Human Resource Management Using Blockchain Technology

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Abstract: One of the more recent developments to develop a distinct identity is blockchain. This technology has the potential to significantly affect HR. It has an extensive number of fields besides HR in which it has already shown to be extremely significant. It is a decentralised and distributed form of a ledger that may store various kinds of information, including data regarding loans, ownership rights, data connected to the transaction of any asset, etc., in addition to business transactions. Because it is decentralized, it can be accessed from a variety of networks yet cannot be altered, making it extremely transparent and even secure. The paper has made an attempt to describe the numerous industries in which blockchain technology is employed and, more importantly, the features and advantages of blockchain technology that make it so crucial for organisations' human resources management departments.

Key word: Bitcoin, blockchain, cryptography, Human Resource Management

INTRODUCTION

Blockchain, which is essentially a decentralised technology, is a type of digital ledger system that can store information of any kind, not only financial transactions. A distributed, accessible to the public, and immutable ledger is one of the core technologies that secures bitcoin, a digital money supported by cryptographic techniques. Since we live in the twenty-first century, we heavily rely on technology, which increases the risk of identity theft and the theft of personal data. However, blockchain is a sort of technology that can be accessible from all kinds of networks, making it transparent while also possessing the distinctive quality of anonymity. Decentralization, distrust, agent removal, chronology, anonymity, group upkeep, opening sourcing, being programmed, distributed, immutable encrypted data, safety, and dependability are some of the technological properties that block chain technology possesses. This open ledger system is much safer and more practical than others.

It will be extremely beneficial for the business organisation in many ways if the blockchain's features are kept foremost and used in HR management. For instance, recruiting can be done more simply, employee work can be accurately assessed, and the number of leaves an employee takes can be easily recorded. By using blockchain, employee data can be stored on a distributed ledger, providing a tamper-proof and transparent record that can be accessed by authorized parties in real-time. This eliminates the need for intermediaries and can significantly reduce the risk of fraud and error. Additionally, blockchain can facilitate automated verification of credentials, streamlining the recruitment process and enhancing the efficiency of onboarding and performance management. Despite its potential benefits, the adoption of blockchain in HR management is still in its early stages. There are challenges related to regulatory compliance, data privacy, and the need for specialized skills and infrastructure. Nevertheless, as the technology matures, it has the potential to revolutionize the way HR processes are managed, providing greater transparency, security, and efficiency

LITERATURE REVIEW

➢   BIG DATA: A Twenty-First Century Arms Race,2017:A distributed, accessible, and immutable ledger is one of the primary technologies used to protect bitcoin, a digital money supported by cryptographic techniques. widely used ledger known as a blockchain. It is a grouping of transactions that have been posted to a ledger. The term "blockchain" refers to each group as a block, and each block is connected to the others. A certain user's blockchains contain a database of all the transactions that user has made, and these transactions can be tracked back to learn all the relevant details. Even the purchase or sale of an item, as well as any transaction involving an asset, can be recorded, and this recording also includes all the qualities of the object, which can be used afterwards to identify the asset's owner in the event of theft.Typically, alternative ledger technologies do not have this feature. To eliminate the double spend problem, which was caused by the fact that anyone might use the same amount of digital currency in a rational location and at the same

time, bitcoin is now employed in blockchain technology. With the use of bitcoin blockchains, many organisations may now easily enrol information on physical assets without the need for a third party, which was previously required.

➢ Block chain: Cryptographic method in fourth industrial revolution,2018: Sometimes there is a significant public demand in the supply chain market because of a lack of competition or a change in the market. And supply chain managers are worried about this. They developed various trust mechanisms and centralised businesses to handle these needs, but because they had numerous drawbacks, they couldn't last for very long. The blockchains then entered the picture. With the use of blockchain technology, decentralised trust-based transactions, as well as coordination and cooperation, can be accomplished. Blockchain can be utilised to solve issues like irrational public demand in addition to serving as an accounting system. According to researchers, supply chain managers need to be aware of how blockchain can be employed in synergy.

➢ Riia O'Donnell,2017: The potential effects of blockchain on HR are endless. The hiring process in businesses is lengthy, and occasionally the business must hire recruiters from outside the organisation.to be set aside for this specific activity. However, using blockchain will make the process more efficient since it will take less time to verify all types of documents. Second, it is possible to confirm a person's academic qualifications and certificates or discover outstanding credentials that other commercial organisations had neglected. Again, blockchain makes it simple to obtain a candidate's past performance or work history because, once recorded, the information cannot be modified, even if the system is breached or the candidate's prior employer goes out of business. And if an employee is a foreign national, blockchain enables quicker and less expensive payroll processing.

➢ Marie Fincher,2019 :Due to the fact that blockchain is largely used to store data, I hope to facilitate the following by doing so: Gig or contract workers must wait for a manual verification, but it can be done more quickly if we utilise blockchain to store their invoice. - Aids in attendance and timekeeping accuracy Many businesses use biometric technologies that simultaneously record the time and track employee attendance. The management can act appropriately based on this information in the future to alter an employee's leave or determine how many days he was late. Paying salaries with cryptocurrencies The primary use of blockchain is to control financial transactions. The work can be done in a more convenient method if the corporation pays the employees' salaries.

➢ Ashik Ahmed,2018: Blockchain has the potential to transform how businesses operate. It has the ability to create traditional resumes for candidates as well as career networking platforms like LinkedIn. Blockchain technology can create a CV or resume for the learner instead of having him write it. The hiring procedure would be greatly streamlined as a result. Second, leveraging blockchain makes it simple to implement the complex taxes processes for contract workers. The tax that must be paid will be determined by reviewing all of the transactions that have been recorded using blockchain technology.

