Journal of Infrastructure, Policy and Development 2025, 9(2), 10352.
https://doi.org/10.24294/jipd10352

Article

Artificial intelligence innovations in talent recruitment, retention, diversity mapping within South Africa: A meta narrative analysis

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CITATION

Maharaj A, Obalade GO. (2025). Artificial intelligence innovations in talent recruitment, retention, diversity mapping within South Africa: A meta narrative analysis. Journal of Infrastructure, Policy and Development. 9(2): 10352. https://doi.org/10.24294/jipd10352

ARTICLE INFO

Received: 5 November 2024
Accepted: 20 December 2024
Available online: 5 March 2025

Abstract: This paper uses existing studies to explore how Artificial Intelligence (AI) advancements enhance recruitment, retention, and the effective management of a diverse workforce in South Africa. The extensive literature review revealed key themes used to contextualize the study. This study uses a meta-narrative approach to literature to review, critique and express what the literature says about the role of AI in talent recruitment, retention and diversity mapping within South Africa. An unobtrusive research technique, documentary analysis, is used to analyze literature. The findings reveal that South Africa's Human Resource Management (HRM) landscape, marked by a combination of approaches, provides an opportunity to cultivate alternative methods attuned to contextual conditions in the global South. Consequently, adopting AI in recruiting, retaining, and managing a diverse workforce demands a critical examination of the colonial/apartheid past, integrating contemporary realities to explore the potential infusion of contextually relevant AI innovations in managing South Africa's workforce.

Keywords: workforce management; artificial intelligence; recruitment; diversity; talent management; South Africa

1. Introduction

The contemporary global work environments have significantly transformed with the widespread integration of artificial intelligence (AI) technologies, leading to a shift in conventional human resource management (HRM) standards (Vrontis et al., 2023). AI enhances machines' ability to mimic human intelligence (Mamela, 2021) to perform human tasks such as reasoning, making decisions and solving problems (Chilunjika et al., 2022). One of the crucial roles of AI innovations is establishing robust HRM structures essential for effectively managing the talents imperative to organizational productivity. This transformative impact is particularly salient in AI for recruitment, diversity promotion, and talent retention (Allal-Chérif et al., 2021; Vrontis et al., 2023). The global recruitment process has undergone substantial changes in recent years, driven by elevated unemployment rates, widespread technological advancements, and escalating skills shortages within the work environment. This has resulted in heightened competition for securing the most qualified candidates.

South Africa is distinguished by its diverse racial and socioeconomic landscape and commitment to workplace equity and transformation. Hence, AI innovations have found resonance within its human resource functions (Shava and Doorgapersad, 2021). Both public and private organizations in the country have adopted digital technologies, particularly in recruitment processes, while identifying and hiring talented workers.

AI technologies confer efficiency in candidate screening, facilitating rapid analysis of job applications beyond human capacity (Black and van Esch, 2020). This innovative tool accelerates the identification of qualified candidates, concentrating solely on qualifications to ensure fair and unbiased decision-making (Goncalves et al., 2022). AI algorithms, which draw insights from historical data, contribute to the selection process based on critical characteristics such as skills, experience, and cultural fit. Notably, AI facilitates global talent acquisition, fostering workplace diversity by enabling recruiters to identify and engage talents irrespective of geographical location (Allal-Chérif et al., 2021; Chowdhury et al., 2023). Empirical studies highlight that talent management practices in South Africa are governed by specific legislation in the public sector, fostering employer growth and increased productivity (Shava and Doorgapersad, 2021). The influence of AI on talent retention practices within South African organizations is essential, given the competitive job market and the persistent challenges of brain drain. The brain drain in South Africa is evident through the continuous emigration trend of skilled and highly educated individuals seeking better opportunities abroad (Yu, 2022). This talent flight phenomenon in the Sub-Saharan Africa (SSA) region is driven by the country's socioeconomic stresses, limited career prospects, and high unemployment rates, exacerbating dissatisfaction among highly skilled workers (Ferreira and Carbonattol, 2020; Ombogo, 2023).

