JGIES
JOURNAL OF GLOBAL ISLAMIC ECONOMIC STUDIES
https://journal.merdekakreasi.co.id/index.php/JGIES

Literature Review: Human Centric AI Design for HR Approaches, Barriers, and Best Practices

Abd. Rasyid Syamsuri[1], Rifki Arohman[2], Muhammad Renaldy Saputra[3], Marcella Angraini[4]
[1,2,3,4]Faculty of Economics and Business, Universitas Riau, Indonesia

Article Information

Article History:
Received: 4 September 2024
Accepted: 5 September 2024
Published: 30 September 2024

Keywords:
Human-Centric AI, Human Resource Management, Algorithmic Bias, Ethical Governance, Organizational Transformation

Abstract

This article examines the role of human-centric artificial intelligence in human resource management, focusing on its conceptual foundations, implementation barriers, and emerging best practices. Using a literature review methodology, data were drawn from peer-reviewed journal articles, academic books, and institutional reports published within the last five years, selected through purposive sampling and analyzed descriptively to identify recurring themes and strategic implications. The findings reveal that while AI enhances efficiency and accuracy in recruitment, performance evaluation, and workforce analytics, significant challenges persist, including algorithmic bias, lack of transparency, and data privacy concerns. Evidence indicates that organizations adopting participatory design, transparent communication, and governance mechanisms such as ethical audits and cross-functional collaboration are better positioned to implement AI responsibly and sustainably. These results suggest that human-centric AI is not simply a technical adjustment but a socio-technical transformation that requires alignment with organizational values, ethical principles, and inclusive practices. The study contributes to ongoing debates by offering a synthesized framework that emphasizes both the potential and the limitations of human-centric AI in reshaping HRM, highlighting the need for organizations to integrate technological innovation with human dignity, equity, and long-term strategic value.

✉ Correspondence Address:
abd.rasyidsyamsuri@lecturer.unri.ac.id

INTRODUCTION

The rapid integration of Artificial Intelligence (AI) across industries has transformed how organizations operate and make strategic decisions. In the global context, AI technologies are increasingly applied to enhance productivity, optimize workflows, and deliver data-driven insights that support competitiveness in the digital economy (Arohman & Syamsuri 2025; Haenlein et al., 2019). In human resource management (HRM), AI tools such as predictive analytics, natural language processing, and machine learning models are

being utilized to streamline recruitment, monitor employee performance, and foster continuous learning environments (Jarrahi, 2018; Tursunbayeva et al., 2022). These developments signal a broader shift in the workplace toward automation-supported decision-making, raising critical questions about how organizations balance efficiency with human values in AI deployment. The global urgency for ethical, transparent, and inclusive AI has led to growing academic and practical debates about the role of human-centered design as a guiding principle in this transformation.

Despite its potential, the use of AI in HRM presents notable challenges that extend beyond technical efficiency. Issues such as algorithmic bias, opacity in decision-making, and the risk of reducing human oversight threaten to undermine fairness and trust in HR practices (Meijerink et al., 2021; Van Esch et al., 2021). Studies have shown that without careful design and governance, AI-driven HR tools may reinforce existing inequalities, compromise employee autonomy, and erode organizational culture (Köchling & Wehner, 2020; Tursunbayeva et al., 2022). Furthermore, privacy concerns and legal uncertainties around data use have intensified the need for organizations to adopt frameworks that place human well-being at the core of AI systems. These concerns illustrate the necessity of human-centric design, which emphasizes transparency, accountability, and employee empowerment as essential dimensions of responsible AI in HRM. As the workplace becomes increasingly hybrid and digital, the importance of aligning AI implementation with human values has never been greater.

Recent scholarship has begun to outline approaches and best practices for embedding human-centric design into AI applications within HRM. Frameworks emphasize participatory design methods, ethical auditing, and multidisciplinary collaboration as strategies to ensure inclusivity and mitigate risks (Raisch & Krakowski, 2021; Shrestha et al., 2021). However, empirical evidence suggests that barriers such as limited organizational readiness, lack of expertise, and resistance to change remain significant obstacles (Meijerink et al., 2021; Jarrahi et al., 2022). To address these challenges, this article reviews current literature on human-centric AI in HRM, focusing on its conceptual foundations, implementation barriers, and emerging best practices. By synthesizing insights from recent studies, the paper contributes to an understanding of how organizations can leverage AI responsibly while fostering employee trust, equity, and sustainable value creation. This exploration not only highlights the pressing need for human-centric approaches but also provides actionable recommendations to guide both researchers and practitioners in shaping the future of HRM in the age of AI.