Objectives of Research

➢ to recommend technological adaptation for HR management
➢ to comprehend the advantages of integrating blockchain technology into an organization's HR department

RESEARCH METHODOLOGY

The data presented here was compiled from secondary sources, including journal papers, websites, magazines, and other periodicals. The research design for this study would be exploratory, with the aim of understanding the current state of blockchain technology in HR management and identifying potential areas of application. The research would be both qualitative and quantitative in nature.

Blockchain in HR Management

Blockchain technology is not only used to create financial transactions; it can also be effectively employed in the HR department, which has a tonne of benefits. It stands out from other technologies because to its transparency and security, and as a result, it is employed all over the world. Additionally, if it is used in HR, it makes it possible to complete many jobs in a very practical way.

The various ways where blockchain can impact HR is as follows:

➤ It significantly affects hiring inside an organisation. Typically, organisations must pay outside HR recruiters to help with hiring. This takes a lot of time, and the company must spend other resources. Before hiring a candidate, recruiters must confirm all of the candidate's supporting documentation, including their degree, identification, and certificates.

However, thanks to blockchain technology, it is no longer necessary to manually verify the information because it has already been saved there. Due to the significant time savings, the organisation uses fewer resources as a result. Therefore, it is a very practical and cost-effective technique.

➤ When every detail about a candidate is documented using blockchain, there is no possibility of degree fraud. It is possible to check the qualifications and certificates obtained while earning those degrees, and from there it will be clear if a fraud has taken place. Although decentralized, blockchain is extremely safe and its data cannot be changed.

➤ The technology of blockchain is helpful for tracking employee time and attendance. The blockchain technology is applied in the biometric attendance system. For instance, it details the employee's arrival time at work and the number of days he has been on vacation. The management can use that information as well.

➤ With the aid of blockchain, it is possible to evaluate a candidate's prior work performance prior to hiring them. This aids in determining the degree of commitment the candidate has to their task. These techniques can assist companies in assessing candidates' personalities and making appropriate selections.

➤ Blockchain also aids in the use of bitcoin, which is its most essential function. Employee salaries can be paid at a business utilising bitcoin and blockchain, and this method of payment is incredibly safe. Only a few of the numerous applications for blockchain in HR management are highlighted above.

Comportments by which blockchain reshapes value exchange

There are four ways in which the blockchain changes the characteristics of the value exchange that has

been listed below:

➤ It does away with the reliable middleman who normally stands between a provider and a customer during a transaction, such as an estate agency, a travel agent, a bank, etc. For instance, if a consumer could book an Uber directly by speaking to the driver, Uber would be the third party and would not be involved in the circumstances described above. In a similar manner, blockchain also gets rid of the middleman.

➤ The blockchain technology is extremely secure because it produces an unchangeable proof that a transaction has occurred. Its design prevents information from being changed or altered once it has been recorded, making it a very trustworthy piece of technology.

➤ Smart contracts are a concept related to blockchain. This involves taking the business transaction's verbal description and codifying it. In other words, the data that has to be stored may be transformed into computer codes, then copied, stored, and monitored by the network of computers that power the blockchain.

➤ Because the blockchain technology does not require any bills, receipts, reconciliation, or other transactional components, it does not require a back office.

➤ The amount of money saved when a back office is not needed globally amounts to roughly 4 trillion USD.

Suggestion

➤ Conduct a feasibility study: Before implementing blockchain technology in HR, it's essential to conduct a feasibility study to determine whether it's the right solution for your organization. This involves identifying the specific HR processes that could benefit from blockchain, the potential costs and benefits, and the technical requirements

➤ Train HR staff: Implementing blockchain in HR requires specialized skills and knowledge. Therefore, it's important to provide adequate training to HR staff to ensure they understand how the technology works, how to use the platform, and how to manage and secure employee data on the blockchain

➤ Address regulatory compliance: HR is subject to strict regulations governing data privacy and security. When implementing blockchain, it's essential to ensure that the technology complies with these regulations, such as the General Data Protection Regulation (GDPR)

➤ Collaborate with IT: Blockchain technology requires specialized IT infrastructure, such as nodes and servers, to operate effectively. Therefore, it's important to collaborate closely with IT to ensure that the necessary infrastructure is in place and that the technology is integrated effectively with existing HR systems

CONCLUSION

This report informs us of the significant impact that blockchain technology can have on human resources departments within corporations. Technology's advantages and capacities are something that cannot be overlooked. Blockchain technology is not only useful for recording transactions; the HR department may also use it. The HR processes are greatly streamlined, cost-effective, efficient, and time-effective as a result. Blockchain is most widely recognised globally because it is decentralized, secure, immutable, and transparent. And if this sort of technology is adopted globally in HR, the entire corporate world would undergo a revolution.

One of the main advantages of blockchain in HR management is that it can eliminate the need for intermediaries such as HR departments or third-party vendors, thus reducing costs and improving efficiency. Additionally, blockchain's inherent security features make it more difficult for unauthorized individuals to access or manipulate employee data. Another benefit of blockchain in HR management is its ability to create a verifiable and immutable record of employee credentials, such as education, certification, and work history. This can help prevent fraud and ensure that candidates have the necessary qualifications for a job. However, implementing blockchain in HR management may pose some challenges, including the need for a skilled workforce with knowledge of blockchain technology and the potential difficulty of integrating blockchain with existing HR systems In conclusion, while blockchain technology holds great promise for HR management, its widespread adoption in the field is still in its early stages, and further research and experimentation will be necessary to fully understand its potential benefits and limitations.

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