



Emerging Challenges In AI- Enhanced HR Management And Its Impact On Employee Rights: A Critical Appraisal

Shailesh Kumar Pandey^{1*}  and Ansh Parashar² 

1. Hidayatullah National Law University, Nava Raipur, Chhattisgarh, India

2. Hidayatullah National Law University, Nava Raipur, Chhattisgarh, India

shailesh.pandey@hnlu.ac.in

ansh.232892@hnlu.ac.in

***Corresponding author:** Shailesh Kumar Pandey (shailesh.pandey@hnlu.ac.in)

Abstract. With the paradigm shift in notions of human resource management from humans managed by humans to algorithm-based governance of employees, the introduction of Artificial Intelligence (AI) in Human Resources Management (hereby referred to as HRM) has led to increased automation in leading corporations and has eventually caused major disruption in the service sector. This shift has prompted growing academic and policy interest in understanding its broader implications. At present, the utilization of large language processing and machine learning models is enhancing ease of use, perceived impartiality, and cost-effectiveness in HRM. These technologies are transforming traditional HR functions, but they also raise significant concerns regarding transparency, accountability, and fairness in decision-making processes, especially in areas such as recruitment, performance evaluation, and employee surveillance. The aim of this study is to doctrinally examine the impact of AI-HRM on the interests of employees, particularly in the context of ethical and legal implications. The present descriptive study will utilize doctrinal sources based on both primary and secondary sources – such as legislation, books, scholarly works, and reports, in order to analyze how AI-HRM systems affect employee rights. The study will also consider comparative perspectives from EU, India, USA etc. to provide a broader understanding of regulatory responses. The study seeks to identify and address key challenges, prospects, and shortcomings. Ultimately, it aims to formulate an effective strategy to ensure that technological advancements in HRM uphold and protect fundamental employee rights, while critically reflecting on the limitations of doctrinal analysis in addressing practical implementation challenges.

Keywords: AI-HRM, Employee Rights, Algorithmic Decision-Making, Ethical and Legal Implications, Comparative Regulatory Frameworks.

1 Introduction

1.1 Connecting the Dots – AI & HRM

The introduction of Artificial Intelligence (AI) has sparked a progression of automation in the Human Resource (HR) related task in many leading corporations. The dimensions in which AI has influenced can be said to be kaleidoscopic in nature – inclining the sector is several spectrums. Products are advertised by AI-recruiting tools, claiming that they reduce bias as well as increase fairness in the recruitment processes [1]. This revolutionized form of Human Resource Management (HRM) boasts of improvement in recruitment, training, growth, and retention of the employees [2]. Solving the issue of job-burnout which is caused due to overworking of the HRM professionals, Generative-AI models assist them at strategic and operational tasks. Moreover, it also assists the employees as an AI-HRM model has a set-range of expectations to fulfil, which makes it comparatively easier for the employees to function and fulfil the expectations. The impact of AI is significantly visible in core competencies, business procedures and customer outputs, which is occurring not merely in the developed nations but also developing countries [3]. This is bringing a paradigm shift in the process of working among the employees too, as they now have a trustable assisting mechanism that possesses an expert command on the allotted tasks.

AI tends to improve efficacy and fairness of the HR processes, especially in the facets of recruitment, selection, workforce planning, and talent management. The early stages of selection can be automated, with application of sophisticated algorithmic analysis, providing unbiased decisions. AI Chatbots further enhance the HR operations as they provide prompt responses and finish tasks, which allows the human experts to focus on more complex queries [4]. AI plays a key role in increasing efficiency, reducing work time, labor costs, and the need for human workers to perform repetitive tasks. This eases off the workload from the shoulders of the employees. In recent trends, the mental health of white-collar workers has been stressed upon [5], and a subordinate like AI-HRM models can be a viable solution. AI systems are able to screen candidates based on their resume keywords, digital profiles, as well as facial and vocal analysis, predicting their successful performance based on historical metadata [6].