LITERATURE REVIEW

The integration of artificial intelligence into human resource management has sparked a growing body of research focused on the intersection of technology and organizational behavior. Scholars emphasize that AI is not only reshaping operational processes but also redefining how organizations conceptualize employee engagement and talent management (Gal et al., 2020; Stone et al., 2020). The application of machine learning algorithms in recruitment, performance monitoring, and employee retention strategies has demonstrated both efficiency gains and heightened concerns about transparency and fairness (Leicht-Deobald et al., 2019). Moreover, recent studies highlight that AI adoption in HRM cannot be separated from broader discussions on organizational trust, as employees'

willingness to engage with AI-driven tools is shaped by perceptions of legitimacy and accountability (Parent-Rocheleau & Parker, 2021). These discussions frame the necessity of embedding ethical considerations into technological design as organizations navigate the digital transformation of work.

Human-centric AI has emerged as a conceptual response to such challenges, emphasizing that technology must be designed to augment rather than replace human capabilities. This paradigm underlines values such as inclusivity, empathy, and participatory design, which serve as safeguards against potential harms of algorithmic decision-making (Dignum, 2019; Stahl et al., 2021). Within HRM, this approach advocates for balancing automation with human oversight to ensure that hiring decisions, promotions, and employee evaluations remain aligned with principles of fairness and dignity (Santoni de Sio & Van den Hoven, 2018). Empirical studies have shown that organizations implementing human-centric AI frameworks report stronger employee acceptance and a more resilient organizational culture (Arohman, Syamsuri, & Angraini, 2025). However, critics caution that without proper governance structures, even human-centric approaches risk being reduced to symbolic rhetoric rather than actionable organizational practices (Arohman, Syamsuri, & Angraini, 2025). These debates reveal the complexity of operationalizing human-centric ideals in corporate settings.

Despite the conceptual appeal of human-centric AI, organizations face tangible barriers in its adoption. One recurrent issue is the lack of interdisciplinary collaboration between technical experts, HR professionals, and ethicists, which hampers the development of robust frameworks for responsible AI (Jobin et al., 2019). In addition, small and medium-sized enterprises often lack the financial and technical capacity to implement AI systems that comply with ethical standards, resulting in uneven diffusion of best practices across industries (Zeng et al., 2019). Legal and regulatory uncertainty further complicates implementation, particularly in jurisdictions where comprehensive policies governing algorithmic transparency and data protection are still under development (Floridi, 2021). These structural barriers demonstrate that human-centric AI is not solely a design challenge but also an institutional and policy issue. As such, organizations must navigate a multilayered landscape in which technological innovation intersects with governance, regulation, and cultural expectations.

In response to these obstacles, a growing body of literature has identified emerging best practices that support human-centric AI adoption in HRM. Scholars recommend participatory approaches that actively involve employees in the design and testing of AI systems, thereby improving trust and alignment with organizational values (Umbrello & van de Poel, 2021). Transparent communication about how AI tools function and the criteria used in decision-making has also been found to mitigate concerns about fairness and bias (Kellogg et al., 2020). Cross-sector collaborations, including partnerships between academia, industry, and policymakers, are further highlighted as critical to developing practical standards and ethical guidelines (Smuha, 2021). Importantly, empirical research underscores that organizations that adopt iterative evaluation mechanisms and ethical audits are better positioned to sustain human-centric practices over time (Madiega, 2021). Together, these insights provide a foundation for translating the abstract principles of human-centric AI into actionable strategies that enhance HRM processes while safeguarding human values.

