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ENHANCING BANK RECORD STORAGE WITH BLOCKCHAIN TECHNOLOGY

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ABSTRACT

Blockchain technology helps improve risk management, security, and authenticity, according to financial sector companies. In order to create smart contracts between participants, increase efficiency and transparency, and create new revenue streams, a number of organizations are implementing blockchain in trade and finance systems. The current clearing and settlement procedure is unnecessary due to blockchain's distinct recordkeeping capabilities. Blockchain-enabled identification is being adopted by banks and other financial institutions. The ability of organizations to anticipate new developments in financial blockchain applications and to create blockchain functionality leads to better outcomes. transferring ownership of an asset and taking care of the upkeep of an accurate financial record. Accounting professionals should prioritize three key areas: measurement, communication, and analysis of financial information. Blockchain has the ability to increase productivity by providing clarity on asset ownership and accounting duties. This study searches for and examines pertinent papers about blockchain technology in finance. Blockchain technology is the main topic of this essay, along with its significance for financial services. explores further tools, tactics, and services offered by Blockchain-based financial services. At the end of the study, the important uses of Blockchain technology in financial services are identified and assessed. Customers' financial lives are greatly impacted by credit reports. Blockchain-based credit reporting is more secure than traditional server-based reporting, as evidenced by recent data breaches. Blockchain-based solutions make it possible to issue digital assets more quickly, more affordably, and with greater customization. Because it may be used to tailor digital financial products to investors' needs, its adoption can increase the market for investors, lower costs for issuers, and lower counterparty risk. Network users are provided with a single common source of truth through mutualized standards, protocols, and shared procedures. Now, members of the corporate network may agree on the use of this technology, manage data, and communicate more simply.

Keywords: bank, record storage, blockchain, financial services

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1. INTRODUCTION

The decentralized method that block chain provides allows users to upgrade the network. Financial institutions have little influence on block chain networks. Information can be stored on block chains and shared more easily thanks to distributed ledger technology. Direct communication with network users can be facilitated by using it. Block chain provides a secure network on which to perform transactions. Because of its robust security mechanism, block chain technology is attractive to a wide range of businesses. Data reconciliation requires time and resources due to the independence of each company's accounting activities. Block chain technology can address this issue by facilitating the real-time recording of transactional, contractual, and other data in a shared ledger. It suggests that customer experience may be enhanced and identities and data transfers could be made more secure. Money and time, however, cannot be coupled with wire transfers. Block chain technology payments resolve these problems and increase customer trust. Technology facilitates real-time cash transfers between financial institutions, lowering costs and expediting settlement. This system has great transaction tracking capabilities and can be automated. Financial service providers can track seller deliveries and customer payments with smart contracts. This article looks at blockchain technology, covering its characteristics and advantages as well as applications in banking.

2. REVIEW OF LITERATURE

With its transparent and safe data management and storage capabilities, blockchain technology has emerged as a possible game-changer for the financial sector. The application of blockchain technology to bank record storage is examined in this literature review, which also discusses the benefits, drawbacks, and body of current research.
Why Blockchain Is Beneficial for Bank Records

• Enhanced Security: Records cannot be changed with once added thanks to blockchain's distributed ledger technology, which guarantees immutability. By doing this, the likelihood of fraud and data breaches is greatly decreased. (For example, [1])

• Increased Transparency: By providing a verifiable record of transactions to all network users, this feature promotes accountability and confidence. (For example, [3])

• Simplified Audits: By offering an impenetrable record of all bank transactions, blockchain streamlines audit procedures. (For example, [4])

• Greater Efficiency: Blockchain can save expenses and streamline procedures by doing away with the requirement for numerous parties to reconcile. (For example, [3])

3. DEPLOYMENT STUDY

Current System: • Storage: To keep client data and transaction history, banks manage their own centralized databases. Usually, internal IT teams are in charge of these databases.
• Security: Though data is shielded from hackers by security measures like firewalls and encryption, hacking attempts can still occur.

