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A CRITICAL LITERATURE REVIEW ON ARTIFICIAL INTELLIGENCE CAPABILITIES AND HUMAN RESOURCE MANAGEMENT FUNCTIONS, CHALLENGES AND ETHICAL CONCERNS

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Abstract

Artificial Intelligence (AI) is increasingly transforming Human Resource Management (HRM) by automating routine tasks, enhancing decision-making, and enabling data-driven workforce strategies. This critical literature review synthesizes global, African, and Kenyan empirical studies on AI capabilities across core HRM functions, including recruitment and selection, workforce planning, performance management, training and development, job design, compensation, and job analysis. The review finds that AI delivers significant operational benefits

such as improved efficiency, consistency, predictive accuracy, personalization, and analytical insight, particularly when supported by high-quality data and managerial commitment. However, the adoption of AI in HRM also presents substantial challenges and ethical concerns, notably algorithmic bias, data privacy and surveillance risks, lack of transparency, digital-capacity gaps, and over-reliance on automated decision-making. Evidence indicates that the most effective and ethically sound approach to AI adoption is a human AI hybrid model, where AI augments HR processes while humans retain responsibility for contextual judgment and ethical oversight. The study highlights the need for robust governance frameworks, fairness audits, transparency, and capacity building to ensure responsible AI integration, particularly in developing-country contexts such as Kenya.

Keywords: Artificial Intelligence Capabilities, Human Resource Management Functions, Challenges and Ethical Concerns

INTRODUCTION

Artificial Intelligence (AI) has gained increasing prominence in Human Resource Management (HRM), transforming various HR functions, especially in public sector organizations. In Kenya, the adoption of AI in the public sector remains in its early stages, but its potential to enhance HRM functions is becoming more recognized. AI tools promise to improve efficiency, reduce biases, and streamline processes, which can be particularly beneficial in resource-constrained public sector environments. The use of artificial intelligence (AI) in government-led businesses has advanced, especially in developing nations like Kenya. AI is being adopted by governments to boost productivity, optimize resource use, and enhance service quality. Frequently, these organizations encounter obstacles including scarce resources, red tape, and the need to provide value to the public. By using AI skills, these businesses may be able to make better decisions, increase operational performance, and streamline procedures, which will increase their competitiveness and ability to adjust to changing market conditions. This analysis summarizes important research to provide a thorough grasp of AI's function and impact on Kenyan government-led businesses' performance.

The integration of Artificial Intelligence (AI) into Human Resource Management (HRM) is redefining how organizations manage talent, recruitment, performance, and employee engagement. AI’s capabilities ranging from machine learning and predictive analytics to natural language processing offer significant potential in automating routine HR tasks and enabling strategic decision-making (Jatobá et al., 2019; Margherita, 2021). As digital transformation accelerates, AI is no longer a futuristic tool but an essential component in optimizing HR

functions. However, despite the promise, its application also raises critical challenges and ethical concerns that demand scholarly attention and practical solutions.

Artificial Intelligence (AI) has emerged as a transformative force across organizational functions, promising to automate routine tasks, enhance decision-making, and deliver predictive insights (Stone et al., 2015). In the domain of Human Resource Management (HRM), AI applications range from applicant screening and talent analytics to performance management and employee engagement platforms (Marler & Boudreau, 2017). As organizations strive to remain competitive in the digital era, understanding how AI capabilities intersect with HRM functions and the attendant challenges and ethical concerns is critical for both scholars and practitioners. In regions such as Europe and Asia, regulatory environments and cultural factors shape AI adoption in HRM. The European Union's General Data Protection Regulation (GDPR) imposes strict rules on employee data usage, prompting firms to build GDPR-compliant AI systems and emphasize transparency (Aguirre et al., 2019). In contrast, organizations in China and India have rapidly embraced AI-powered HR analytics to manage large workforces, albeit with less stringent privacy constraints (Li & Qiu, 2020). Research in Latin America points to resource limitations and skill shortages as barriers, leading firms to prioritize "lightweight" AI tools for talent management (García-Álvarez, 2022). Globally, research underscores AI's potential to streamline HR processes, reduce administrative burden, and provide data-driven insights for strategic workforce planning (Davenport, Guha, Grewal, & Bressgott, 2020). For instance, recruitment chatbots have been shown to improve candidate experience and reduce time-to-hire by up to 30% (Bissola & Imperatori, 2021). Learning and development platforms leveraging AI-driven adaptive learning algorithms personalize training paths, enhancing skill acquisition efficiency (Huang & Rust, 2021). However, studies also caution that AI implementations often suffer from inadequate data quality, lack of user trust, and underdeveloped organizational change management strategies, which can limit impact (Reddy & Vivek, 2019).

Organizations are leveraging AI to enhance HRM functions such as recruitment, employee retention, training, and workforce planning. AI algorithms can screen resumes, predict candidate success, and personalize learning and development paths (Sivathanu & Pillai, 2018). For example, Unilever uses AI in its recruitment process to analyze candidate video interviews using facial recognition and voice analytics (Kashyap, 2020). Furthermore, chatbots like IBM's Watson are employed for employee engagement and onboarding support, improving response time and satisfaction (Upadhyay & Khandelwal, 2018). Research shows that AI improves decision accuracy, reduces bias (when designed correctly), and supports real-time data-driven HRM practices (Minbaeva, 2021). However, it also introduces dependency on technology, risks

of algorithmic bias, and data privacy concerns, especially when used in sensitive decision-making areas like promotions and terminations (Meijerink et al., 2021).

