User controlled content on social media based on Blockchain

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Abstract— Decentralised social media platforms are networks that run on a blockchain or a number of separate, autonomous servers. Unlike the legacy networks we still use today, Decentralised social media isn't governed by a single organization or restricted to a centralized server. User generally do not care about their data which is in their social media application. But Some user's requirement is that their data to be protected. On top of this, many people are not aware of social media platforms can mishandle data and censor content. So there currently much of a public need for a new kind of social networks. For this challenge the introduction of new type of social framework is being proposed based on blockchain. A Social media website based on blockchain is a really effective solution for this existing problem.

Keywords—decentralized, mishandle, network, social, communication (*key words****)***

I. INTRODUCTION

The concept of blockchain technology was initially proposed in 1991 it was done by two mathematicians, Stuart Haber and W. Scott Stoments, who wanted to build a system that would prevent the tampering of document timestamps. Blockchain is such a trendy topic right now that everyone wants to learn more about it. A shared database using blockchain technology saves data dif Encryption is a base concept for blockchain. fervently from a traditional database. It stores data in blocks that are digitally connected to one another. Although blockchain is more well-know [11]n since it is mostly utilized in cryptocurrencies, like bitcoin, there are numerous other industries that use it, including finance and health care. The fundamental idea behind blockchain is decentralization, which increases user confidence and makes data safer. Decentralization, as we may be aware, entails the absence of any central. This reduces the possibility of prejudice or poor judgement by ensuring that control and decision-making are evenly dispersed throughout a network rather than being in the hands of one person or group. Decentralized social media doesn't have a single central server, which is the most significant point to remember. The biggest social media networks of today, including Facebook, Twitter, and Instagram, are frequently centralized, meaning that a single central authority has complete control over the whole network. Blockchains can offer secrecy, security, control over information, tamper-proofing, accountability, and transparency. In social networks, however, bogus news and deliberately created screenshots are constantly created and shared. This raises the likelihood of catastrophic vast hacks, takeovers, and disclosures. Dispersed social media networks Provide additional control to users. Federated networks, as opposed to centralized social networking platforms, encourage freedom from a centralized authority. Advantages include increased control over user-generated content, control over private information, and resistance to censorship. [1]

In addition to presenting a few interesting possibilities, there are different superb and negative factors related to decentralized social media structures.

II. MOTIVATION

Blockchain Social media is a term used to describe decentralized networking services built on blockchain protocols and platforms that allow for the development of smart contracts and apps Decentralised administration is a method by which the tasks of an organisation functions, especially those pertaining to arranging and making decisions, are distributed or delegated off from a central, authority place or team [13]. Decentralisation is the process of moving power and control from a central organisation (a person, company, or a team of people) to a dispersed network. in the context of the blockchain. By ensuring that control and decision-making are not concentrated in the hands of a single person or group but rather are distributed equitably across a network, this reduces the potential of prejudice or bad judgement. We provide Ushare, a user-focused social media platform powered by blockchain that lets users manage, track, and claim ownership of every piece of material they share.

Currently, royalty payments for music, movies, and streaming services are distributed using blockchain, and The most important thing to note about decentralized social media is that it doesn't correspond of one central garcon. Numerous of the biggest social media networks out there moment, including Facebook, Twitter, and Instagram, are all centralized, meaning one core authority holds all the power over the network. Decentralisation of social services has received attention recently as a potential solution to the key privacy problems with social media, fake news, and censorship. The most well-known decentralised method used

today is blockchain technology, which is being used by developers while creating new decentralised social platforms . The description of the problem is that detecting and preventing fake news on social media involves special difficulties that call for creative algorithms. The blockchain is a recent invention [12] revolutionizing the digital world bringing a new perspective to security, resiliency and efficiency of systems. This can be dangerous, as it increases the threat of large-scale hacks, appropriations, and leaks. These platforms use a system of governance instead of the word of a many individualities to make opinions. Druggies can bounce on effect to have their say in how the platform progresses, rather of having to go on with whatever the central authority wants..