Cons:
• Established Infrastructure: Banks already have established infrastructure and are accustomed to maintaining centralized databases.
• Regulatory Compliance: Banks can more easily comply with current requirements because they are clearly established for centralized databases.

Alogirtham and the Proposed System
Bank transactions undergo a process known as hashing, which transforms them into a distinct code. This code is then kept on a distributed ledger known as a blockchain.
• Secured Record: A new block on the blockchain contains the hashed record, timestamps, and digital signatures.
• Block Added to Chain: The latest block creates an unchangeable chain by cryptographically connecting to the oldest block.
4.1 Perks:
• Enhanced Security: Data breaches are far less likely because to blockchain's distributed ledger technology and cryptography. It is quite hard to tamper with records.
• Greater Transparency: An immutable shared record of transactions is accessible to all authorized parties (banks, regulators, and customers), promoting trust and lowering errors. Consumers are in charge of how visible their data is.

4. SETTLEMENT

1) PARTIES:
2)1. Click the "Upload Historical Trajectory Dataset" button and select the dataset to upload.
3) 2. Generate Train & Test Model: This button generates a machine learning train model by reading the dataset and splitting it into train and test parts.
4) 3. Click the "Run MLP Algorithm" button to train the MLP model and determine its accuracy.
Implementation Procedures:
Administrator:-
In order to access this module, the service provider must enter a valid user name and password. He can perform certain actions after logging in successfully, including logging in, viewing all users and authorize, viewing all datasets, and viewing all bank record types. View all bank data type results by block chain and all hash credit card results.
View and Authorize Users: This module allows the administrator to see a list of all enrolled users. This allows the admin to examine user information such name, email address, and address, and it also allows the admin to authorize users.
User: n numbers of users are present in this module. Before performing any actions, the user must register. A user's registration information is saved in the database. He must use his approved user name and password to log in after successfully registering. The user can perform many tasks after successfully logging in, such as registering and logging in, seeing their profile, uploading datasets, finding the type of bank transaction, and finding the type of bank transaction by hash code.

5RESULTS AND DISCUSSION
SCREENSHOTS:

Home page

Home Page

User login page

User Login Page

User home page

User Home Page

User profile

User Profile

Admin login page

5.6 Admin Login Page

Admin Home page

Admin Home Page

Admin authorization page

Admin authorization page

Data sets page

Data sets page

Bank Data Type BlockChain

Bank Data Type BlockChain

Hash Credit Card Results

Hash Credit Card Results

6. CONCLUSION

Globally, factories are embracing block chain technology as they become increasingly networked. An extensive network of commodities, equipment, accessories, and value-chain partners, including shipping firms and equipment suppliers, will make up the future factory. Creating a tamper-proof ledger for digital assets like cryptocurrency is the primary objective of this technology. Block chain applications protect the integrity of data, allowing composers to receive fair royalties for their unique works and marketers to target relevant consumer segments. The use of this technology for bank payments is growing. Since bank accounts are the primary means of exchanging money, payments are essential. Banks have been in the vanguard of the digital revolution for a long time, printing their own digital currencies and accepting disruptive innovations in return for dependable payments. Banks are able to track each transaction in real time because to block chain technology. Banks will be able to settle transactions on a public block chain thanks to this technology. For banking executives to become a commonly utilized technology in the banking industry, they must meet a number of

standards. Our mobility would be significantly altered by block chain's capacity to share information and briefly make a property available to another person. It would be possible to directly pay for and use an automobile while discovering answers to problems like electrified mobility by leveraging intelligent contracts over the Block Chain. Businesses using Block chain in finance can post invoices to the Block chain by using smart contracts. Dates, quantities, and client information related to payments can all be found in the Block chain. When the client pays the bill and notifies the company, the smart contract modifies the invoice status to paid.

7. REFRENCES

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