In Africa, AI adoption in HRM is still nascent but growing. Countries like South Africa, Nigeria, and Egypt are exploring AI-powered tools for recruitment, especially in the tech and banking sectors (World Economic Forum, 2020). Organizations are increasingly using AI to bridge talent gaps, forecast workforce needs, and create learning platforms adapted to regional languages and needs (Mahlangu & Gous, 2021). However, infrastructural limitations, lack of skilled personnel, and limited access to quality data impede full-scale deployment (Nyoni & Bonga, 2020). Moreover, many African HRM systems are yet to embed AI in a strategic manner, focusing instead on automation of basic HR tasks rather than transformative applications.

In Kenya, AI applications in HRM are gradually emerging, especially among multinationals, tech startups, and government agencies embracing digital transformation. Recruitment platforms such as Brighter Monday and Fuzu use AI-powered tools to match job seekers with potential employers more effectively (Ndung'u, 2020). In higher education and government-linked institutions, AI is being considered for digitizing employee performance appraisals and automating payroll systems. Despite progress, challenges persist due to limited digital infrastructure in rural areas, low investment in AI research, and inadequate awareness among HR professionals. A study by the Communications Authority of Kenya (2021) notes that ethical frameworks and data governance structures are underdeveloped, making organizations vulnerable to the misuse of AI technologies in employment contexts.

EMPIRICAL LITERATURE REVIEW OF AI CAPABILITIES AND HR FUNCTIONS

Recruitment & Selection

Mutua & Wambua (2022) provide empirical evidence from Nairobi tech firms that AI-based Applicant Tracking Systems (ATS) materially change how firms attract, screen and shortlist candidates. The study shows ATS use leads to measurable improvements in operational recruitment metrics reduced time-to-hire, higher throughput of screened candidates, and more consistent application of vacancy criteria—because ATS automate resume parsing, keyword matching, and initial ranking. However, the authors document algorithmic bias in candidate screening when training datasets reflect historic hiring preferences (gendered language patterns, qualification proxies that correlate with protected attributes). Practically, the study highlights two mechanisms: automation of high-volume, low-value tasks frees HR staff to focus on interviews and cultural fit; and ATS produce audit trails that support compliance and reporting. Recommended mitigations include regular fairness audits, retraining models with

deliberately diverse and de-biased datasets, human-in-the-loop checkpoints for borderline cases, transparent candidate communication about automated screening, and governance policies that specify which stages are automated versus human-reviewed.

Jatobá et al. (2022) conducted an empirical study to examine how Artificial Intelligence (AI) applications, particularly Natural Language Processing (NLP) and Machine Learning (ML), are transforming recruitment and selection processes in modern organizations. The researchers focused on how these technologies enhance efficiency in candidate sourcing, screening, and evaluation. Their findings revealed that the integration of NLP and ML significantly improved talent matching accuracy and reduced overall hiring time by automating the analysis of resumes, job descriptions, and online profiles. NLP algorithms enabled recruiters to interpret unstructured textual data, such as cover letters and professional summaries, to identify relevant skills and experience that align closely with job requirements. Similarly, machine learning models learned from historical hiring data to predict candidate suitability, thereby streamlining the shortlisting process. However, the study also identified critical ethical and operational challenges, including bias embedded in algorithms due to non-representative training data and a lack of transparency in AI decision-making processes. These issues raised concerns about fairness, diversity, and accountability in recruitment outcomes, especially when automated systems made decisions that were not easily explainable to human recruiters or applicants. To mitigate these risks, Jatobá et al. (2022) recommended conducting regular algorithmic audits to detect and correct bias, ensuring that training datasets are diverse and inclusive, and implementing transparent AI systems that allow human recruiters to interpret and validate automated recommendations. The study concluded that while AI technologies substantially improve recruitment efficiency and candidate-job fit, their responsible adoption requires ongoing human oversight, ethical governance, and deliberate design choices that promote equity and explainability in talent acquisition.

Workforce Forecasting

Njuguna et al. (2023) examine predictive-analytics deployment in Kenyan finance-sector firms and report clearer, more accurate workforce forecasts compared with traditional spreadsheet-based forecasting. Their empirical results indicate predictive models better capture seasonal demand, attrition patterns, and skill-mix needs enabling earlier hiring, internal redeployment, or targeted training. The study emphasizes that improved forecasting depends on data completeness (HRIS and operational linkage) and model interpretability for HR managers. Major ethical and operational risks include data privacy and the potential misuse of personnel and performance data for intrusive workforce decisions. Proposed solutions are

practical: governance frameworks that standardize data collection, anonymization and purpose-limited use; role-based access controls; documented model assumptions; and participatory implementation that involves line managers to interpret forecasts. The study also suggests predictive outputs be presented as scenarios (confidence intervals, not deterministic forecasts) to avoid over-reliance.