1.2 Polishing the HRM: How does AI operate?

AI operates in a prism-like manner in the field of HRM where it opens several gates for the proficient management of HR. Its dimension ranges from automated initial screenings, personalized applicant communication, conduction of preliminary interviews to providing resources for onboarding, answering policy questions, virtual touring, automating the paperwork and balancing such automation with human touch [7]. However, the question of addressing ethical concerns and biases and their overall impact on employment keep arising. It is necessary for AI to be sensitized among the firms for its efficient operation. There must be an utmost consideration from an employee perspective to ensure a smooth transition into AI-HRM systems.

In developing economies, due to international pressure companies have rolled a slow yet steady shift towards E-HRM practices, eventually with the addition of AI. Such systems have helped in managing HR functions in a more efficient manner while also meeting international labor standards [2]. AI has infact been recognized as an effective HRM tool in the Global South, precisely in the emerging economies. This is due to the fact that developing economies are trying to fill the gaps in their lagging progress with judicious usage of technology, more precisely, AI. The findings and propositions in the same context indicate that AI tools have reduced recruitment costs, time-to-hire, playing a key-role detection of fraudulent activities and improving the utilization of resources [3]. It helps the developing economies in catching-up with the developed economies in lesser time.

In Harambee, South Africa, AI tools have helped in enlarging the recruitment pools in regions with surplus of unskilled labor and human capital shortage [8]. AI-HRM have also reduced the influence of nepotism, favoritism as well as subjective preferences in recruitment and selection, such as in the case of Jim Chatbot of DBS [9]. Such improvements add to motivation of the employees to perform better at their jobs. Another example can be that of Digital Innovation Assistant for Knowledge Engineering (DIANE) by Supahands which tallies agents and projects on the basis of timing and relevance, which enhances the overall productivity [10].

The integration of artificial intelligence in HRM is transforming how organizations manage talent and make decisions. One of the most widely used algorithms, the Decision Tree (DT), excels in classification and prediction tasks related to employee attrition, job candidate selection, and performance evaluation due to its interpretability and ability to handle both numerical and categorical data. Similarly, Random Forest (RF) [11] and Support Vector Machine (SVM) [12], each with a 17% usage rate, enhance HR analytics by predicting employee turnover and assessing performance while reducing overfitting and efficiently managing large datasets. Logistic Regression (LR), used for predictive modeling with a 15% adoption, offers straightforward implementation and interpretable results, making it a favorite for attrition prediction and candidate selection [13]. K-Nearest Neighbor (KNN) is popular for classification, particularly effective for smaller datasets, but constitutes only 11% of usage [14]. For more intricate analytics, Multi-Layer Perceptron (MLP) [15] and C4.5 algorithms [16], each holding 4% usage, are employed to analyze complex relationships in employee performance and satisfaction. Meanwhile, Gaussian Naïve Bayes (GNB), although representing only 2%, remains a quick and efficient choice for turnover predictions [17]. The diverse AI algorithms available empower HR professionals with deeper insights, ultimately enhancing decision-making processes, streamlining talent management, and fostering a data-driven approach in cultivating a robust workforce. From the employee perspective, this means that their unique skills and contributions are recognized and valued through data-driven assessments, leading to more personalized development opportunities and career growth. Employees can expect more transparent feedback mechanisms, fairer performance evaluations, and tailored training programs that align with their individual aspirations and strengths. This not only builds trust in the HR processes but also contributes to a more engaged and motivated workforce, where team members feel supported and empowered to thrive in their roles.

AI, particularly in the form of HR chatbots, presents numerous advantages for HRM on a global scale. In Germany, these chatbots contribute to transparency by providing timely updates and feedback to applicants during the recruitment process, which enhances candidate experience and engagement [1]. Furthermore, researchers from Hungary, Iran, and the Russian Federation emphasize the capability of HR chatbots to assist throughout the entire employee lifecycle, from recruitment to onboarding, thereby fostering a more engaged workforce [18]. These chatbots analyze and predict employee behaviors, which are critical for retention strategies. In Morocco, scholars highlight the empowerment of HR teams through task offloading, as routine tasks can be delegated to chatbots, allowing human resources professionals to concentrate on more strategic initiatives [19]. This delegation enhances overall productivity within the organization. In Egypt, the utilization of chatbots leads to improved productivity by automating notifications of guidelines, deadlines, and updates, freeing up HR staff to focus on complex issues [20]. Finally, despite varying rates of adoption, the push towards integrating chatbots in HRM reveals a trend towards enhanced operational efficiency and improved communication within organizations. By embracing AI technologies, companies can streamline their processes, engage employees more effectively, and ultimately drive better organizational outcomes. The global perspective on HR chatbots showcases a transformative potential that aligns with modern workforce needs and organizational goals.

