



AI And Blockchain For Secure And Transparent Hr Data Management

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ABSTRACT

The growing digitalization of the Human Resource Management (HRM) has intensified the reliance of organizations on data-driven systems to manage the information of employees, recruitment processes, performance evaluation, and planning of workforce. Despite the benefits of digital HR platforms on the efficiency and accessibility of the operations, they also put organizations at risk of salient challenges, which are associated with data security, privacy, integrity, and transparency. When stored in centralized repositories, HR data is particularly vulnerable to cyberattacks, unauthorized access, manipulation of data, and insider attacks and/or dispositions that sabotage employee confidence and violate regulatory compliance. Putting sensitive personnel information into repositories causes an increase in risk exposure and the loss of the capability to verify independently the provenance of data. In this scene, the Artificial Intelligence (AI) and Blockchain technology have become the potent tools that can address these shortcomings. Blockchain provides a decentralized, unalterable information foundation that ensures transparency, traceability, and resistance to tampering, and AI enhances HR data management by means of intelligent automation, forecast analytics, and decision-support features. This paper considers the opportunities of AI and blockchain to enhance safe and transparent HR data-management. The synthesis of the existing academic materials



proves that the combination of these technologies improves data control and increases the confidence in HR practices and supports ethical and responsible management of the workforce during the digital age.

1. INTRODUCTION

The growing digitization of organizational operations has shifted Human Resource Management (HRM) to a more administrative role to a strategic one of organizational success. The scope of modern HRM is broad because it entails the acquisition of talent, staffing, performance management, payroll, compliance, training and development, and staff planning. These functions are dependent on proper management of the data of the employees. As digital HR tools continue to emerge, companies have created data-intensive repositories of sensitive personal and professional data, including identification data, employment history and education, performance, payroll, and behavioral analytics. Although these systems have remarkable gains in terms of improving efficiency in operations, they also present radical challenges concerning the provision of data security, integrity, transparency, and trust. Conventional HRM systems also rely on databases that are centralized and cloud-based storage solutions. Although these platforms enable the management and easy access to data, they have a fundamental weakness to cyberattacks, unauthorized access, data manipulation, and insider threats. The centralized architectures pose a single point of failure making organizations vulnerable to both internal and external attacks. Major data breaches in different sectors have raised important concerns about the severe threat of poor data security in HR systems. These cases do not only lead to a loss of funds and image loss but also destroy the sense of trust among employees which is critical in the cohesiveness and output of any organization. The inefficiency to ensure that there is integrity may also create conflict between the employees and the employers especially in sensitive matters like compensation, promotions or performance appraisal.

Other than issues of security, transparency is also a vital concern in HRM. The employees have no idea how the decisions are made about the recruitment, promotions, performance review, or termination. The conventional HR systems can also be based on manualized appraisals or black box algorithms which cannot be explained. Consequently, the employees might feel that the HR is prejudiced or unfair and this will decrease engagement, turnover and the organizational culture. Moreover, meeting the requirements of stricter data protection regulations, including the General Data Protection Regulation (GDPR) in the European region or the likes of other data protection regulations in other parts of the world would necessitate the transparent and auditable nature of employee data. Companies should not just protect



information but they should also be accountable and traceable in the way information is consumed to make decisions.

One of the tools that have been adopted to deal with some of these issues is Artificial Intelligence (AI) which has become a transformative tool. Some of the uses of AI in the HRM field include smart recruitment systems, predictive workforce analytics, performance evaluation algorithms, worker attrition prediction, and employee engagement monitoring. Through the analysis of big data, AI can discover trends, predict, and general insights that can be used to make a decision based on data. Indicatively, AI-based recruiting systems can automatically filter resumes, suggest applicants to the job specifications, and anticipate cultural compatibility, which will greatly reduce human bias and enhance recruitment effectiveness. The performance measures of employees can also be analysed by AI systems to offer individualised development suggestions, detect retention risks, and streamline the allocation of workforce. However, the operation of AI systems is highly reliant on the quality, integrity, and reliability of the data that they rely on. In case the information is incomplete, altered, or biased, the results of the AI can be inaccurate or unjust towards other people, thus creating additional inequities in organisations.