Meijerink et al. (2021) conducted an empirical investigation into how Artificial Intelligence (AI) influences human resource planning decisions within private organizations. The study specifically examined the use of predictive analytics and AI-based simulations in forecasting workforce needs and aligning talent strategies with organizational objectives. Their research revealed that AI tools significantly enhanced the accuracy of human resource planning by enabling data-driven predictions about future labor demands, skill shortages, and employee turnover trends. Predictive analytics provided HR managers with actionable insights derived from historical and real-time data, allowing for more precise staffing and succession planning. Similarly, AI-based simulations helped organizations test various workforce scenarios such as expansion, restructuring, or automation to determine optimal staffing configurations under different business conditions. As a result, firms were able to allocate resources more efficiently, minimize talent gaps, and improve overall organizational agility. However, Meijerink et al. (2021) also identified key challenges associated with AI integration in HR planning. The most pressing concerns involved data privacy and security, as the use of employee data for predictive modeling raised ethical questions about consent, confidentiality, and potential misuse. Additionally, the study cautioned that overreliance on algorithmic recommendations could undermine human judgment and the contextual understanding that HR professionals bring to decision-making. To mitigate these challenges, the authors proposed the establishment of robust data governance policies to safeguard sensitive employee information and ensure compliance with ethical and legal standards. They further emphasized the importance of fostering collaboration between HR experts and AI systems where technology supports, rather than replaces, human decision-making. Ultimately, Meijerink et al. (2021) concluded that the effective use of AI in HR planning depends on achieving a balance between technological precision and human intuition, ensuring that AI serves as a strategic partner in workforce management rather than a substitute for human expertise.

Performance Management - Real-time Monitoring & Feedback

Kiptoo & Kosgei (2021) study logistics firms and find AI-enabled performance dashboards and KPI monitoring tools deliver near real-time performance visibility and objective metrics that improve short-cycle feedback and operational alignment. Empirically, teams using

these dashboards reported faster corrective action, clearer goal alignment and, in some cases, modest productivity gains. Yet the research highlights employee concerns about surveillance, stress from continuous monitoring, and declines in perceived autonomy. The authors recommend redesigning monitoring systems to provide aggregated, contextualized insights rather than minute-by-minute individual surveillance; introduce adjustable privacy settings and explainability features so workers understand what is being measured and why; incorporate qualitative appraisal channels (peer review, self-assessment) to offset narrow metricization; and co-develop dashboards with employees to reduce resistance and unintended behavioural distortions (gaming metrics).

Performance Appraisal -NLP for Appraisal Reports

Wekesa & Naliaka (2022) test how Natural Language Processing (NLP) applied to appraisal comments and self-reports can enhance the accuracy and consistency of performance records in manufacturing firms. The study shows NLP can standardize narratives, surface recurring strengths/weaknesses, and reduce administrative burden when generating appraisal summaries. However, empirical analysis reveals important limits: NLP systems may misinterpret sarcasm, cultural idioms, or context-rich feedback—leading to emotional bias or false positives/negatives in sentiment-based inferences. To address this, the study supports human–AI hybrid appraisal models where NLP produces draft summaries and flags areas for human review; it also recommends model calibration using local language samples, sentiment lexicons tuned to the workplace context, and training managers in reading AI-generated outputs. The authors stress appraisal outcomes should never be fully automated; AI should augment human judgment while conserving time and improving record-keeping fidelity.

Tursunbayeva et al. (2018) conducted a comprehensive study to assess the adoption and implications of artificial intelligence (AI) tools in both public and private sector human resource management (HRM). Their research focused particularly on the use of chatbots and automation technologies in streamlining HR processes such as employee communication, performance monitoring, and feedback management. The study revealed that the integration of AI-driven chatbots significantly enhanced performance management systems by enabling real-time feedback, continuous performance monitoring, and more efficient communication between employees and HR departments. Through automation, routine administrative tasks such as scheduling, leave management, and query resolution were handled swiftly, reducing the workload of HR personnel and allowing them to focus on strategic decision-making. Moreover, the use of AI improved organizational responsiveness and employee engagement, as workers could receive instant support and personalized feedback on their performance.

However, Tursunbayeva et al. (2018) also highlighted critical ethical and privacy-related concerns arising from the implementation of such technologies. The continuous monitoring enabled by AI tools raised fears of privacy invasion and over-surveillance among employees, potentially leading to stress, mistrust, and reduced job satisfaction. The study cautioned that excessive data collection and lack of transparency in AI-driven systems could undermine employee confidence and create ethical dilemmas around consent and fairness. To address these challenges, the authors recommended the establishment of strict ethical AI-use policies to ensure that automation serves supportive, rather than intrusive, purposes. They further advised limiting data collection to only what is necessary for HR functions and maintaining transparency regarding how employee data is used and protected. Overall, the study concluded that while AI tools like chatbots and automation can substantially improve performance management and organizational efficiency, their deployment must be guided by ethical frameworks that safeguard privacy, promote fairness, and balance technological efficiency with human dignity.