Contrary to this trend, a study conducted in South Africa in 2015 reported a decline in the migration patterns of health workers. This decline was attributed to the successful implementation of domestic policies to enhance healthcare and improve staff satisfaction, reducing professionals' willingness to seek opportunities abroad. However, an International Labour Organisation (ILO) report in 2020 emphasized that the South African government remains concerned about the persistent migration of highly skilled workers to the global north (Ferreira and Carbonattol, 2020). This concern is exacerbated by the high demand for qualified professionals, making talent retention a critical global issue, particularly in South Africa. In light of these issues, applying AI commands to analyze extensive datasets and predict labour trends emerges as a strategic solution. This approach empowers employers with valuable insights into workforce career aspirations, enabling practices that enhance employee satisfaction, productivity, and overall organizational success (Mer and Srivastava, 2023).

As South Africa undergoes the transformative influence of the global AI revolution, its diverse work environment is witnessing the positive impact of digital tools on recruitment processes, diversity management, and talent retention strategies. While AI offers numerous advantages in identifying and retaining talented workers, organizations must proactively address potential job security, privacy, and transparency challenges. Generally, there are some trends towards the creation of laws regulating AI. Some of the guiding principles advanced by international organizations like the Organisation for Economic Co-operation and Development (OECD) converge on what they perceive as should be the key focus of an ethical AI development framed around respect for human rights and freedoms together with transparency, fairness, security, and beneficence and accountability (Donnelly, 2022).

A deliberate and inclusive approach to AI implementation, coupled with effective communication, holds the key to fostering positive outcomes for employees and

organizations in South Africa. Context-related strategic human resource management (SHRM) challenges in South Africa include addressing the inequalities of the past in the transition from the apartheid economy to the democratic dispensation where workforce and talent management, capital and labour markets flows, diversity management, and inequality in the distribution of skills, income, and opportunity are at the heart of the SHRM responses towards redress (Wood and Bischoff, 2020).

For South Africa, the dynamics of economic integration are driven mainly by the emergence of global value chains and technology-mediated geographical distribution of goods and services, as well as the need to expand the skills of an increasingly diverse pool of talent in an economy that is dependent on direct foreign investment as a driver for economic growth (Matekenya and Moyo, 2023). Thus, in this context, strategic management of human resources and organizational workforces implies understanding the dynamics of HR systems implementation, mainly how organizations manage employee retention and recruitment in the context of diversity and technological advancement. As SHRM scholars grapple with the limits of Western-inspired HRM models, it is critical to unpack the contextual realities and integrative possibilities in implementing what is framed as innovative HR practices, particularly the adoption of technology in HR functions in the Global South.

The content of local (indigenous) HR systems evolves because of exposure to global influences and competition. In the case of South Africa, the nature and contextual influences on the functioning of HR systems are predicated by the socioeconomic history and contextual realities of workforce management that have informed HRM practice. This paper provides a comprehensive review of the literature analyzing the role of AI innovations in shaping talent management practices in South African organizations. Specifically, it focuses on recruitment, promoting inclusivity and diversity in alignment with the South African Employment Act, and evaluates AI's role in talent retention. Furthermore, it will identify the gaps in this relatively under-researched body of knowledge over four years, 2020–2024.

The objectives for this study are as follows:

1) To explore the role of Artifical Intelligence (AI) in transforming Talent Management and Recruitment practices in South Africa.

2) To elaborate on the role of Artificial Intelligence (AI) in fostering Diversity, Inclusion, and Talent Retention in South Africa.

2. Materials and methods

Recently, Authors (Dreher, 2003) have called for conceptual research to systematically review published knowledge to clarify concepts, especially in a field where there are debates on knowledge and no universally agreed definition. Thus, a meta-narrative analysis provides a holistic view of significant concepts in a research field. This study uses a meta-narrative approach to literature to review, critique and express what the literature says about the role of AI innovations in shaping talent management practices in South African organizations. Specifically, it focuses on recruitment, promoting inclusivity and diversity in alignment with the South African Employment Act, and evaluates AI's role in talent retention. An unobtrusive research technique, documentary analysis, is used to analyze literature.