The solution is available in the form of blockchain, which offers decentralised and immutable data management that is secure. Blockchain also spreads the data to various nodes unlike centralised databases and this makes unauthorised modification extremely hard. Every transaction or record is cryptographically appended to the last record creating a verifiable and tamper-proof history. Such a feature will help keep the HR data, such as employment contracts, credentials, payroll records and performance evaluations, secure and traceable. Smart contracts, programmable scripts that are embedded in blockchain systems, can be used to automate HR processes such as the disbursement of payroll, the allocation of benefits, and the performance of compliance checks, reducing the risk of human error and improving operational efficiency. Blockchain does not only provide better security but also facilitates transparency as it allows both employees and management to access the integrity of the data as well as audit records without exposing privacy. Combining AI and blockchain provides a synergistic platform of secure and transparent data management of HR. Blockchain is to secure the credibility and integrity of data, and AI is to use this validated data and generate practical information and smart AI automation. As an example, blockchain will be able to safely store certified employee data, and AI algorithms will analyze them to make better decisions during the recruitment process, career development, and performance assessment. Blockchain smart contracts can be used in payroll systems to make sure that compensation is provided in a timely and correct way, and AI can be used to monitor trends in transactions in case of anomalies, risks of non-compliances, and predictive workforce data. These



technologies combined will help in strengthening organisational governance, mitigate chances of fraud, and increase employee trust through opening up a transparent, responsible, and trustworthy ecosystem of data.

Various authors emphasize that AI-Blockchain combination could be promising and effective in the field of HRM. Valivarthi (2020) and Valivarthi and Purandhar (2021) have come up with a framework of predictive control, machine learning, and blockchain-based distributed storage, which proves to be more effective in terms of data security and organization. Singh et al. (2025) suggested a smart HRM system, whereby employee records are secured using blockchain and analytics is improved with the use of AI. Maheswari et al. (2024) have highlighted the transformational effects of introducing AI and blockchain in the digital HRM processes, with such benefits as more transparency, fewer operational mistakes and better talent measures. All these studies point to the agreement that AI-Blockchain-based HRM can support strategic workforce management by overcoming the long-standing issues connected with the security of data, privacy, and transparency. In spite of these bright improvements, a number of challenges exist. Implementation of AI-Blockchain systems may be very expensive especially to small and medium-sized companies. Technical complexity, such as integration with legacy human resources systems, scalability concerns, and network maintenance can be obstacles to adoption. It is important to pay attention to regulatory uncertainties that are related to blockchain data governance, the enforceability of smart contracts, and ethical principles of AI. Organisations need to juggle between transparency and data privacy so that sensitive information about employees is secured but they allow auditability and accountability. The introduction of AI and blockchain technologies is a paradigm shift in HR data management. The security, immutability, and transparency of blockchain would enhance this with the intelligence, automation, and predictive power of AI to provide organisations with a powerful, reliable, and efficient HR ecosystem. This is a combined strategy that deals with operational and ethical issues, which creates organisational trust, enhances employee interest, and assists in strategic decision-making. The growing body of literature emphasises the potential for transformation that AI - Blockchain enabled HRM systems offer, while making a case for empirical studies, standardised implementation frameworks and governance models to ensure their scalability, compliance and ethical accountability. With organizations still moving through the digital era, both artificial intelligence and blockchain technology will redefine the stable and transparent management of human resource data, providing viable solutions as well as strategic benefits.

2. LITERATURE REVIEW



There has been a lot of interest in scholarly and industrial studies on the adoption of artificial intelligence and blockchain technologies in the human resource management field due to the potential to increase security of data and its transparency, efficiency and confidence in handling employees. The old HR systems, which are mostly centralized and based on the traditional databases, face the threats of breach of data, unauthorized access, mistakes, and lack of transparency in the decision-making process. Such restrictions have led to the emergence of research and practice efforts on novel technologies that can help deal with the growing complexity of HR management in the digital era.