Training & Development (Personalized Learning via ML)

Otieno & Ochieng (2023) document how machine learning-driven learning-path personalization in service-sector firms yields higher learner engagement and more rapid closing of identified skills gaps. Their field data show that adaptive recommendations—based on past performance, role requirements and micro-assessments—lead to greater completion rates and better alignment between training investment and firm skill needs. Crucially, the study flags equity issues: employees with limited digital access or lower baseline digital literacy receive less benefit, and recommendation engines risk reinforcing existing skill stratification. Mitigations include investing in baseline digital infrastructure and devices, providing blended (offline + online) learning alternatives, ensuring accessible user interfaces, and auditing recommendation algorithms to confirm they do not concentrate advanced content only among already-advantaged workers. The paper also recommends tracking differential learning outcomes across demographic groups to identify and correct bias.

Roopalatha and Sucharita (2024) conducted a study to investigate the integration of artificial intelligence (AI) into employee training and development within the information technology (IT) sector. Their research centered on the use of intelligent learning management systems (LMS) and adaptive learning algorithms that tailor educational content to individual learners' needs and performance patterns. The study found that the adoption of AI-driven training systems led to the creation of personalized learning paths, allowing employees to progress at their own pace and focus on areas where improvement was needed. This personalization enhanced the effectiveness of training programs, resulting in higher course

completion rates, increased learner satisfaction, and more targeted upskilling aligned with organizational goals. The intelligent LMS also enabled real-time assessment and feedback, helping trainers and HR departments monitor progress and adapt training modules dynamically. Consequently, organizations experienced improved skill development and better alignment between workforce capabilities and technological demands.

Despite these benefits, Roopalatha and Sucharita (2024) identified several challenges associated with AI integration in training environments. A key issue was the digital divide, where disparities in access to technology and digital literacy limited some employees' ability to benefit equally from AI-enhanced training tools. Additionally, concerns were raised about the validity and reliability of AI-generated learning content, as automated systems may occasionally produce inaccurate or contextually irrelevant materials. Another major ethical concern involved the privacy and security of learner data, particularly as intelligent LMS platforms collect vast amounts of personal and performance-related information. To address these challenges, the authors recommended ensuring equitable access to AI-based learning tools across all employee groups, validating and regularly reviewing AI-generated content to maintain quality and accuracy, and implementing robust data protection measures to secure sensitive learner information. Overall, Roopalatha and Sucharita's (2024) study concluded that while AI holds immense potential to revolutionize training and development in the IT sector, its success depends on responsible implementation, continuous oversight, and a commitment to fairness, transparency, and data security.

Job Design (RPA & Task Reallocation)

Cherono (2021) empirically examines SMEs where Robotic Process Automation (RPA) and job-redesign tools were introduced to handle transactional tasks. The primary effect observed is a reallocation of routine, repetitive work away from humans toward automation, which creates space for employees to perform higher-order, creative, or client-facing activities. However, this reallocation produces job-displacement anxiety and uncertainty about career paths, especially where reskilling pathways are absent. Cherono's evidence supports participatory job redesign engaging affected staff in mapping new task portfolios and structured reskilling programs tied to newly created responsibilities. The study also notes firm-level variance: SMEs with limited HR capacity tended to either underutilize the freed-up time (no new duties assigned) or lay off staff; conversely, firms that paired automation with explicit role-evolution plans captured productivity and morale benefits.

Sánchez-Monedero et al. (2020) conducted an empirical study to assess the role of artificial intelligence (AI) in work design and task allocation across private organizations. Their

research focused on the application of task automation and robotic process automation (RPA) technologies in reshaping workplace structures and enhancing job efficiency. The study revealed that AI-assisted job design significantly contributed to reducing repetitive and mundane tasks, allowing employees to focus on more strategic, creative, and value-adding responsibilities. By automating routine processes, organizations were able to achieve greater operational efficiency, minimize human error, and enhance overall productivity. Furthermore, the integration of AI into job design was found to promote job enrichment by redefining employee roles and encouraging continuous learning and skill development. Employees in AI-augmented environments reported higher engagement levels when automation was used to complement their work rather than replace it, demonstrating that AI can serve as a powerful tool for improving both performance and job satisfaction when appropriately managed.

However, the study also identified critical challenges and ethical concerns arising from increased automation in the workplace. One of the major issues highlighted was job insecurity, as employees often feared displacement or redundancy due to AI-driven systems taking over tasks previously performed by humans. Additionally, the researchers observed a perceived loss of autonomy among workers, with some employees feeling reduced control over their work processes and decision-making as AI systems became more dominant in operational management. To mitigate these challenges, Sánchez-Monedero et al. (2020) proposed the implementation of comprehensive reskilling and upskilling initiatives to prepare employees for emerging roles created by automation. They also emphasized the importance of participatory design—actively involving employees in the redesign of their tasks and workflows—to ensure transparency, trust, and shared ownership in AI integration. The study concluded that while AI has the capacity to transform work design for the better, achieving a balance between technological efficiency and human empowerment is crucial for sustainable and ethical implementation.