Sample and inclusion criteria

In the section below, an overview of the studies done between 2020 and 2024 was searched for using the keywords, workforce management, Artificial Intelligence, recruitment, diversity, Talent management, South Africa. The following databases were used, *PubMed, Google Scholar, Scopus, Web of Science*, and relevant South African academic repositories were searched to reflect a range of scholarly sources.

Studies were included if they met the following criteria: their relevance, which includes studies focusing on recruitment, promoting inclusivity and diversity in alignment with the South African Employment Act, and evaluates AI's role in talent retention within the South African context. Studies in English or with available English translations were included in the analysis. Common themes and trends from across literature were synthesized from the extracted data. A total of fifty studies were identified using the criteria listed above and are listed in **Table 1** below.

Table 1. The different types of literature reviewed in this study.

Literature Reviewed	Number of:
Journal articles	23
Conference papers	10
Book chapters	14
Reports	3

Limitations to this analysis included publication bias, where studies highlighting positive or relevant results are readily available and published. To address this limitation, information from different databases was sourced. In addition, the choice of only English language studies may have excluded relevant studies conducted in other languages that would provide helpful information. Despite these limitations, this meta-narrative analysis seeks to share a valuable synthesis of available research on the role of AI innovations in shaping talent management practices in South Africa, offering insights and recommendations for further investigation and policy development in this crucial area.

3. Results and discussion

The key findings of the review of literature are divided into five themes and are discussed in the below sections:

3.1. Theme 1: AI revolution in SHRM: Transforming talent management and recruitment practices

Talent management characterizes all efforts to identify, engage, train, develop and retain individuals in the workplace (Gallardo et al., 2020). The pre-AI era in recruitment involved manual, time-consuming approaches (Frissen et al., 2023; Hassan, 2022; Ng and Alarcon, 2020). Tasks such as drafting job descriptions, advertising newspaper vacancies, and physically receiving resumes were standard practices. This traditional method must cope with today's era of talent competition, resulting in the need for the right and improved recruitment tools (Chen, 2022).

The intelligent capabilities of AI technology in mirroring human cognitive functions and also inaugurate a new era of Generative AI systems that create novel content, emphasizing its significance in today's work environment (Alkatheiri, 2022; Harisanty et al., 2022; Hassan, 2022). The integration of AI innovations has triggered a monumental shift in SHRM, reshaping key dimensions of talent management, which include recruitment, workplace diversity and inclusion promotion, and talent retention (Allal-Chérif et al., 2021; Vrontis et al., 2023).

The contemporary HR landscape, empowered by AI, extends beyond traditional people management to a strategic role in driving organizational success (Harisha et al., 2023). Approximately 40 percent of HR tasks in organizations worldwide employ AI applications, predominantly in the US, while European and Asian companies are falling behind (Harisanty et al., 2022).

Transparency and fairness have become crucial in recruitment practices, with technological advancements addressing the ethical implications of automated processes (Mamela, 2021). Acknowledging that algorithmic-based analysis in job candidacy requires human judgment to address undetected ethical considerations, the evolving HR practices blend the advantages of technology with human oversight (Pereira et al., 2023; Vrontis et al., 2023).

Despite global advancements, South Africa and many states from the global south face challenges fully embracing the Fourth Industrial Revolution (4IR) due to their economies' reliance on farming, mining, and the informal sector, alongside high unemployment and a workforce lacking advanced skills (Mamela, 2021). Predictions of a 50% replacement of human work by robots in the future highlight the ongoing impact of the 4IR and AI on South Africa's employment setting. The effects of the 4IR and AI are already noticeable, with fluctuations in employment and unemployment rates (Mamela, 2021). This comprehensive review underscores the widespread adoption of AI innovations in talent management, emphasizing their profound influence on recruitment processes, diversity promotion, and retention strategies. The synthesis of global insights sets the stage for a focused analysis of AI applications in the recruitment process in the next section of this paper.