2.1 Blockchain Applications in HRM.

The technology of blockchains is becoming an effective instrument in the resolution of the data security and transparency problem in the HRM. Blockchain provides immutability, traceability, and accountability of the employee data by distributing information through multiple nodes and cryptographically verifying such information. The article by Kim et al. (2020) suggested a privacy-sensitive distributed registry of worldwide HR data and showed that blockchain technologies could be highly beneficial in improving data integrity and ensuring a high level of access restrictions. Kothapalli (2021) reiterated that blockchain will help in mitigating the risk of data exposure in privacy, decreasing the need to use central databases, and subsequently avoiding manipulation of sensitive HR information by unauthorized parties. Recruitment and credential verification have also fallen under the use of blockchain. Padmavathy (2021) mentioned recruitment systems based on blockchain which ensure transparent validation of education and professional qualifications, which reduces resume fraud to the minimum. The recruitment framework proposed by Jayarajan et al. (2024) is based on a blockchain platform that makes the recruitment a responsible and verifiable process, which enables employers and candidates to be confident in the authenticity of the recruitment process. The paper by Paranthaman et al. (2024) also revealed the application of blockchain in ensuring impeccable employee records and labor laws as well as audit trails that are auditable to regulatory and governance.

2.2 HRM and Artificial Intelligence.

Artificial intelligence supplements blockchain and allows smart automation and better analytics in human resources procedures. The AI uses in HRM are automation of recruitment, performance management, workforce planning, predictive analytics, and analysis of worker engagement. As Sareddy (2022) showed, AI recruitment processes can save time-to-hiring and eliminate human bias during recruitment. According to Sareddy and Khan (2024), AI can help to strengthen transparency and security by monitoring the HR activities and detecting anomalies. AI is also used to enhance management in the area



of workforce by evaluating performance information and forecasting how employees will behave. According to Yanamala (2023), AI is capable of recognizing trends in the performance of employees, forecasting the possibility of attrition, and suggesting individual development paths. Bertino et al. (2019) touched upon ethical concerns, stating that transparency and accountability are vital in HR decision-making that is driven by AI. These papers indicate that the high value of AI requires credible and safe data, since manipulated and biased data may undermine the quality of decisions and organizational trust.

2.3 Integration of Artificial Intelligence and Blockchain

The recent studies focus on the synergetic combination of AI and blockchain within the HRM systems. Valivarthi (2020) and Valivarthi and Purandhar (2021) proposed AI- Blockchain frameworks, which integrate predictive control, sparse matrix storage, and machine learning algorithms with decentralized data management. In their research, they reveal that blockchain guarantees integrity with data and AI boosts intelligence in the system, automation, and prediction. To address the problem of high expenses and high employee turnover, Singh et al. (2025) came up with a smart Hr management system that uses blockchain to store employee records safely and AI to make decisions by relying on analytics. Maheswari et al. (2024) emphasized the importance of AI and blockchain in promoting digital HRM processes through greater transparency and efficiency and quality of decision making. Madanchian and Taherdoost (2026) also pointed out that HRM facilitated with the use of blockchain supports verifiable credentials, trust, and talent mobility within organizations. Equally, Vadithe et al. (2025) reported data security, transparency, and regulatory compliance to be important factors that determine the adoption of AI-Blockchain HR systems. Practical advantages are also observed in the sector-specific applications. Eyinade et al. (2025) evaluated the utilization of blockchain in the HRM of the insurance industry and observed enhanced data accuracy, auditing, and trustworthiness by the staff. Faruk and Khan (2022) have described AI-enhanced payroll systems with Blockchain that provide error-free, secure, and automated compensation management. Chhibber et al. (2024) pointed out that AI and blockchain overlap positively, improving operational efficiency, decreasing the risk of fraud, and increasing the accountability of digital HR systems.

2.4 Ethical Implications and Research Lapses.

These benefits notwithstanding, there are still issues with the implementation of AI-Blockchain HRM systems. High upfront costs, technical complexity, integration with legacy systems, scalability problems, and regulatory uncertainty restrict widespread adoption. Moreover, such ethical issues like AI bias and blockchain privacy protection must be controlled (Bertino et al., 2019; Yanamala, 2023). Inadequate



standardized frameworks and empirical research on the long-term effectiveness are also listed in the literature as proof of the need to conduct more research on the governance, implementation, and scalability.