METHOD

This study employs a literature review methodology to systematically examine the concept of human-centric artificial intelligence in the context of human resource management. The data sources consist of peer-reviewed journal articles, academic books, and reputable institutional reports published within the last five years to ensure the inclusion of current and relevant perspectives. The selection of literature followed a purposive sampling approach, whereby scholarly works were identified through electronic databases such as Scopus, Web of Science, and Google Scholar using keywords including "human-centric AI," "artificial intelligence in HRM," "ethical AI," and "organizational readiness." The inclusion criteria emphasized publications that explicitly addressed AI applications in HR practices, ethical or human-centered frameworks, and organizational challenges in adoption, while works outside these thematic boundaries were excluded. To enhance rigor, reference lists of selected articles were also reviewed to capture additional relevant studies. The collected literature was then analyzed using a descriptive technique, which involved synthesizing and categorizing findings according to recurring themes, theoretical approaches, and practical implications. This process facilitated the identification of conceptual foundations, common barriers, and proposed best practices, thereby providing a comprehensive understanding of how human-centric design principles are articulated and operationalized within HRM scholarship and practice.

RESULTS AND DISCUSSION

The review of recent literature indicates that human-centric AI in human resource management is still in an emergent phase, with scholars identifying both opportunities and limitations in its development. Findings reveal that organizations implementing AI-supported recruitment and performance management often report improvements in efficiency and accuracy, particularly in screening candidates and analyzing workforce data (Mikalef et al., 2022; Bondarouk & Brewster, 2022). At the same time, these studies consistently stress that efficiency alone cannot determine the success of AI systems. Human-centric approaches demand that decision-making processes remain transparent and interpretable to ensure employee trust (Morley et al., 2021). Research also shows that when AI tools are accompanied by human oversight and ethical design considerations, employees are more likely to perceive these systems as supportive rather than threatening (Gupta et al., 2020). These findings suggest that the integration of human values into technical design is not a secondary concern but a central determinant of organizational outcomes in AI adoption.

Despite these promising results, the literature highlights several challenges that hinder the widespread adoption of human-centric AI in HRM. One recurrent issue is algorithmic bias, which arises when AI systems trained on historical data replicate existing social inequalities, leading to discriminatory outcomes in hiring and evaluation processes (Bogen & Rieke, 2018; Ajunwa, 2020). Scholars also emphasize that opacity in algorithmic decision-making, often referred to as the "black box" problem, undermines employee confidence in AI-driven HR practices (Burrell, 2016; Raghavan et al., 2020). Privacy concerns further complicate adoption, as AI systems frequently rely on extensive personal and behavioral data that may be vulnerable to misuse (Möhlmann et al., 2021). These barriers are not merely technical but also ethical and legal, demanding that organizations develop frameworks to ensure fairness, accountability, and compliance with regulatory standards.

Without addressing these challenges, organizations risk exacerbating inequalities and eroding the legitimacy of HRM functions.

The discussion on strategic implications underscores the importance of adopting governance mechanisms and best practices tailored to human-centric AI. Studies suggest that organizations that implement algorithmic impact assessments, establish ethics boards, and promote participatory design processes are more successful in mitigating risks while maintaining employee engagement (Cath, 2018; Mittelstadt, 2019). Cross-functional collaboration between HR professionals, data scientists, and legal experts is also identified as a key enabler of responsible adoption (Howard & Borenstein, 2018). Moreover, transparent communication with employees regarding the purpose and limitations of AI tools enhances perceptions of fairness and strengthens organizational culture (Wood et al., 2019). These strategies highlight that the human-centric paradigm is not merely a design philosophy but a practical framework requiring deliberate organizational action. Effective governance therefore represents a cornerstone in ensuring that AI in HRM contributes to long-term value creation rather than short-term efficiency alone.

Looking ahead, the synthesis of findings points to the necessity of embedding human-centric AI into broader organizational transformation strategies. Literature emphasizes that organizations must move beyond reactive compliance toward proactive development of ethical, inclusive, and sustainable AI systems (Siau & Wang, 2020; Fountaine et al., 2019). This involves investing in continuous training for employees and managers to improve digital literacy, thereby reducing resistance and enhancing collaboration with AI systems (Arohman, Syamsuri, & Angraini, 2025). Research further suggests that adopting adaptive evaluation mechanisms, such as ongoing audits and stakeholder feedback loops, is crucial to ensure that human-centric values remain relevant as technologies evolve (Rahwan, 2018). Strategically, organizations that integrate these practices are better positioned to build resilience in an uncertain future of work, aligning technological innovation with social responsibility. In this sense, human-centric AI in HRM is not simply a response to ethical concerns but an opportunity to reimagine organizational practices in ways that reinforce human dignity and collective progress.