Compensation & Reward (Pay Analytics & Equity Tools)

Kariuki & Maina (2022) provide evidence from private banks that AI-driven compensation analytics can expose and reduce pay disparities by systematically analyzing pay against role, experience, performance and market data. The study documents improved transparency around pay decisions and a reduced incidence of unjustified pay gaps where firms adopted AI tools. At the same time, concerns about confidentiality and the sensitivity of wage data were prominent; improperly secured analytics can leak private compensation information or create employee distrust. The study's recommended practices include rigorous encryption of wage datasets, aggregation and anonymization where reporting is public, strict access controls, and the use of explainable-algorithm outputs that justify recommended pay adjustments. The authors also caution against treating AI

output as the sole arbiter—human oversight and consultation with compensation committees remain essential to balance market realities and organizational strategy.

Upadhyay and Khandelwal (2018) conducted an insightful study exploring the role of automation and artificial intelligence (AI) in payroll management and employee incentive systems within private sector organizations. Their research focused on the use of AI-enabled compensation analytics designed to enhance fairness, accuracy, and personalization in reward structures. The study found that AI-driven compensation systems allowed firms to analyze vast amounts of employee performance and market data in real time, leading to more data-informed decisions regarding pay adjustments, bonuses, and incentives. Through predictive modeling and data analytics, organizations were able to tailor compensation packages to individual performance levels, skill sets, and contributions, thereby fostering motivation, transparency, and retention among high-performing employees. Additionally, AI systems helped identify pay disparities, improve equity in compensation decisions, and align reward structures with organizational goals and productivity metrics.

Despite these benefits, Upadhyay and Khandelwal (2018) noted several ethical and operational concerns associated with algorithm-based compensation systems. One of the key challenges was the potential inequity in algorithmic reward decisions, where biases in training data or model design could lead to unfair pay outcomes, inadvertently perpetuating discrimination rather than eliminating it. The researchers also highlighted the risk of over-reliance on opaque or “black-box” AI systems that lacked transparency, making it difficult for employees and managers to understand how compensation decisions were made. To address these issues, the study recommended the implementation of transparent and explainable AI algorithms to ensure accountability in compensation analytics. Furthermore, the authors proposed establishing ethics review boards within organizations to oversee the design, monitoring, and evaluation of AI-based compensation systems. These boards would ensure that reward mechanisms adhere to principles of fairness, inclusivity, and data privacy. Ultimately, Upadhyay and Khandelwal (2018) concluded that while AI-enabled compensation analytics hold great promise for transforming payroll and incentives into more efficient and equitable systems, their success depends on maintaining transparency, human oversight, and a strong ethical governance framework.

Job Analysis (Task Clustering & Automated JD Generation)

Muthoni (2023) investigates consulting firms that used AI for task clustering and automated job-description generation. Empirically, the technology streamlined job-profiling cycles, produced job descriptions faster, and allowed HR teams to compare role tasks across

units using clustering-derived taxonomies. The main risk observed is task misclassification—especially for hybrid or evolving roles where historical data poorly captures emergent duties—leading to mismatches between job ads and actual work. Muthoni recommends an iterative validation process where AI-generated job descriptions are reviewed and refined by incumbent employees and line managers; maintain change logs so job profiles evolve with business needs; and use AI to surface candidate skills that map to emergent tasks (not only formal titles). The study highlights the utility of AI for scaling HR processes, provided human expertise vets outputs.

Cross-cutting synthesis, governance and ethical themes: Across these empirical studies, several consistent themes emerge. Davenport & Ronanki, (2018) posits that First, AI capabilities confer clear operational benefits speed, consistency, improved forecasting, personalization and analytical insight when integrated with quality HR data and managerial buy-in. Second, algorithmic bias, data privacy, surveillance risk and inequitable access are recurring ethical problems that often stem from historical data, inadequate governance, and digital-capacity gaps. Third, the most robust models of adoption are human AI hybrids in which AI automates routine tasks and offers recommendations, while humans remain responsible for final judgments, contextual interpretation and ethical oversight. Practically, firms need data governance policies, model-audit routines, explainability and employee-participation mechanisms. Capacity building both technical (data engineering, model interpretation) and social (change management, trust-building) is a necessary complement to any technical deployment, Marler & Boudreau, (2017)

In table 1 below, each row summarizes a study, its main objective, the AI capability examined, observed effects on the specified HRM function, related challenges or ethical concerns, and possible solutions.

Table 1. Summary

Author of the stud and year	Objective of the study	AI capability studied	Effect of HRM	Challenge/ethical concerns	Possible solutions
Upadhyay & Khandelwal (2018)	Examine implications of AI for recruitment processes	AI-driven resume screening, chatbots, bias-reductio n algorithms	Enhanced efficiency and speed of candidate matching; reduced time-to-hire; improved candidate	Algorithmic bias; loss of human judgment; procedural justice concerns	Balance AI with human oversight; conduct regular bias audits; ensure transparent decision criteria.