Table 1. Summary of Key Literature on AI and Blockchain in HRM

Author(s)	Year	Focus Area	Key Contribution
Kim et al.	2020	Blockchain HR records	Privacy-preserving distributed ledger
Valivarthi	2020	AI + Blockchain HRM	Predictive control and secure storage
Padmavathy	2021	Recruitment	Transparent hiring using blockchain
Sareddy	2022	AI HR analytics	Bias reduction and efficiency
Maheswari et al.	2024	Digital HRM	AI-Blockchain-driven transformation
Singh et al.	2025	Smart HR systems	Secure and intelligent HR architecture
Madanchian & Taherdoost	2026	Talent mobility	Trust and transparency enhancement

In general, the available literature testifies that the combination of artificial intelligence and blockchain technologies can reduce the main issues of the human resource management domain, yet there are few empirical frameworks that can guide the process, which should encourage further theoretical and practical research.

3. METHODOLOGY

The implementation methodology of secure and transparent HR data management by applying AI and blockchain is a synthesis of the system design principles, technological integration, and working processes to ensure confidentiality, integrity, and accountability of the employee data. In this paper, a conceptual research design has been embraced, which integrates AI-powered analytics with blockchain-premised decentralized storage to overcome the drawbacks of the traditional HRM systems. The suggested approach predicts the secure data collection, unchangeable storage, smart processing, and open audit.

3.1 Research Approach

The research has used both conceptual and applied research approach in which the theoretical findings of existing researches are combined with practical implementation framework. The strategy will be divided into three main steps, which include data collection, data management, and decision support. All stages



will include AI and blockchain capabilities to enhance their security, transparency, and operating capability.

- **Data Collection and Acquisition:**

HRM systems collect a wide range of employee information, which include personal identification information, employment history, educational level, performance information, payroll, and attendance. The channels of The sources of data are the internal HR systems, recruitment systems, performance management systems, and external services of credential verification. Input validation measures and encryption systems are set so that data integrity when entered into the system is guaranteed. AI based preprocessing is one to normalise, cleanse, and structure the data for accurate analytics and machine learning operations.

- **Data Management based on Blockchain:**

After the acquisition, the HR data is stored in an authorised blockchain network. All records such as the employment contracts, credentials and payroll transactions are encrypted and attached to the antecedent records using cryptographic hash functions hence ensuring immutability. Smart contracts also automate access control, enabling users to access or update information only in case they possess the necessary authorisation, i.e. the authorisation of the authorized HR personnel or employees. The design has the advantage of removing single point of failure, eliminating illegal modifications and providing a verifiable audit trail to use in compliance. It is a distributed ledger storage that guarantees redundancy and resilience of the system to cyber-attacks or loss of information.

- **AI-Driven Analytics and Decision Support:**

Artificial intelligence is used over the blockchain verified data in order to perform predictive analytics, anomaly detection and intelligent HR decision making. Machine-learning algorithms evaluate worker performance, anticipate chances of attrition, optimise hiring, and offer individualised recommendations to employees in terms of development. The AI models constantly train based on the blockchain-protected dataset, which is why their output of analysis will be fair and correct in the context of the integrity and impossibility of data modification. Decision-support modules allow the HR managers to visualise the workforce patterns, predict the personnel requirements and implement evidence-based and transparent decisions.

Artificial intelligence and blockchain.