3.2. Theme 2: AI in HR recruitment: Catalyst for transformation, efficiency, and fair practices

The growing scholarly interest in AI's multifaceted role and impact on various HR functions, particularly in recruitment practices, reflects the increasing recognition of AI as a potent catalyst for transformative change (Harisha et al., 2023; Jovanovic and Campbell, 2022). This transformative influence extends globally, reshaping HR competencies and meeting the dynamic demands of modern workspaces, with recruitment processes emerging as a primary beneficiary of AI integration (ibid). The revolutionary impact of AI on HRM practices is most evident in the enhanced efficiency and accuracy it brings to the candidate recruitment stage. Notably, AI algorithms, such as those employed in resume screening, not only streamline recruiters' workflows but also empower them to focus more intently on other pivotal stages of the recruitment process (Albassam, 2023; Black and van Esch, 2020).

In addition to time-saving features, AI introduces tools like chatbots and applicant tracking systems (ATS) that further accelerate processes, from identifying and advertising positions to the efficient hiring of talented workers (Aladağ et al., 2023; Chowdhury et al., 2023; Frissen et al., 2023). Furthermore, incorporating AI in assessing facial expressions and tone during interviews brings a more comprehensive understanding of candidates' personalities and ability to perform efficiently (Papagiannidis et al., 2020). This balanced approach by AI-driven tools aims to reduce recruitment bias by emphasizing candidates' qualifications, thereby mitigating unconscious biases in decision-making (Drage and Mackereth, 2022; Köchling and Wehner, 2020).

An essential catalyst for change within HR recruitment processes is AI's unique ability to mimic human intelligence and decision-making while automating routine tasks, allowing HR professionals to focus on more strategic, value-added activities (Mamela, 2021). Another key functionality of AI in talent recruitment is its skill gap analysis capability, assessing and identifying the skills of existing employees, contributing to strategic decision-making, and boosting overall company productivity (Sofia et al., 2023). AI functionalities that evaluate cognitive abilities, personality traits, and behavioural tendencies provide valuable insights into a cultural fit, leadership capabilities, and problem-solving abilities (Cawthorpe, 2023; Upadhyay, 2023). This evaluative process ensures informed decision-making aligned with organizational values and work culture. While AI's continuous learning and improvement processes, involving algorithms that refine decision-making based on feedback and adapt to industry trends, offer numerous benefits, challenges like biases, algorithmic transparency, privacy concerns, and ethical issues significantly impact the fair application of AI in hiring processes (Forti, 2021; Köchling and Wehner, 2020; Metz, 2021).

The importance of AI in recruitment and selection processes across diverse sectors is accentuated by its efficacy in addressing labour force attrition, resulting in cost reductions during new candidate recruitment (Al-Alawi et al., 2021). AI's application in these processes has advanced solutions for analyzing vast datasets, particularly in scenarios involving announcing new job positions, reviewing costly resumes, and mitigating commonly experienced human errors in traditional recruitment processes (ibid). Moreover, AI reduces costs associated with meetings, interviews, and candidate selection tests when assessing recruitment quality against a company's reputation (Al-Alawi et al., 2021).

Forti (2021) contends that organizations are turning to automation to pursue fair and impartial hiring and selection processes. AI application software increasingly ensures fair practices and addresses biases that have marred traditional recruitment processes (Metz, 2021).

3.3. Theme 3: AI's impact beyond recruitment: fostering diversity, inclusion, and talent retention

Other research stresses the vital role of AI tools in advancing diversity and inclusion within workplaces. Frissen et al. (2023) highlight that organizations adopting blind recruitment strategies prioritize qualifications, eliminating biases associated

with personal details. Another study reveals that AI-driven algorithms scrutinize data from various sources to identify skilled talent from diverse backgrounds, expanding talent pools globally (Vivek, 2023). Additionally, inclusive AI language assessments ensure unbiased job descriptions, and standardized interviews contribute to fostering fair recruitment processes (Nugent and Scott-Parker, 2022). By integrating AI into recruitment practices, organizations can enhance collaborative decision-making, fostering effective communication and coordination among recruiters (Filip, 2022).