1.3 The Darkside of AI-HRM: Blackbox Issue and its Implications

Several AI tools which are based on machine learning mechanism do not provide the reasoning behind the algorithm that has proposed the solution, which is referred to as the blackbox issue [21].

This issue impacts the reasoning model of AI as it points towards the fact that there is practically no structured reasoning, raising clouds of distrust towards AI models. This would especially impact negatively the trust that the employees have placed on the AI-HRM models. For instance, in the reviewing system of employees, if the employees are not aware about what will they be reviewed upon, it would place a major difficulty to decipher the criterion of the AI-HRM model on which it performs the tasks. This is further bound to place enormous difficulties upon the employee in the aspect of mental health as well as their resume.

The blackbox issue, thus, poses significant risks regarding employee rights, particularly in terms of fairness, transparency, and accountability. Without clear insights into how AI algorithms make decisions, employees may find themselves subjected to biased evaluations or unjust consequences based on factors they do not fully understand. Another example, if an AI-HRM system penalizes employees for certain behaviors or performance metrics without providing context, it can foster an environment of insecurity and anxiety. Employees may feel they are under constant scrutiny without knowing the parameters being used to evaluate their performance, which is draconian in nature and can erode morale and motivation.

Additionally, the lack of transparency in AI systems can result in discriminatory practices that violate employee rights. If the algorithm inadvertently favors certain demographics over others, it can perpetuate inequalities, leading to potential legal ramifications for the organization. Employees might also struggle to contest decisions made by these systems, as the opaque nature of AI means they might not have the information necessary to argue against a negative evaluation or a lack of promotion opportunities.

Ultimately, this lack of clarity can undermine the principles of due process and equity in the workplace. Employees might feel compelled to conform to vague expectations, stifling their creativity and individuality.

2 Review of Literature

Multiple studies highlight that AI tools streamline recruitment, reduce human bias, and improve fairness in hiring decisions [1] – [4], [6]. These tools—ranging from resume screening algorithms to predictive analytics—are increasingly used to enhance recruitment and employee lifecycle management [6], [9] – [12], [14]. In emerging economies, AI adoption in HRM is accelerating to bridge gaps in efficiency and align with global standards [2], [3], [8], [19]. Chatbots, in particular, have proven effective in automating routine HR tasks, improving employee engagement, and supporting onboarding processes [7], [18] – [20]. However, several studies caution that AI-driven surveillance and performance monitoring may adversely affect employee mental health and job satisfaction [5], [3], [7]. Scholars raise concerns about transparency, data privacy, algorithmic bias, and the “black box” nature of AI decision-making [1], [4], [21]. Various machine learning models are applied in HRM for classification, prediction, and performance evaluation, including Decision Tree, Random Forest, SVM, Logistic Regression, KNN, MLP, C4.5, and Naïve Bayes [11] – [17]. The GDPR and EU AI Act 2024 provide legal safeguards for employee data and mandate transparency and accountability in AI systems [22] – [28], [29] – [41]. These regulations ensure that AI-driven HRM platforms comply with data protection standards and ethical guidelines, promoting fair and responsible use of AI in HRM.

3 Research Methodology

This study employs a qualitative doctrinal methodology, combining legal analysis of frameworks like the GDPR and EU AI Act 2024 with comparative and thematic reviews of academic literature, policy documents, and case studies across jurisdictions. It critically examines the ethical, legal, and operational implications of AI-HRM, focusing on employee rights, algorithmic transparency, and regulatory adequacy, while offering normative recommendations. The research is based solely on secondary sources and does not include empirical data collection.

