In addition, it would give doctors a way to securely share information with each other.

Ultimately, blockchain technology has the potential to revolutionize the medical industry. It could give patients more control over their data, while also making it easier for doctors to access and share information.

Blockchain in Agriculture

The potential use cases for blockchain technology in agriculture are vast and varied. One of the most promising applications of blockchain in agriculture is in the area of supply chain management. The use of blockchain can help to create a transparent and traceable supply chain for agricultural products, making it easier to track the movement of goods from farm to table. This would not only improve food safety but also help to combat food fraud, which is estimated to cost the global food industry billions of dollars each year.

Another potential use case for blockchain in agriculture is in the development of a decentralized marketplace for buying and selling agricultural products. This could potentially provide farmers with greater access to markets and allow them to sell their products directly to consumers. Such a marketplace would also allow consumers to buy agricultural products from a wider range of suppliers, giving them more choices and helping to create a more competitive market.

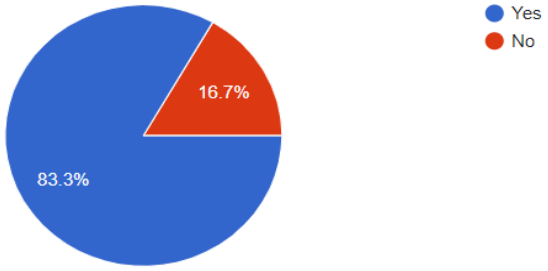
Finally, blockchain technology could also be used to create a digital identity for each agricultural product. This would allow consumers to easily verify the authenticity of products and ensure that they are buying what they think they are. It would also help to protect against counterfeiting and fraud, as each product would have a unique digital fingerprint that could be used to track it through the supply chain.

While the potential applications of blockchain technology in agriculture are numerous, it is important to note that there are still some challenges that need to be addressed before it can be fully realized. For example, blockchain technology is still in its early stages of development and there is a lack of standardization across different platforms. This means that it may be some time before we see widespread adoption of blockchain in agriculture. Nevertheless, the potential benefits of the technology are significant and it is likely that we will see more and more use cases emerge in the years to come.

Questionnaire Survey and Results

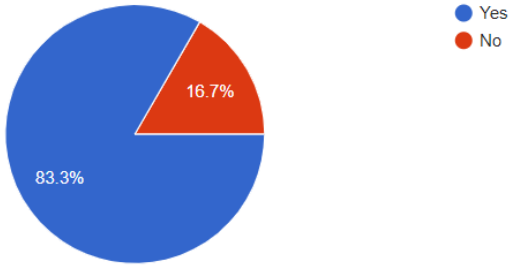
- Do you know about blockchain?
- Do you know about cryptocurrencies?
- Have you purchased any crypto coins?
- Do you know the use of blockchain technology other than crypto coins?
- Do you think blockchain is secure?
- Is the current voting machine trustworthy?
- Do you know that Blockchain can be used in healthcare, education, voting, and agriculture?

1.Do you know about blockchain?



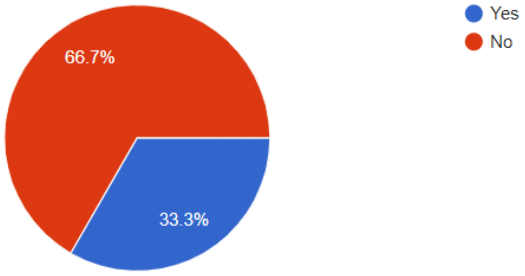
When people were asked, do you know about blockchain? 83.3 percent of people said yes, 16.7 percent said no.

2.Do you know about cryptocurrencies?



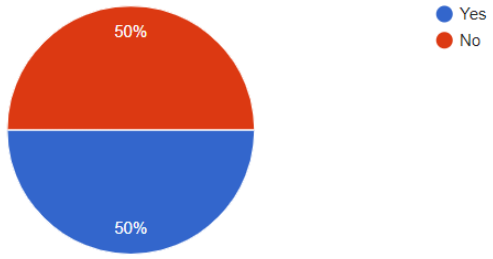
More than 83 percent of people said they know about cryptocurrencies who were asked Do you know about cryptocurrencies?