Recognizing the correlation between diversity and organizational success, companies are increasingly incorporating AI automation in recruitment to scan resumes and consider factors such as gender, ethnicity, and disability. Al-Alawi et al. (2021) point out successful examples, such as Google, which has created diverse working environments conducive to creativity. AI applications, like Job Description Optimization tools, make suggestions related to job descriptions and target job specifications for candidates from diverse backgrounds (Al-Alawi et al., 2021)). This approach not only aids in hiring a diverse workforce but also addresses discriminatory practices. AI technologies are also acknowledged for their potential to contribute to a more inclusive work environment (Gwagwa et al., 2022). Utilizing AI's data analysis capabilities, companies can enhance pattern recognition and decision-making processes to meet employment equity and diversity goals mandated by regulatory frameworks (Chen, 2022).

Beyond recruitment, AI plays a pivotal role in talent retention within organizations. Predictive AI analytics tools assess historical employee data to identify talent flight risks and implement proactive retention measures (Vishwanath and Vadepalli, 2023). Moreover, AI tools facilitate personalized career development plans, analyze employee feedback, perform real-time monitoring and recognition, and help manage workloads for a healthier work-life balance (Mer, 2023). Additionally, AI's application in succession planning, compensation analysis, and overall retention strategies addresses challenges related to brain drain, ensuring organizations retain skilled professionals (Mer and Srivastava, 2023). The comprehensive integration of AI across HR functions signals a transformative shift, enhancing recruitment practices, promoting diversity and inclusion, and bolstering talent retention strategies.

3.4. Theme 4: Contextual realities and integrative possibilities in South Africa: SHRM trends in recruitment, diversity, and talent retention

The dynamic evolution of the South African work environment mirrors ongoing trends in recruitment, diversity promotion, inclusion, and talent retention. As an early adopter of national HR standards, South Africa delineates seven comprehensive HRM practice fields across the HR value chain: workforce planning, performance management, learning and development, reward and recognition, employee wellness management, employment relations management, and organizational development. To align with organizational strategies and talent management goals, HRM professionals and leaders must embark on digitalization across these seven areas (Chapano et al., 2023). This digital transition is noticeable, driven by the advent of technologies influencing HRM practices, especially in simplifying the recruitment process through online platforms (Chapano et al., 2023). Noteworthy is the long experience of the

country's adaptability to technology in the workspace to both functional applications and HRM needs.

The COVID-19 pandemic forced the work sector in the country to close their physical activities and replace them with digital operational tools to assist their functional and managerial activities, including recruiting new staff during the pandemic and processing all the rewards while safeguarding the well-being of the collective staff through holistic support. Chapano et al. (2023) observed that South African companies quickly adopt digital channels such as online platforms, social media, and job portals to engage with a broader pool of candidates. This strategic shift not only fast-tracks the hiring process but also aligns seamlessly with the tech-savvy skills needed by the contemporary South African workforce.

A decline in growth and a transition from a manufacturing-oriented to a service- or knowledge-based economic hub characterize the current economic scenario in South Africa (Baccini et al., 2023). Critics who question the advantages of this shift argue that an emphasis on service-related jobs might have detrimental effects on the growth potential of less developed countries. They contend that this new sector preference is less likely to enhance productivity than the manufacturing sector and may need to pay more attention to unskilled workers than manufacturing did in previous years (Baccini et al., 2023). Compared to the manufacturing sector, service workers tend to be more educated, involved in higher-skilled occupations, and have a higher representation of females, constituting 40% of employees, twice the proportion seen in manufacturing (Baccini et al., 2023).

The prospective workforce involves individuals with diverse skills, including computer, mechanical, and process engineering abilities. Additionally, the evolving labour market will necessitate soft skills, emphasizing management, self-organization, teamwork, and communication skills. In other spheres, the proliferation of digital technologies and increased internet availability give rise to gig economies in South Africa, characterized by flexible work schedules (Anwar and Graham, 2021). The literature described the 'gig' economy as a compensated exchange for labour and intellectual property on a flexible, short-term contractual arrangement facilitated by digital platforms. This work arrangement allows employers to hire staff from different geographical regions, often areas with less stringent labour laws, high unemployment rates, and limited access to healthcare, as observed in South Africa (Anwar and Graham, 2021).