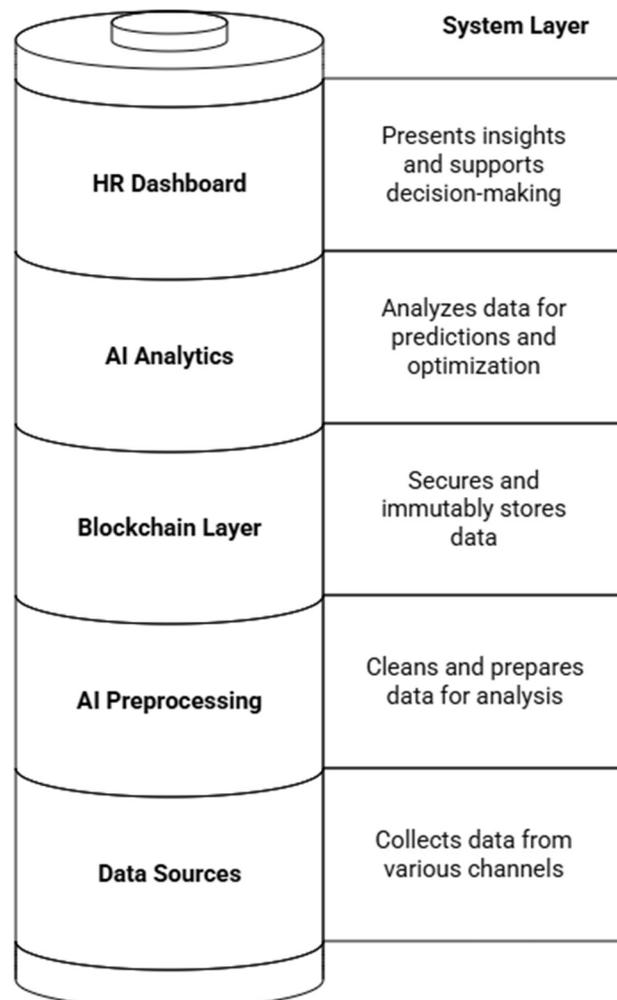


- The combination of AI and blockchain is modelled as a layered architecture:
- Data Layer: uncooked employee data obtained both externally and internally.
- Blockchain Layer: Uneditable and encrypted storage with the smart contract enabled access control.
- AI Analytics Layer: Machine-learning models that provide predictive analytics, detect anomalies, and optimise.

Interface Layer: HR dashboards and reporting tools that visualise insights without compromising security and transparency.

This architecture will ensure that every HR decision is based on reliable data, and it will also enable employees and administrators to have records of all actions and decisions that can be verified.

Figure 1. Conceptual Architecture of AI–Blockchain HRM System





Evaluation Metrics

Some of the measures that could be used to assess the suggested methodology include:

- **Data Integrity:** The data integrity is measured by the ability of records stored in the blockchain to be immutable and verifiable.
- **Security Compliance:** Checks compliance with privacy concerns and protection against unauthorized access.
- **Analytical Accuracy:** Measures the predictive accuracy of AI models, such as attrition prediction, recruitment efficiency and performance evaluation.
- **Transparency and Trust:** Emphasize the confidence of employees with the decision taken by the HRM based on the verifiable and auditable trails of data.
- **Operational Efficiency:** Evaluates the enhancement of HR operations, time to hire, reduction of errors and administrative expenses.

Switch Strengths of the Methodology.

Proposed AI-Blockchain HRM methodology has a number of advantages:

- **Eased Security:** It improves decentralized storage to avoid unauthorized access and interference.
- **Transparency:** Irreversible records have a good audit trail of every HR activity.
- **AI Analytics:** Data-driven decisions are based on trusted data, which helps to obtain reliable information.
- **Compliance and Ethics:** Smart contracts provide access rules, which guarantee privacy and compliance.
- **Scalability:** The layered architecture enables scaling to suit the increased organizational needs.

4. DISCUSSION

The advent of the Artificial Intelligence (AI) and blockchain in Human Resource Management (HRM) is a revolutionary solution to the existing problems in employee data management, such as security, transparency, efficiency, and trust. The debate in the present paper aims at discussing the implications of AI-Blockchain-powered HR systems, reviewing the validity of their application in practice, discussing



the challenges that might arise, and emphasizing the benefits of the strategy to organizations that seek safe and transparent management of workforce.