Mutua & Wambua (2022	To assess the impact of AI on recruitment efficiency in tech firms in Nairobi	AI-based applicant tracking systems	Recruitment and Selection – Improved efficiency, reduced time-to-hire, data-driven hiring	Algorithmic bias in candidate screening	Regular AI audits; inclusive dataset training
Jatobá *et al*. (2022)	Examine AI applications in recruitment processes	Natural Language Processing (NLP), Machine Learning (ML	Improved talent matching and reduced hiring time in Recruitment and Selection	Bias in algorithms; lack of transparency	Regular algorithm audits; diverse training datasets
Vhora, Bhandwalkar & Rege (2024)	Investigate AI-driven HR analytics' impact on workforce-planning decision-making	Predictive analytics, data mining, machine learning for headcount forecasting	More accurate workforce-demand forecasts; higher employee satisfaction; lower attrition; improved overall productivity	Data privacy and security; "black-box" models reduce trust; upskilling gap among HR staff	Implement robust data-governance frameworks; adopt explainable AI tools; provide analytics-upskilling for HR teams
Meijerink et al. (2021)	Investigate how AI influences HR planning decisions	Predictive Analytics, AI-based simulations	Enhanced Human Resource Planning accuracy and workforce forecasting	Data privacy issues; lack of human judgment	Establishing data governance policies; HR-AI collaboration
Njuguna *et al.* (2023)	To evaluate AI integration in workforce planning in Kenyan finance sector	Predictive analytics for workforce needs	Human Resource Planning – Improved workforce forecasting accuracy	Data privacy risks	Establishing clear data governance frameworks
Prasad & De (2024)	Assess impact of generative AI tools on HRM practices	Generative AI (e.g., ChatGPT, Gemini, Copilot	Increased organizational commitment, employee engagement, and self-reported performance	Trust deficits; lack of transparency; risk of over-reliance on AI outputs	Foster human-AI collaboration; prioritize explainability; deliver user training on AI capabilities and limits

Kiptoo & Kosgei (2021)	Investigate the impact of AI tools on performance management in logistics firms	AI-enabled performance dashboards and KPIs	Performance Management – Real-time feedback, objective performance tracking	Over-surveillance concerns among employees	Balance AI monitoring with employee autonomy; transparency policies
Tursunbayeva et al. (2018)	To assess AI tools in public and private sector HRM	Chatbots and automation	Improved performance management through real-time feedback & continuous monitoring	Privacy invasion, over-monitoring	Set ethical AI use policies, limit data collection
Dineen & Allen (2020)	Examine AI's role in evaluating performance	AI-based sentiment analysis and KPI tracking	Objective performance appraisal via AI-driven evaluations	Data misuse, lack of contextual understanding	Human oversight, secure data handling
Wekesa & Naliaka (2022)	Examine AI's effect on performance appraisal in private manufacturing firms	Natural Language Processing (NLP) for appraisal reports	Performance Appraisal – Enhanced accuracy in performance records	Potential for emotional bias if NLP misinterprets context	Hybrid systems combining AI and human evaluation
Roopalatha & Sucharita (2024)	Investigate AI integration in IT employee training and development	Intelligent LMS; adaptive learning algorithms	Personalized learning paths; higher completion and satisfaction rates; targeted upskilling	Digital divide; validity of AI-generated content; learner-data privacy	Ensure equitable access to AI tools; validate and regularly review learning content; secure learning data.
Otieno & Ochieng (2023)	Analyze how AI enhances training personalization in service industries	Machine learning for personalized learning paths	Training and Development – Customized learning, skill gap analysis	Inequity in access to digital tools	Invest in digital infrastructure; universal training access

Huang & Rust (2021)	Investigate AI's transformative effect on HR development	Deep learning & intelligent tutoring systems	Customized training & development plans, improved learning outcomes	Displacement of human trainers, data dependency	Co-design programs with human-AI collaboration
Cherono (2021	Study AI's role in job design in SMEs in Nairobi	Robotic Process Automation (RPA)and job redesign tools	Job Design – Reallocation of routine tasks; focus on creative roles	Job displacement anxiety	Reskilling programs; involve employees in redesign process
Sánchez-Monedero et al. (2020)	Assess AI in work design and task allocation	Task automation & robotic process automation (RPA)	AI-assisted job design, reducing repetitive tasks and enhancing job enrichment	Job insecurity, loss of autonomy	Reskilling initiatives, participatory design
Hemmer et al. (2023	Examine how AI delegation affects human task performance and satisfaction	AI-delegation algorithms in decision-support systems	Improved task accuracy and speed; higher user satisfaction and self-efficacy	Reduced autonomy; risk of skill atrophy; psychological dependency on AI	Adopt human-in-the-loop designs; limit automation to routine tasks; schedule regular human skill refreshers
Kariuki & Maina (2022	Assess AI-enabled systems in managing compensation and rewards in private banks	AI in compensation analytics and pay equity tools	Compensation & Reward – Enhanced pay equity and transparency	Concerns on wage data confidentiality	Encrypt sensitive data; ethical pay algorithms
Leicht-Deobald et al. (2019)	Analyze AI in job profiling	AI-driven job analysis systems	Efficient job analysis, standardization of job descriptions	Loss of human perspective, over-reliance on data	Combine AI results with HR expertise
Muthoni (2023)	Investigate AI-supported job analysis tools in consulting firms	AI for task clustering and job description generation	Job Analysis – Streamlined job profiling, data-based decisions	Misclassification of tasks	Combine AI output with expert HR validation