The following paper demonstrates how and why a distributed strategy for online social networking may resolve these problems. Using this technique, users are no longer constrained by a particular website or platform. Similar to some of the well-known social media platforms we now have, this will provide customers with as much involvement as possible.. [6]

similarly to supplying a few exciting possibilities, there are different effective and poor elements associated with decentralized social media structures. The most prominent hazard is that malicious people may take gain of the way they may be set up.

it could appear an attractive concept to set up a decentralized social media community but there are opportunities for it falling to assaults by using content material creator groups having malicious intent. a few horrific actors may additionally use those decentralized social systems for propagating their vicious thoughts and hatred speech, advertising and marketing, and illegal content via the establishment of damaging groups. given that decentralized networks deliver users the electricity to put up something they want underneath their own network, it will become that lots less difficult for risky agencies to unfold their notions publicly. The enterprise network maintains to plot for brand spanking new social media advertising and marketing stores, but that doesn't make the networks they create loads greater secure.

An person also can alter a decentralized social community in the authorization of its administrators, that means that the manner the complete platform is based might not be absolutely dependable; users could have more autonomy and ability to behave. Decentralized social networking systems placed users in greater manipulate over their moves by using letting them set up how platforms are designed and what customers can say. in place of having a manager for a social community. The amount of data is [3] growing quickly. 20% of the world's data, based on recent research [1], is thought to have been gathered in the previous two years. Since its beginnings, the biggest social network on the internet, Facebook, has gathered 300 petabytes of personal data.

A single server that handles all of the primary processing is the focal point of the construction of a centralized network architecture. Less powerful workstations connect to the primary server and submit it queries rather than processing them on their own. This group includes utilities, applications, and data storage. Some of the main advantages of centralized network management include consistency, efficiency, and cost. Pressure is on network administrators to patch and upgrade machines. As a result, there are fewer administrators and less time spent on IT management when the entire network is managed by a single central server. A centralized network also restricts data transmission to a single point, making network tracking and data collection considerably easier. There are disadvantages to centralized networks as well. Just one object is substantially larger than is typical. This evaluation, along with others, is done on purpose. They adhere to rules that presumptively presume your work will be a part of the entire process and not exist alone. Don't modify any of the labels that are already on the items.

III LITERATURE REVIEW

A blockchain is an expanding distributed ledger that maintains an unchangeable, safe, and chronological record of every transaction that has ever occurred. An unidentified individual or group going by the name of Satoshi Nakamoto invented and employed it for the first time in 2008 to produce the Bitcoin cryptocurrency. The main goal is to encrypt electronic file bit sequences using a cryptosystem to prevent tampering or antecedent. The following are important features to consider when assessing a blockchain: decentralisation, integrity, audibility, privacy, and secrecy [19, 20]. Three types of blockchain technology exist: consortium blockchains (semiprivate blockchains restricted to a certain group), private blockchains (members are selected based on criteria), and public blockchains (anyone may join the network).

3.1 Cryptography Hash Function

A hash function is one of the most commonly used cryptographic algorithms in blockchain technology. It returns any type of data as a string of fixed length and structure, called a hash. The output formed by the hash function is called a hash value. A hash value is formed from data by an explicit hashing algorithm. It is always of the same length and is one-way, i.e., cannot be reversed. The SHA-256 algorithm is the most famous and well-known cryptographic hash function. It is used extensively in blockchain technology. Blockchain is acknowledged for its immutability. When the term "immutability" is used to describe Blockchain technology, it means that once data is captured and saved, it cannot be changed. This is a necessary quality for working with blockchains. The blocks are connected in Figure 1, and each block holds the hash value of the block before it.