4 Findings and Analysis

The utilization of artificial intelligence technology in HRM has numerous benefits for both employer and employee. However, in recent times AI-HRM models have raised alarming concerns, such as the violation of basic employee rights, excessive surveillance, increased frustration and work pressure, and even algorithm bias. Existing gaps in legislative regulations of AI-HRM platforms for safeguarding the interest of employees are instead making them helpless victims by violating their rights conferred under the Constitution, and Labor Law of various National Jurisdictions. For formulating an effective strategy for regulating AI-HRM platforms and safeguarding employee rights the fundamental notions of equality, fairness, natural justice and privacy need to be taken into consideration to restructure and reformulate the ambit and limitations of AI-HRM platforms.

The fundamental shortcomings of present AI-HRM models are that they lack human-like emotional intelligence and fails to understand the mental or emotional state of employees, ultimately upsetting their performance and also fail to extend empathetic responses addressing the legitimate and genuine concerns of employees [7]. There is a dire need to develop customized and personalized demand-based AI-HRM platforms as per the structure and specific needs of institutions and organizations as they will address HRM issues and significantly contribute to building trust and confidence in AI-HRM platforms among employees. Automation of HRM through AI platforms has raised a major issue among employees, as their confidential queries and personal problems are being recorded in AI-based chatbots, which can eventually be accessed by other employees or managers [14]. Therefore, employees are unable to freely communicate with these AI-based platforms due to fear of retaliation and privacy concerns.

The chatbots are at a very early stage of development, and their utilization for handling employee concerns and issues is still under scrutiny. AI is not infallible, and the generation of inaccurate or inadequate responses for addressing legitimate employee queries will demoralize employees.

The need for AI-HRM platforms is potentially higher in business process outsourcing organizations such as call centers in developing countries as the sector is particularly facing job pressure and severe disturbance in work-life balance and long working hours and unruly behavior of manager for completion of the targets is making their situation and working deplorable [3]. Yet, various academicians have raised concerns regarding the harmful impact of AI-HRM platforms on mental health of employees due to the reduction of freedom and creative autonomy, higher level of job insecurity, excessive surveillance by managers, and regressive work environment. The individuals working at subordinate positions will be particularly against this issue.

As the global AI regulatory regime for the use of automated platforms for HRM changes, the European Union and countries like the USA have made sincere efforts to deal with some of the challenges that AI is posing. Positive trends of these legislative interventions have been observed in AI-HRM regime due to extended legislative protection of workers right and greater accountability for employers who are utilizing AI-HRM [4].

4.1 GDPR & AI-HRM

The GDPR is one of the key pieces of legislation for regulating AI-HRM; it regulates AI-based decision-making automations and prescribes certain guidelines for effective and transparent processing of the data [22]. As per the principle of data minimization which is described by GDPR AI systems shall utilize and collect minimal data that is required for basic functioning and analytical decisions a proper demarcation of purpose for which data can be collected and processed needs to be done to ensure that excessive data is not collected [23]. As per GDPR, the employer has to ensure that for every dataset that has been collected from employees for performance assessment constant shall be taken and an option of revocation of the consent shall be available with employees in certain special circumstances [24]. ‘Right to erasure’ – which stands for an employee’s right over the data collected by him to be erased at their legitimate request under permissible circumstances, this right gains significance in AI-HRM platforms because the rotation and shifting of employees from one organization to another makes it essential that the data that has been collected by AI-HRM platforms shall be erased upon resignation or removal of the employee so that his data cannot be misused or misappropriated by the employer or the organization at the later stage [25]. In AI-HRM, ‘right to erasure’ becomes an integral part of the set of employees’ rights as an erasure of the data will ease the burden of employees and will overrule the risk of data misappropriation by the host server.

The transparency in AI-HRM systems can be enhanced by developing a window where employees will be able to monitor the data that has been collected from them and will also be able to see the processing result along with data implications. However, organizations can have the flexibility to hide material evaluative information or confidential information from the employee and to display other ordinary information in the portal [26]. Another important right for employees is the ‘right to access’, the right to access the data collected and in certain circumstances where wrong data or inaccurate data has been collected by the system the employees shall have the right to apply for rectification of the collected data set to ensure that AI does not make a mistake while processing or giving outputs based upon those data [27].