3. Have you purchased any crypto coins?



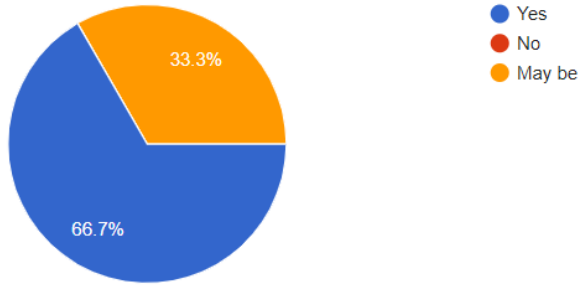
When people were asked, have you purchased any crypto coins? 83.3 percent of people said yes, and 16.7 percent said no.

4. Do you know the use of blockchain technology other than crypto coins?



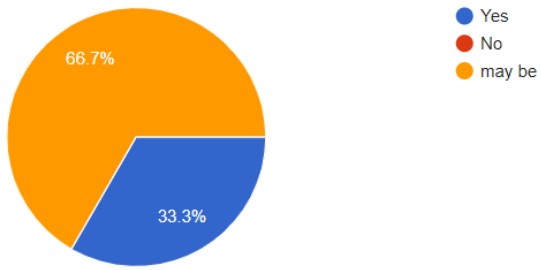
About 50 percent of people said, yes, they know other use of blockchain technology and 50 percent said they don't know.

5. Do you think blockchain is secure?



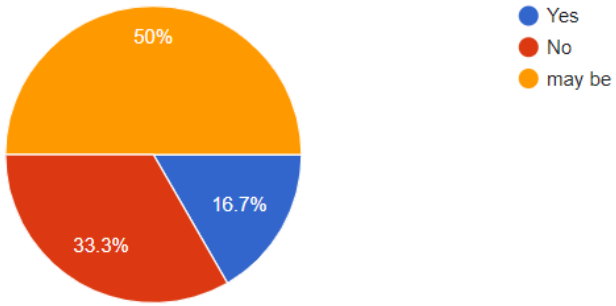
When people were asked, do you think blockchain is secure? 66.7 percent of people said yes, and 33.3 percent were confused.

6. Is the current voting machine trustworthy?



More than 66 percent of people said maybe the current voting machine is trustworthy whereas 33.3 percent said, yes, it is trustworthy.

7. Do you know that Blockchain can be used in healthcare, education, voting, and agriculture?



When did we ask, do you know that Blockchain can be used in healthcare, education, voting, and agriculture? About 33.3 percent said no, 16.7 percent said yes and 50 percent said maybe.

Conclusion

The world can be revolutionized using blockchain in education by creating a decentralized platform for educational content and data. This would allow for a more secure and efficient way to manage educational content and data, as well as provide a way for students and educators to connect and collaborate.

In voting by creating a decentralized platform for voting. It will allow for a more secure and efficient way to manage voting. Transparency of the system will prevent people from corrupt leaders. Genuine, honest and who deserves will be elected. The blockchain can revolutionize the world by eliminating inefficiencies in the field of agriculture and medicine.

References

- https://www.simplilearn.com/tutorials/blockchain-tutorial/blockchain-technology
- https://www.insightsonindia.com/science-technology/communication-and-it-technology/blockchain-technology/
- https://www.geeksforgeeks.org/decentralized-voting-system-using-blockchain/?ref=lbp
- https://indianexpress.com/article/opinion/blockchain-technology-education-nep-7696791/
- https://elearningindustry.com/ways-blockchain-impacts-education-industry-in-2022-and-beyond
- https://mirror.xyz/carolinarojas.eth/01-hUv71yQZ2_ZXZT5re6cyUMNL2h88QovugObopeaU