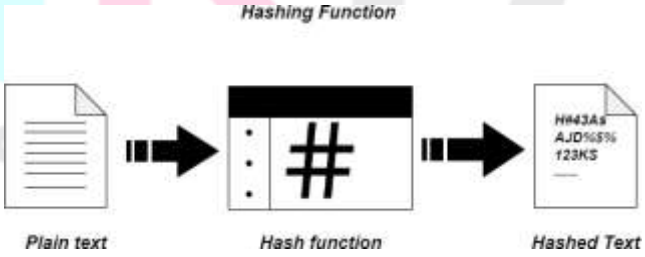

Fig 1: Hashing function

3.2 Immutable Ledger

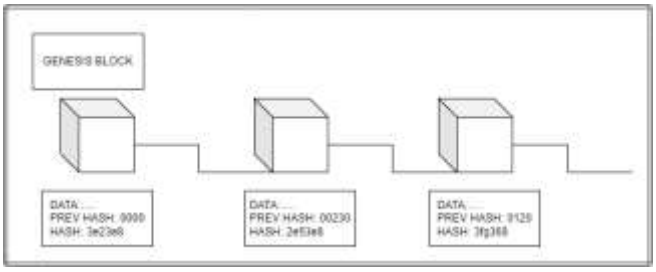

Fig 2: Immutable Ledger

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The genesis block is the initial block and is the only one without any preceding blocks. As is evident, immutability highlights how safe and well-thought-out a blockchain is. Like a bad cheque, the blockchain rejects a hash that differs and becomes invalid when it does not match the preceding hash on the ledger. The subsequent block, the block after that, and the entire blockchain would all need to be entirely altered by a hacker.

3.3. Networks of Distributed Peer-to-Peer

Without the need for a third party, two parties may simply engage through a peer-to-peer approach by using a blockchain. Because P2P protocols are used by blockchain, every member of the network can have an identical copy of their contacts, facilitating consensus over a consensus method.

3.4 Dispersed Software

The distributed applications (ĐApps) that are employed by most cryptocurrency blockchains maintain an efficient digital transaction infrastructure. Dapps are software programmes that may operate simultaneously on several computers and are often developed and maintained on cloud services. While DApps can operate on various network systems or in a cloud environment, several have been developed and implemented using a Blockchain-based paradigm.

The imprecise way in which the phrase is used to describe decentralization has led to the need for more characterization and context (Bodó et al., 2021; Schneider, 2019; Troncoso et al., 2017). This section offers ways to define decentralization in social media from an architectural and cultural perspective. It also presents a number of Decentralised platform examples, classifying them as blockchain-based, federated, and peer-to-peer.

III METHODOLOGY

From the sociological perspective of school-based management, a systematic study was conducted to produce trustworthy, fact-based recommendations for striking a balance between centralised and decentralised decision-making. The goal of a systematic literature review, a scientific technique defined by a set of precise and exacting standards, is to demonstrate thoroughness, objectivity, and responsibility for the method and execution. Numerous significant goals are accomplished They can offer reviews of the present state of understanding in a subject, allowing for the determination of future areas of study. they respond to inquiries which individual studies would't otherwise be able to; they can identify issues in primary research that need to be addressed in subsequent studies; and they can develop or assess theories about how or why. As a result, systematic reviews produce many sorts of knowledge for a variety of consumers, including patients, healthcare professionals, academics, and policymakers Although restrictive latent results h[14]ve been criticised for systematic reviews they may offer advantages like the convergence of qualitative and quantitative research findings, which is required from a methodological perspective because other commonly used analytical methodologies only cover qualitative or quantitative models. The numerous parts and the basic operation of smart contracts are explained in the first section of the article. Next, list and evaluate the many applications for smart contracts, including the benefits of employing them in blockchain applications. The study continues by discussing the difficulties of applying smart contracts in a real-world context. [15] Therefore, combining qualitative and quantitative studies through a systematic review provides a useful framework for enhancing the examination of research issues and providing information for a wider viewpoint.