As per the mandate of GDPR, certain specific data protection compliance officers shall be appointed by all those organizations that are employing AI in HRM to ensure that the protection safeguards and rights of employees are being safeguarded by procedural and substantive compliance with data protection rules [28]. These officials have been entrusted with the responsibility to supervise the flow of data, along with its storage and processing, and, in the meantime, they need to ensure that basic rights of employees, such as the right of informed consent, and the right to erasure, etc., are available.

The study conducted by the EU Parliament has raised serious concerns regarding the usage of AI and its impact on fundamental rights [29]. Unaccountable and irresponsible utilization of AI has the potential to compromise notions of equality, data protection, and privacy, which will eventually affect the human dignity of individuals, such as employees. To overcome these challenges the EU AI Act, 2024 was enacted to regulate

high-risk AI systems that includes AI-HRM platforms that could negatively impact fundamental and other legal rights of employees. The fundamental object behind the enactment of the AI Act is to develop and support AI-based automation and to promote innovation through Tech start-ups in Europe.

4.2 The AI Act, 2024: Role in Regulating AI-HRM Platforms

Although GDPR is a comprehensive legislation for protecting and safeguarding the interest of employees the EU Parliament enacted the AI Act 2024 which was enforced on 1st August 2024, and it is the first-ever AI regulation at the global level dedicated to ensure ethical compliance and data protection in AI-HRM based platforms [30]. The Act specifically includes AI-based HRM platforms, which shall be bound to comply with the regulatory framework contained in the EU AI Act, 2024 for utilizing AI in recruitment or other HRM-related processes. The EU has set up a working group for the implementation and enforcement of the AI Act, 2024 in various national jurisdiction. It is mandated under the Act that within 24 months of the enforcement of the EU AI Act, 2024, various jurisdictions shall give effect to the provisions of the Act.

The EU AI Act, 2024 deals significantly with ‘high-risk AI systems’ [31]. As per Article 6, the items falling under the Annexure 3 of the Act shall be considered high-risk AI systems, and thereafter they are liable for complying with regulatory oversight provided in the Act [32]. As per Annexure 3 read with Article 6 of the EU AI Act, 2024, the matters relating to employment, worker management and performance assessment of employee fall strictly under high-risk AI systems [33]. AI-HRM-related activities are now covered under the regulatory purview of Articles 8 to 17 of the EU AI Act 2024. The high-risk AI systems are mandated to ensure compliance with the above-mentioned articles within 24 months of the enforcement of the AI Act, in prospective national jurisdictions [34]. Under Article 8, the providers of AI systems are now bound to develop a risk management system for minimizing any error in AI-generated results or decisions [35]. Under Article 9, it is the responsibility of AI developers to ensure that data quality and integrity shall be maintained to comply with the Act’s requirements in AI-HRM platforms [36]. Under Article 11, the developers of AI-enabled platforms are found to record system logs to ensure that regulatory compliance has been done. Above-mentioned articles are intended to strengthen regulatory oversight and periodic assessment of AI-HRM platforms [37]. Present AI-HRM platforms are prone to errors as it can make erroneous conclusions or incorrect assessments leading to gross violation of employee’s rights, thereafter, effective human oversight shall be ensured by a competent authority [38]. Any decision or assessment given by AI-HRM platform must be confirmed or rejected by a qualified officer, who is also in charge of making sure that there is enough human oversight to prevent any mistakes in judgment or violations of employees’ rights. The developers of AI-HRM platforms shall ensure accuracy of results and data protection for better reliability of AI systems in their decision-making [39]. One of the most important rules is in Article 15, which says that AI-HRM platforms must be tested enough to make sure they are accurate and reliable, and they must be able to handle HRM issues well. The EU AI Act 2024, the Chapter III mandates strict adherence to regulatory compliance [40]. The Act has put a lot of emphasis on

issues like data monitoring and data management system, to make sure that AI-solution providers, users, or developers can be held responsible for any mistakes and that technical errors that are encountered by AI-HRM platforms.