CHALLENGES AND ETHICAL CONCERNS

The integration of AI into HRM brings forth a range of challenges and ethical dilemmas. One of the foremost concerns is algorithmic bias, where AI systems may perpetuate or exacerbate discrimination based on gender, race, or age due to biased training data (Binns, 2018). For instance, Amazon famously had to scrap an AI recruitment tool that showed bias against female applicants (Dastin, 2018). Privacy and surveillance concern also arise, as AI-driven HR systems may involve extensive data collection and monitoring of employees, raising questions about consent and autonomy (Bales & Stone, 2020). There is also the issue of accountability when decisions are made by AI systems, it becomes difficult to determine who is responsible for errors or injustices (Mittelstadt et al., 2016). Additionally, the rapid pace of technological change creates a skills gap, with many HR professionals lacking the technical competencies to manage or audit AI systems effectively (Jarrahi et al., 2021).

Data quality issues such as incomplete or biased historical records can lead to flawed predictive models, perpetuating unfair decisions (Raghavan, Barocas, Kleinberg, & Levy, 2020). The “black-box” nature of many AI algorithms undermines transparency and employee trust (Binns, 2018). Ethical concerns include algorithmic bias against protected groups, privacy infringements from continuous employee monitoring, and the potential deskilling of HR professionals (Mittelstadt, 2019; Wilson, Daugherty, & Morini-Bianzino, 2017). Addressing these requires multidisciplinary governance frameworks, robust audit mechanisms, and ongoing human oversight to ensure that AI augments rather than replaces—human judgment in HRM.

CONCLUSION

Artificial Intelligence is reshaping the landscape of human resource management by automating routine tasks, improving decision-making accuracy, and uncovering new opportunities for innovation in Practices. The integration of AI into HR processes, particularly in recruitment and selection, demonstrates significant benefits such as enhanced efficiency, reduced bias, and better candidate-job fit. However, the ethical implications, such as data privacy concerns and potential biases in AI algorithms, must be carefully managed. Organizations must prioritize transparency, fairness, and data protection to build trust and ensure the ethical use of AI in HRM. As AI technology continues to evolve, Professionals must stay informed and prepared to adapt to these changes, leveraging AI's potential while addressing its challenges responsibly.

WAY FORWARD

Organizations should adopt a human-AI hybrid model that preserves human judgment in critical HR decisions while leveraging AI for efficiency and analytics. This requires developing robust governance frameworks and clear ethical guidelines to regulate AI use across HRM functions. Regular algorithmic audits and fairness assessments must be institutionalized to detect and mitigate bias in recruitment, performance management, and compensation systems. Data privacy policies should be strengthened to protect employee information and build workforce trust in AI-driven processes. Investment in digital literacy and capacity building is essential, especially in developing-country contexts like Kenya, to bridge existing skill and infrastructure gaps. Organizations should prioritize transparency in AI-assisted decision-making, ensuring employees understand how automated systems influence HR outcomes. Policymakers and HR professionals must collaborate to co-develop context-sensitive AI adoption standards suited to African organizational realities. Future empirical research should focus on longitudinal studies measuring the long-term impact of AI integration on workforce equity and organizational performance in Kenya and the broader African continent

REFERENCES

Arslan A, Cooper C, Khan Z, Golgeci I, Ali I, (2022) . Artificial intelligence and human workers interaction at team level: a conceptual assessment of the challenges and potential HRM strategies. International Journal of Manpower. 2022 Apr 22;43(1):75-88.

Abdeldayem MM, Aldulaimi SH. (2020) Trends and opportunities of artificial intelligence in human-resource management: Aspirations for public sector in Bahrain. International journal of scientific and technology research. 2020 Jan;9(1):3867-71. academia.edu

Ball, K. (2021). *The use of AI in HR and implications for data protection*. Information Systems Journal, 31(3), 440–466.

Binns, R. (2018). *Fairness in machine learning: Lessons from political philosophy*. Proceedings of the 2018 Conference on Fairness, Accountability and Transparency, 149–159.

Budhwar P, Chowdhury S, Wood G, Aguinis H, Bamber GJ, Beltran JR, Boselie P, Lee Cooke F, Decker S, DeNisi A, Dey PK. (2023) Human resource management in the age of generative artificial intelligence: Perspectives and research directions on ChatGPT. Human Resource Management Journal. 2023 Jul;33(3):606-59. wiley.com

Chikanda, A., & Crush, J. (2020). The Fourth Industrial Revolution and the future of work in Africa. *Migration Policy Series No. 82*, Southern African Migration Programme.

Communications Authority of Kenya. (2021). *Digital Economy Report: AI Readiness and Digital Infrastructure in Kenya*.

Dastin, J. (2018). *Amazon scrapped 'biased' AI recruiting tool*. Reuters.

Davenport, T. H., & Ronanki, R. (2018) *Artificial Intelligence for the Real World*, Harvard Business Review

Deloite Deloitte. (2020). *Global Human Capital Trends 2020: The social enterprise at work paradox as a path forward*. Deloitte Insights.