III A. *BLOCKCHAIN*

A blockchain is a distributed database or ledger that is shared among the nodes of a computer network. They are most recognised for their critical function in cryptocurrency systems in preserving a secure and decentralised record of transactions, although their applications are not restricted to Bitcoin. Blockchains may be used to make data in any business immutable—the word used to denote the inability to be changed. Every Block has their own hash code and previous hash code with which it connects the next Block

This is how the Blocks have different hash code -:

ID	NAME	CREATED	HASH
1	AKSHAT	7 JUN	2ZB2
2	SIDDHARTH	10 DEC	AA21
3	PRAJEET	1 MARCH	3DFV
4	CHIRAG	10 MAY	1JKL

Fig 3:Hash code

III A.*HASHING*

Hashing is an encryption function that turns a sequence of characters of any size into a fixed-length unique output, or hash. This implies that no matter what symbol combinations are used as input, they will always output a distinctive sequence of digits and characters.

III. HASHING ALGORITHM

A hashing algorithm is a mathematical function that corrupts and renders data illegible. Although hashing methods are one-way programs, no one else can unscramble and decode the content. That is the point. Hashing secures data at rest, which means that even if someone obtains access to your server, the objects saved on it remain unreadable. Hashing can also assist you in establishing that data isn't changed or changed after the author is done with it. Hashing is also used by some people to assist them make sense of massive amounts of data.

Text may be transformed into a hash using a variety of programs, each of which works somewhat differently.

MD-5
It is a popular hashing method. This is one of the earliest algorithms that has gained popular acceptance. It was created in 1991 and was thought to be quite secure at the time. Hackers have learned how to decode the algorithm since then, and they can do it in seconds. Because it is so simple to pull apart, most experts believe it is not safe for widespread usage.

SHA-256
SHA. The SHA family of algorithms is thought to be slightly more secure. The earliest versions were created by the US administration, but other developers have expanded on the basic frameworks, making later iterations stricter and more difficult to crack. The greater the number following the letters "SHA," the more recent the release and the more complicated the program.

For example, SHA-3 contains unpredictability in the coding, making it significantly more difficult to crack than previous versions. Because of this, it became a common hashing method in 2015.

III B . JAVASCRIPT

You can use JavaScript to create complex features whenever a web page does more than just display static material for you to look at – when it shows updates, interactive maps, dynamic visuals or graphics, scrolling jukeboxes, videos and so on. JavaScript is almost certainly involved, according to CSS. It is the basic requirement for any developer who is learning web development It is the third step in learning web development. It is a type of scripting language used for creating dynamically updated material, controlling multimedia, animating pictures

III D. *SOLIDITY*

Solidity is an item-orientated programming language Created specifically by means of the Ethereum network group for building and designing clever contracts on Blockchain platform. It is used to create clever contracts that enforce business good judgement and generate a sequence of transaction information within the blockchain system.

III *NODE.JS*

Node.js is an open-source, cross-platform runtime environment enabling JavaScript code execution outside of a browser. It's important to keep in mind that NodeJS isn't always a framework or a programming language.
The majority of folks are perplexed and realise it's a programming language or framework. For creating lower back-give up services like APIs for web apps or mobile apps, we frequently employ Node.js. Large organisations like PayPal, Uber, Netflix, Walmart, and other ones use it in production.

IV. CENTRALIZED AND DECENTRALIZED ONLINE SOCIAL NETWORKING

The difference between centralized and decentralized approaches is a critical point of concern In the realm of internet-based social networking platforms. Centralized online social networks, such as Facebook and Twitter, are distinguished by a single governing institution that oversees details, content, and user interactions. The central authority ensures efficient administration and a uniform user experience while also raising issues about data ownership and privacy. Decentralized online social networks, on the other hand, generally rely on blockchain technology to spread power and ownership among members, boosting user privacy and defying censorship. Decentralized architectures are exemplified by Mastodon and Steemit. While decentralized networks pose governance complications and possible anonymity concerns, they also provide resilience and user empowerment. The study of centralized and decentralized online social networking investigates the trade-offs between

the two.The trajectory of digital social interactions is being shaped by efficient administration and user autonomy. The selection of these models has a considerable impact on the dynamics of user interaction, information flow, and the overall social impact of these platforms.