4.1. Improving Data Security and Data Integrity.

Among the most important impacts of blockchain technology on HRM, the data about employees can be named as more secure and intact. Conventional HRM systems may be centralized and prone to cyberattacks, insider threats and tampering of data. Blockchain will address these risks by utilizing a decentralized and unchangeable registry where each transaction or record is cryptographically connected to the records that came before it (Kim et al., 2020). By recording HR records on a distributed ledger, organizations guarantee the information of employees cannot be manipulated without being detected thus creating a verifiable and audible record of all the activities. It is especially useful in sensitive sectors like payroll management, contract enforcement as well as credential verification where even a small mismatch can carry serious legal and financial implications. Moreover, AI can be used to increase security by offering smart surveillance and failure detection. Potential violations or abuse can be detected by machine-learning algorithms detecting some abnormal trends in the access of employee data (Sareddy and Khan, 2024). Together with blockchain, AI works on valid and unalterable data, and security warnings and predictive forecasting are made on reliable information. This synergy effect minimizes the chances of human error, eliminates fraud, and enhances HR process governance by an organization.

4.2 A Nurturing of Transparency and Trust.

Transparency is a major component in worker involvement and trust of an organization. The HR decisions that employees feel are opaque, e.g. promotions, appraisals, terminations, etc. and hence discontent and demoralization. Transparency can be ensured through blockchain because it offers verifiable records of any HR transaction that can be accessed by both employees and auditors without sacrificing privacy (Madanchian and Taherdoost, 2026). With the introduction of smart contracts, more processes, including the payroll disbursement or benefits allocation, are fully automated, and organizational policies are enforced in a consistent and transparent manner. AI is also associated with transparency because it provides analytical information that justifies how decisions are made. As an illustration, predictive algorithms could supply supportable rationale toward the choice of recruitment, performance evaluations, and training suggestions (Yanamala, 2023). Embedded with AI analytics and blockchains to establish a reliable environment where employees can confirm the equitability of organizational decisions, HRM systems will promote a more active participation, retention, and overall employee satisfaction.



4.3 Operational Effectiveness and Support of Decision Making.

The use of AI and blockchain to integrate also enhances the efficiency of HR operations. AI automates repetitive processes, including screening of applications, analysis of performance data, and workforce planning, thus relieving the HR team of a significant administration load (Sareddy, 2022). In the meantime, blockchain guarantees that the data utilized in such automated operations is safe and sound, reducing the number of mistakes and delays in the case of manual checks. The overall result is the increased agility of HR system that would be able to build up on strategic decision making, real-time analytics, and proactive workforce management. AI-based predictive analytics can assist organizations in predicting their employee turnover, skills gaps, and talent distribution. As an illustration, machine-learning algorithms have the potential to use the history of performance and engagement levels to foresee who will leave, enabling HR professionals to establish retention initiatives in time (Sareddy and Khan, 2024). The application of these predictions to blockchain-secured data will result in HR decisions based on the actual, tamper-proof records, which will increase confidence in the results and minimize the risk on an organizational level.

4.4 Strategic Implications to Organizations.

The strategic value of AI-Blockchain integration in HRM goes beyond the operational value. With secure, transparent, and intelligent HR processes, organizations will be better able to comply with regulatory regulations like GDPR, HIPAA, or ISO certifications. Blockchain makes data access auditable and unchangeable that promotes accountability and decreases the chances of regulatory fines (Vadithe et al., 2025). AI brings in predictive intelligence, which facilitates the making of informed workforce decisions by the organization, which are in line with business goals. Moreover, talent mobility and inter-organizational cooperation become more efficient with the help of AI-Blockchain-powered HR systems. Authenticated documents on blockchain enables the employees to submit credible documents to potential employers, thus making it easier to move across organizations as well as enhancing the overall flexibility of the workforce (Madanchian and Taherdoost, 2026). Strategically, organizations that adopt such systems have been able to lead in technology, develop employee confidence as well as have competitive edge in attracting and retaining the best employees.