In the realm of recruitment, diversity, and talent retention, South African employers increasingly recognize the importance of diversity and inclusion in the workplace (The commitment to policies such as the Employment Equity Act 55 of 1998 (EEA) propels this acknowledgement, aiming to provide opportunities for professional development to previously disadvantaged population groups. However, studies reveal challenges in meeting the EEA demands for improved opportunities for previously disadvantaged groups, leading to heightened racial tensions (Mayer et al., 2023). Black employees often feel undervalued, reduced to meeting quotas prescribed by the Employment Equity Act, with no recognition of their skills in the work environment. Black female employees, in particular, experience dual discrimination based on race and gender, leading to increased dissatisfaction with HRM practices in both public and private work settings (Mayer et al., 2023).

To address challenges hindering workplace diversity and inclusion, South African companies provide learning and mentorship opportunities to enhance workforce skills (Mayer et al., 2023). The South African government ensures consistent training and skill enhancement for the entire workforce by endorsing the Skills Development Act No. 97 of 1998.

The commitment to gender equality is reflected in the significant representation of women in managerial positions, reaching almost 33% in 2021, aligning closely with figures from some G20 countries. Despite such efforts, the gender pay gap persists, with South African women earning salaries 13.7% less than their male counterparts, falling within the range of G7 countries (Ketkar et al., 2023).

Driven by legislative frameworks like the EEA, South African companies implement targeted strategies to ensure representation from diverse racial, gender, and socioeconomic backgrounds. Initiatives such as blind recruitment, diversity training, and inclusive language assessments are embraced to foster inclusive workplaces (Ketkar et al., 2023; van Rensburg-Welling and Mitchell, 2022). South African businesses prioritize talent retention to address challenges posed by brain drain and the competitive job market. Companies in the country are implementing personalized career development plans, mentorship programs, and flexible work arrangements to enhance employee satisfaction and loyalty (Swanepoel and Saurombe, 2022).

Furthermore, incorporating AI predictive analytics tools to detect potential talent flight risks has become indispensable for implementing proactive retention strategies. South Africa has integrated digital innovations into talent management practices, particularly in candidate screening, interview processes, and skill gap analysis. Chilunjika et al. (2022) argue that AI will play a pivotal role in rejuvenating and upgrading traditional recruitment procedures in South Africa. Dayanand and Maharaj (2024) found that recruiters use digital technologies such as LinkedIn to search, screen, and select talented candidates, aligning with international trends and identifying LinkedIn as the preferred social network in recruitment. Nevertheless, the South African Department of Public Service relies predominantly on manual recruitment and selection processes, limiting AI's applicability (Chilunjika et al., 2022).

A study concentrating on talent management in the private sector, specifically within the automobile industry, confirmed this limitation by finding that South African automotive organizations needed to give the necessary attention to applying AI tools to talent management (Macpherson et al., 2023). The authors further stated that study participants disagreed with the notion that their organizations strategically organized human resources to guarantee talent availability. Likewise, they expressed disagreement with the effectiveness of using rewards to retain talent (Macpherson et al., 2023).

A comprehensive literature review emphasizes the gradual adoption of ICT in the South African public sector, impeding AI's complete integration and operational effectiveness in public sector HRM (Chilunjika et al., 2022). In addition to technical qualifications, there is a growing emphasis on assessing candidates' soft skills and alignment with organizational culture in the recruitment process and overall objectives. This emphasis ensures a harmonious and productive work environment (Maisiri and van Dyk, 2021; Ramnund-Mansingh and Reddy, 2021). Understanding and adapting to these current trends is imperative for South African organizations seeking to remain

competitive, attract and maintain top talent, and cultivate inclusive workplaces despite the challenges of adopting AI in HRM.

3.5. Theme 5: Navigating challenges in AI adoption: Transforming recruitment practices for fairness and efficiency

Artificial Intelligence (AI) is revolutionizing the landscape of HRM by enhancing machines' ability to mimic human intelligence (Mamela, 2021). Integrating AI into recruitment strategies to improve hiring and selection processes has gained significant momentum (Albassam, 2023). In South Africa, where HRM is critical in transforming employment and work dynamics, the implications of the 4IR and AI are important to the government (Moagi, 2020). The South African government's apprehension is justified, given its dual role as a substantial employer and a consumer of IT products and services (Moagi, 2020). However, despite this recognition, the World Economic Forum Global Competitiveness Report 2022 highlights persistent challenges in finding skilled talent within the country. South Africa is ranked 57th out of 63 countries for locating skilled employees and 55th for staff training (Macpherson et al., 2023).