The EU AI Act, 2024 is supplementing GDPR requirements, and in cases of conflicts, the GDPR will prevail over provisions of the Act. Thereafter, a system of dual compliance has been introduced for AI-HRM platforms in Europe to ensure that the rights of employees are protected [41].

4.3 Algorithmic Bias in Hiring: A Case Study of Amazon's AI Recruitment

Amazon began developing on an artificial intelligence-driven hiring tool in 2014 which was going to make process easier to search through job applications. The system was supposed to give candidates a rating of one to five stars, which would help recruiters quickly find the best candidates for technical jobs. Amazon found out in 2015 that the tool was unfair to women who applied. The information The information used for training caused the problem: the machine learning algorithms had previously been trained on 10 years' worth of resumes, most of which came from male candidates, which is typical of the tech industry. AI system began to Penalize resumes that included the word "women's", such as "women's chess club captain" and Favor language and experiences more commonly found in male applicants' resumes [42].

Ultimately, the Amazon discovered that the model could still show hidden and unpredictable biases. The company discontinued the project in 2018 because it didn't believe it would be impartial. The company stopped using the flawed mechanism, but it used critical observation to make its AI work better and make hiring fairer [43].

4.4 Essential Findings

The adoption of automation and artificial intelligence (AI) in human resources (HR) is accelerating, with nearly 25% of organizations currently leveraging these technologies, particularly in recruitment and hiring, a trend especially pronounced among large organizations with over 5,000 employees who demonstrate higher adoption rates compared to their smaller counterparts. AI tools are delivering significant operational benefits, with 69% of HR professionals using AI reporting improved time-to-fill for open positions, 85% of employers noting increased efficiency or time savings from automation or AI, 64% of HR professionals indicating their tools automatically filter out unqualified applicants, and 68% reporting a reduction in the number of applications requiring manual review, thereby demonstrating that AI is streamlining recruitment processes, reducing administrative burdens, and enabling HR teams to focus on higher-value activities. However, the integration of AI presents substantial challenges, as only 30% of organizations believe AI helps reduce bias in hiring while 46% seek more guidance on identifying bias in these tools, 19% of organizations have experienced AI tools unintentionally excluding qualified candidates, and although 92% of organizations source their AI tools from external vendors, just 40% find these vendors transparent

about how they mitigate bias, highlighting ongoing concerns about fairness and transparency [44]. Looking ahead, the role of AI in HR is expected to expand significantly, with 25% of organizations planning to expand AI use in hiring within five years and 20% planning to extend AI use to performance management, underscoring the increasing reliance on AI for critical HR functions while amplifying the need for robust oversight, transparency, and guidance to ensure ethical and effective use [45].

5 Conclusion

In conclusion, the integration of artificial intelligence (AI) in human resource management (HRM) presents both significant opportunities and challenges. The introduction of artificial intelligence-based platforms for strengthening automation in human resource management has changed the dynamics of HRM in the 21st century. AI-driven HRM platforms are addressing issues like discrimination, nepotism, and bias by automating complex HRM tasks like performance assessment, feedback collection, employee mental health management, and the recruitment process. AI technologies can enhance efficiency, reduce biases, and optimize resource utilization in the HRM process. AI-driven HRM is equally beneficial for both employees and employers; however, various ethical and legal concerns shall be effectively addressed to ensure that erroneous decision-making and inadequate technical efficiency of AI-based HRM platforms do not negatively affect vulnerable employees of the organization. For adopting AI technologies in HRM processes, human oversight shall be ensured as suggested by the AI formulated by the European Union Parliament to ensure that the judgement shall not only be dependent upon technical data but must confirm moral and value-based reasoning to ensure that employees rights are not affected by AI-enabled HRM platforms. The rights of the employees can be safeguarded by adopting suitable implementation mechanisms as suggested by GDPR and the EU AI Act of 2024. Various national jurisdictions including developing countries like India need to adopt these regulatory frameworks to effectively address ethical and legal concerns as well as to implement legal frameworks as suggested by global leaders of AI regulation, such as the EU and, to ensure transparency, accountability and legal liability for AI-based HRM platform users and developers.

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