The research on centralized and decentralized online social networking goes deeply into the subtle trade-offs between centralized platforms' streamlined efficiency and the empowering autonomy provided by decentralized alternatives. The mechanics of user interaction, information distribution, and the broader societal ramifications of these digital social arenas are all echoed in this investigation. As the study progresses, it navigates the complexities of these disparate models, elucidating their influence on the growing landscape of online social interactions and providing essential insights into the future trajectory of digital communities.

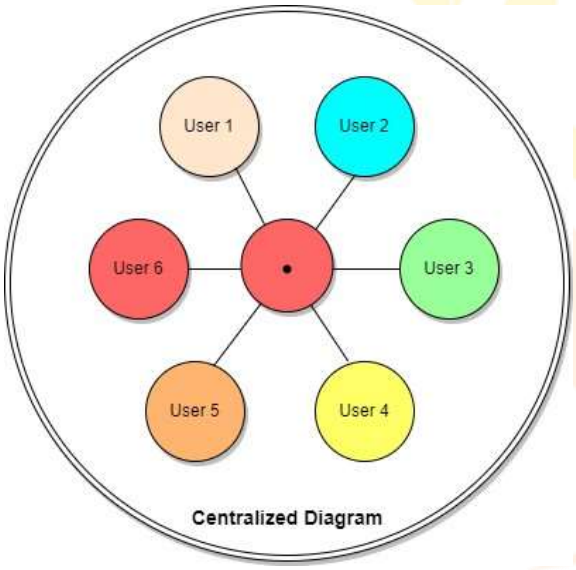

Fig 4:Centralized network

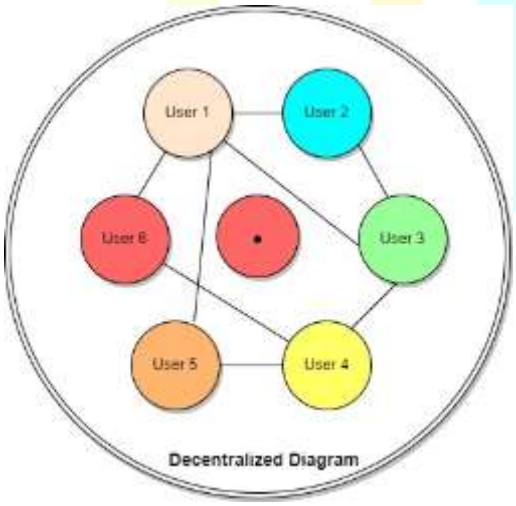

Fig 5:Decentralized network

V. CONCLUSIONS

In summary, decentralisation through blockchain technology has the enormous potential to completely change a number of sectors as well as the way we interact with assets, data, and systems. Blockchain technology allows for peer-to-peer collaboration and transactional activities without the need for central authority, since it eliminates the need for middlemen and creates a transparent, immutable, and secure ledger, Because blockchain networks are decentralised, they improve security, lower the possibility of single points of failure, and encourage inclusion by giving individuals in underdeveloped areas access to financial services and information. Because it makes it possible to create smart contracts and decentralised apps (DApps), which may automate complicated procedures and enable trustless interactions between parties, it promotes innovation..

In addition, decentralization with blockchain can improve data privacy, giving people more power over their personal data. It can also lead to greater transparency in the supply chain, in the election process, and in many other sectors, increasing accountability and reducing corruption. There are, of course, challenges and limitations that come with the widespread use of blockchain technology. These include scalability problems, energy consumption issues (especially in the case of Proof-of-Work blockchains) and regulatory barriers. However, overcoming these obstacles will be critical to unlocking the full potential that decentralized systems can offer. All in all, decentralized systems offer a revolutionary opportunity to transform the global economy into a more transparent, more inclusive, and more efficient place. As the technology advances and society solves its problems, we can look forward to more and more innovative applications that build on the strength of decentralized networks. This is the beginning of a new age of trust, cooperation, and power.

VI. ACKNOWLEGMENT

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