The challenges intensify as the Employment Act in South Africa needs clear regulations for Artificial Intelligence Systems (AIS), posing obstacles to aligning AI practices with employment legislation (Kgoale and Odeku, 2023). Furthermore, the broader global concern revolves around the potential impact of AI on employment, with technological innovations frequently rendering skills outdated and affecting employees' longevity in the job market (Macpherson et al., 2023).

Human Resource divisions have long grappled with the difficulties inherent in traditional recruitment practices, which are marked by human-made decisions that tend to be discriminatory and biased. While promising, the recent adoption of AI in recruitment could be much faster. Nevertheless, it has enabled organizations to innovate, fast-track processes, and introduce objectivity and cost-effectiveness into their recruitment strategies (Harisha et al., 2023). However, challenges and potential adverse effects emerge as organizations leverage AI technologies in HRM. Concerns about biases, especially those against women, persist, emphasizing the need for AI to address discriminatory practices and focus on candidates' skills. Privacy and data security issues have become prominent due to the vast amount of personal information handled by AI tools, impacting compliance with regulations such as the European General Data Protection Regulation (Forti, 2021).

While the advantages of AI in Sub-Saharan Africa are recognized for development, discussions on ethical challenges in adopting AI remain limited, and a unified African position on global AI ethics is still being determined (Metz, 2021). The projection that 14% of the worldwide workforce might need to transition to new jobs by 2030 due to AI-related technological advancements raises concerns about the broader societal impact (Sofia et al., 2023).

Within South Africa, the adoption of AI tools for workforce management faces numerous obstacles, including a lack of ICT skills, rapid urbanization, poor infrastructure, limited collaboration, poverty, unemployment, and the lingering effects of the COVID-19 pandemic (Shava and Doorgapersad, 2021). South Africa's internet

penetration rate is 62%, higher than many African countries but lower than developed regions like North America (88%), Western Europe (92%), Northern Europe (95%), and Southern Europe (83%) (Kemp, 2020). Despite comparisons with emerging economic blocks such as Central America (66%), the Caribbean (60%), Eastern Asia (63%), and South East Asia (66%), only 24% of the African population has reliable internet access.

With this context, the South African government acknowledges the importance of improving internet access, considering it a priority. Organizations grapple with the challenge of balancing the implementation of AI with fostering inclusion and diversity, aligning with the Employment Equity Act. While automated tools offer efficiency benefits, concerns about losing the human touch in the hiring process and potential technical issues during scheduling highlight the need for a nuanced approach (Chen, 2023; Horodyski, 2023; Johnson et al., 2022; Nugent and Scott-Parker, 2022).

4. Limitations, conclusion and recommendations

Investing in training programs for South African HR professionals is crucial to strengthening the quality of AI implementation in HRM (Chowdhury et al., 2023; Jaiswal et al., 2022). This ensures that HR teams are well-equipped to understand, implement, and apply AI tools effectively within their practices. Additionally, it is essential to promote collaboration and knowledge sharing among HR professionals, AI experts, and IT specialists (Pereira et al., 2023). This collaborative approach closes the gap between technical expertise and comprehensive knowledge within the HR field.

Aligning recruitment plans with existing regulatory frameworks is imperative (Budhwar et al., 2023). Adherence to employment-related regulations mitigates potential risks associated with AI integration and ensures compliance with legal standards, enhancing the ethical standing of AI adoption in HRM. Pilot programs play a crucial role in evaluating the real-world effectiveness of AI within organizations (Damiani et al., 2023). Initiating these programs allows continuous refinement of AI algorithms and aligns AI technology with organizational goals and values.