4.5 Challenges and Limitations

However, AI-Blockchain HRM systems have a number of issues despite their potential. Small and medium enterprises may be discouraged by the high cost of implementation, the need to interconnect



with existing HR systems, and technical complexity. There are also issues with scalability because, at the moment of dealing with a significant amount of employee data, blockchain networks may be exposed to delayed response times and storage capacities (Chhibber et al., 2024). Ethics when it comes to AI algorithms in terms of bias and inability to explain are also a significant factor. To prevent the re-enforcement of inequities, organizations need to make sure that AI models are trained on representative data sets and implemented in transparent governance structures. In addition, regulatory uncertainty in blockchain, smart contracts and AI ethics can hamper adoption. On the one hand, blockchain guarantees the impossibility of changes in data; on the other hand, the need to comply with the rules of data privacy may presuppose the selectivity of access and anonymization measures. The use of ethical guidelines of AI decision-making should also be incorporated to enhance trust among workers and regulatory bodies.

4.6 Synthesis and Implications of Future Research.

As it has been discussed, the adoption of artificial intelligence and blockchain technology is not just a minor technological improvement of the discipline of human resource management (HRM) but a strategic change. These paradigms converge with each other to handle the operational exigencies as well as ethical considerations hence providing a solid framework of safe, transparent and intelligent workforce governance. Future research ought to focus on the empirical case studies, analyze the long-term organizational implications and develop uniform implementation models. Additionally, research should examine employee attitudes, adoption practices at the organization, and industry-related issues with the aim of improving the viability of such innovations.

5. CONCLUSION

The integration of artificial intelligence (AI) and blockchain technology in the HRM context represents a radical breakthrough in the safe and clear management of the data about employees. The current research highlights how traditional HRM systems are based on central databases and which are more prone to security breaches and data manipulation to organizational decision-making. Conversely, blockchain provides a decentralized, unalterable registry that ensures the integrity and audible qualities of the data and AI offers advanced analytics and predictive modelling and automated decision-making functions. The twin implementation of the technologies can fulfill the concurrent needs of reliability and operational effectiveness that is critical in the modern HR practice. In addition to mere data storage, blockchain can guarantee the encrypted, secure, and impeccable storage of employee records, payroll records, performance reviews, and credentials. Smart contracts also enhance transparency by automating the standardized processes like paying salaries, benefits, and checks. The ability to check transactions is



beneficial to both the employees and the management, as it minimizes conflict and enhances confidence in organizational processes. Additionally, distributed ledger systems should reduce the risks of using centralized systems, such as single-point failures, insider attacks, and unauthorized access. Artificial intelligence complements blockchain and makes blockchain data-driven and automateable. The AI algorithms analyze blockchain-verified data to predict employee turnover, skills mismatch, optimal staffing to allocate and improve hiring effectiveness. Relying on machine learning and predictive analytics can help HR managers to make evidence-based decisions in line with organizational goals. Also, AI supports ethical based and transparent HR practices through the identification of anomalies, the reduction of bias, and provision of explainable insight, supporting the idea that decisions are fair and verifiable. The combination of AI and blockchain generates strategic implications: companies implementing the technologies are technologically ahead, gain the confidence of their staff, and obtain a competitive edge in staffing and retaining employees. The level of regulatory compliance is improved, both blockchain provides an immutable audit trail and AI provides accurate and timely reporting. Verifiable credentials allow talent mobility by providing employees with credible documents they can submit to potential employers to create fluidity in the workforce. By working together, these capabilities lead to organizational resilience, flexibility and operational excellence. However, there are still difficulties. The adoption may be hindered by implementation costs, complexity, scalability issues and integration with legacy HR systems. The issue of ethics, especially regarding the AI algorithms, requires proactive mitigation which would prevent bias and guarantee transparency. Uncertainty in the regulatory sphere of blockchain regulation and enforceability of smart contracts also requires careful examination. Companies should have strong governance systems, strict training, and ethical and legal protection to maximize the benefits of AI-blockchain HRM systems. Altogether, the intersection of AI and blockchain is the future of HRM, which provides a safe, open, and smart structure of managing employee data. These technologies correct key shortcomings of the old HRM systems and allow making decisions effectively, responsibly, and ethically. The next steps that should be followed by future research entail the empirical validation, sector-specific adoption approaches, and standardized implementation models to streamline the application of AI-blockchain HR solutions. With the rise of organizations that are more digital and rely on data, AI and blockchain will further transform secure and transparent HR data management, creating trust in the organization, enhancing organizational performance, and promoting strategic management of workforce.

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