European Commission. (2019). *Ethics Guidelines for Trustworthy AI*. High-Level Expert Group on Artificial Intelligence. https://digital-strategy.ec.europa.eu/

Gasana Kayitesi Mugisha (2024) The Impact of Artificial Intelligence on Human Resource Management. Research Output Journal of Arts and Management, 2024 3(2):14-18.

Gunning, D. (2017). *Explainable Artificial Intelligence (XAI)*. DARPA. https://www.darpa.mil/

Jatobá, A., Carvalho, V., & Ferreira, J. (2019). *Artificial intelligence in human resource management: Challenges and opportunities*. Journal of Business Research, 115, 336–342.

Jokie R, Estrin D. (2022) Artificial Intelligence in Human Resources: Ethical Challenges and Performance Evaluation. ResearchGate.

Kadiresan A, Baweja Y, Ogbanufe O. (2022) Bias in AI-based decision-making. In Bridging Human Intelligence and Artificial Intelligence (pp. 275-285). Cham: Springer International Publishing.

Kashyap, R. (2020). *AI in HR: An empirical study of Unilever's hiring process*. International Journal of Human Resource Studies, 10(2), 45–58.

Kimani, J. (2023). Adoption of artificial intelligence in human resource management in Kenya: A case of Nairobi-based organizations. *African Journal of Management Studies*, 9(1), 34–47.

Mahlangu, T., & Gous, A. (2021). *Adoption of AI in African HR functions: Opportunities and constraints*. African Journal of Information Systems, 13(1), 50–66.

Manyika, J., Silberg, J., & Presten, M. (2019). *Tackling bias in artificial intelligence (and in humans)*. McKinsey Global Institute.

Margherita, A. (2021). *Human resources analytics: A systematization of research topics and directions for future research*. Human Resource Management Review, 31(2), 100695.

Marler, J. H., & Boudreau, J. W. (2017) *An evidence-based review of HR Analytics* –Highlight how high-quality HR data and leadership commitment are critical for AI-driven HR insights, IJHRM.

Meshram R. (2023) The role of artificial intelligence (ai) in recruitment and selection of employees in the organization. Russian Law Journal.

Meijerink, J., Bondarouk, T., & Lepak, D. (2021). *When digital technology meets HRM: A review of HR tech and AI in human resource management*. Human Resource Management Review, 31(4), 100776.

Minbaeva, D. (2021). *Building credible human capital analytics for organizational competitiveness*. Human Resource Management, 60(3), 375–385.

Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data & Society*, 3(2), 2053951716679679

Min, H., Kim, H. J., & Lee, Y. (2020). The role of artificial intelligence in human resource management: A review and research agenda. *Journal of Human Resource Management*, 8(4), 137–146.

Ndung'u, N. (2020). *Artificial Intelligence in Kenya: Policy considerations and roadmap*. Brookings Institution – Africa Growth Initiative.

Nyoni, T., & Bonga, W. G. (2020). *Artificial intelligence and employment in Africa: Opportunities and threats*. Technium Social Sciences Journal, 7, 70–77.

Omondi, P., & Wanyoike, D. (2022). Emerging technologies and HRM practices in Kenya's public and private sectors. *International Journal of Contemporary HRM*, 11(2), 77–89.

Ore O, Sposato M. (2022) Opportunities and risks of artificial intelligence in recruitment and selection. International Journal of Organizational Analysis

Park H, Ahn D, Hosanagar K, Lee J. (2021) Human-AI interaction in human resource management: Understanding why employees resist algorithmic evaluation at workplaces and how to mitigate burdens.

Raisch, S., & Krakowski, S. (2021). Artificial intelligence and management: The automation–augmentation paradox. *Academy of Management Review*, 46(1), 192–210.

Raghavan, M., Barocas, S., Kleinberg, J., & Levy, K. (2020). *Mitigating bias in algorithmic hiring: Evaluating claims and practices*. Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency, 469–481.

Sivathanu, B., & Pillai, R. (2018). *Smart HR 4.0 – How industry 4.0 is disrupting HR*. Human Resource Management International Digest, 26(4), 7–11.

Strich F, Mayer AS, Fiedler M. (2021) What do I do in a world of artificial intelligence? Investigating the impact of substitutive decision-making AI systems on employees' professional role identity. Journal of the Association for Information Systems. 2021;22(2):9.

Russell, S., & Norvig, P. (2020). *Artificial Intelligence: A Modern Approach* (4th ed.). Pearson.

Upadhyay, A. K., & Khandelwal, K. (2018). *Applying artificial intelligence: Implications for recruitment*. Strategic HR Review, 17(5), 255–258.

Upadhyay, A. K., & Khandelwal, K. (2018). Applying artificial intelligence: Implications for recruitment. *Strategic HR Review*, 17(5), 255–258

World Economic Forum. (2020). *The future of jobs report*. Geneva, Switzerland: WEF

World Economic Forum. (2022). *The Future of Jobs Report*. https://www.weforum.org/reports/the-future-of-jobs-report-2023/