In adopting AI during recruitment, organizations must actively consider ethical aspects (Rodgers et al., 2023). Clear ethical guidelines and regular auditing of AI algorithms are essential to ensure fairness, transparency, and accountability. Addressing technical skill limitations is crucial for successful AI integration (Mir et al., 2020). Offering technical training opportunities and transparent communication builds trust among employees.

Ensuring data security and compliance with privacy regulations is paramount, aligning AI systems with global standards such as the GDPR (Díaz-Rodríguez et al., 2023). The private sector should focus on emerging technologies, while the government must emphasize supporting basic research for non-profit purposes. Customizing AI solutions to complement existing HR processes helps balance efficiency and maintain the human touch (Vishwanath and Vadepalli, 2023).

Regular monitoring and feedback mechanisms, incorporating insights from HR professionals and employees, offer a holistic understanding of the impact of AI on HRM goals, employee satisfaction, and organizational performance (Burnett and Lisk,

2021). This continuous feedback loop allows organizations to adapt HRM practices based on real-world experiences.

The final recommendation is to promote a culture of continuous learning within HR teams. Staying informed about AI advancements empowers organizations to harness emerging capabilities, ensuring that HRM practices remain dynamic and responsive to evolving technological landscapes.

While this paper provides valuable insights, it is essential to acknowledge its limitations. Existing literature forms the basis of the research, and the rapidly evolving nature of AI and HRM practices may lead to changes that the study needs to capture fully. No primary data or case study was employed to substantiate the arguments regarding implementing AI to address recruitment, diversity, and retention. However, the meta-narrative review employed has provided an understanding of how research on AI and talent recruitment and selection have unfolded over the years. It has also helped illuminate the topic from various angles. Another limitation of this study is its generalizability to other contexts as it focuses on the South African context. However, it contributes to AI and HRM literature in Africa.

The findings of this conceptual paper hold several practical implications for further research in the field of AI adoption in HRM within the South African context. Researchers can explore the specific impacts of AI on various facets of HRM, such as recruitment, diversity management, and talent retention. Conducting longitudinal studies to track the changes resulting from AI adoption in South African organizations will provide valuable insights into the sustained effects and challenges over time. Additionally, exploring industry-specific intricacies and the varied adoption of AI across industries could offer targeted recommendations for diverse organizational contexts.

In conclusion, successfully integrating AI into HRM practices in South Africa requires a comprehensive and strategic approach. The recommendations outlined earlier provide a practical roadmap for organizations seeking to embrace the transformative potential of AI while maintaining ethical standards and prioritizing the well-being of their workforce. By acknowledging and exploring this paper's practical implications and limitations, we gain a deeper understanding of the subtle interplay between AI and HRM in the South African context.

This conceptual paper's key findings emphasize the significant impact of AI on various facets of HRM, including recruitment, diversity management, and talent retention. The study highlights the need for organizations to invest in training, foster collaboration, align with regulations, implement pilot programs, address ethical considerations, and promote continuous learning, leading to the successful adoption of AI innovations.

Moreover, the paper encourages future research to explore the specific impacts of AI on various facets of HRM within the South African terrain. Longitudinal studies tracking the sustained effects of AI adoption, industry-specific investigations, and examinations of the varied adoption of AI across different industries could provide targeted recommendations for diverse organizational contexts. Future studies should also consider using primary data against secondary data used for this study.

Incorporating these practical implications and understanding the study's limitations positions researchers and practitioners to make informed decisions about

integrating AI into HRM. This information is a valuable foundation for shaping future investigations and strategic decision-making related to AI integration within work environments, ensuring that South African organizations can use AI technologies effectively for enhanced talent acquisition, skill development, and workforce productivity.

Author contributions: Conceptualization, AM; methodology, AM and GOO; software, AM; validation, AM and GOO; formal analysis, AM; investigation, AM; resources, AM and GOO; data curation, AM and GOO; writing—original draft preparation, AM; writing—review and editing, AM and GOO; visualization, AM; supervision, AM; project administration, AM; funding acquisition, AM. All authors have read and agreed to the published version of the manuscript.

Funding: This article was funded by AM research account as the supervisor, account number RW18.

Conflict of interest: The authors declare no conflict of interest.

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