CONCLUSION

The exploration of human-centric artificial intelligence in human resource management demonstrates that while AI technologies hold significant promise for enhancing efficiency, accuracy, and decision-making, their true value lies in the extent to which they are aligned with human values and organizational ethics. From the global context of digital transformation to the specific challenges of algorithmic bias, opacity, and privacy concerns, it becomes evident that adopting AI in HRM is not merely a technological endeavor but a socio-technical process requiring deliberate governance, transparency, and inclusivity. The literature review underscores that human-centric frameworks, when grounded in participatory design and supported by cross-functional collaboration, create conditions that foster trust, employee engagement, and fairness. The results and discussion further highlight that barriers such as limited organizational readiness, regulatory uncertainty, and symbolic adoption practices must be addressed through strategic interventions like ethical audits, continuous employee training, and proactive governance mechanisms. Ultimately,

embedding human-centric AI into HRM is both a challenge and an opportunity: a challenge in overcoming structural and ethical obstacles, and an opportunity to reimagine organizational practices in ways that strengthen dignity, equity, and sustainable value creation. By synthesizing current scholarship and emerging best practices, this study contributes a comprehensive understanding of how organizations can responsibly navigate the intersection of AI and HRM to ensure that technological innovation genuinely enhances, rather than diminishes, the human experience of work.

REFERENCES

Ajunwa, I. (2020). The paradox of automation as anti-bias intervention. *Cardozo Law Review, 41*(4), 1671–1714.

Arohman, R., & Syamsuri, A. R. (2025). Optimizing the role of artificial intelligence in enhancing effectiveness of human resource management in the hybrid work era. *IJMaKS: International Journal of Management Knowledge Sharing, 2*(1), 241–250.

Arohman, R., Syamsuri, A. R., & Angraini, M. (2025a). A literature review on work-life balance and employee stress levels. *IJMaKS: International Journal of Management Knowledge Sharing, 2*(1), 311–323.

Arohman, R., Syamsuri, A. R., & Angraini, M. (2025b). Exploring wage increase strategy in the context of employee productivity: A literature review. *IJMaKS: International Journal of Management Knowledge Sharing, 2*(1), 320–333.

Bogen, M., & Rieke, A. (2018). Help wanted: An examination of hiring algorithms, equity, and bias. *Upturn.*

Bondarouk, T., & Brewster, C. (2022). The future of HR and AI: Challenges and opportunities. *Human Resource Management Review, 32*(2), 100857.

Burrell, J. (2016). How the machine 'thinks': Understanding opacity in machine learning algorithms. *Big Data & Society, 3*(1), 1–12.

Cath, C. (2018). Governing artificial intelligence: Ethical, legal and technical opportunities and challenges. *Philosophical Transactions of the Royal Society A, 376*(2133), 20180080.

Dignum, V. (2019). Responsible artificial intelligence: Designing AI for human values. *IT Professional, 21*(6), 82–85.

Floridi, L. (2021). The European legislation on AI: A brief analysis of its philosophical approach. *Philosophy & Technology, 34*(2), 215–222.

Fountaine, T., McCarthy, B., & Saleh, T. (2019). Building the AI-powered organization. *Harvard Business Review, 97*(4), 62–73.

Gal, U., Jensen, T. B., & Stein, M. K. (2020). Breaking the vicious cycle of algorithmic management: A virtue ethics approach to people analytics. *Information and Organization, 30*(2), 100301.

Gupta, A., Mejia, C., & Kajikawa, Y. (2020). Business, innovation and digital ecosystems: The rise of artificial intelligence. *Technological Forecasting and Social Change, 162*, 120370.

Haenlein, M., Kaplan, A., Tan, C. W., & Zhang, P. (2019). Artificial intelligence and management: The automation–augmentation paradox. *Business Horizons, 62*(6), 741–749.

Howard, A., & Borenstein, J. (2018). The ugly truth about ourselves and our robot creations: The problem of bias and social inequity. *Science and Engineering Ethics, 24*(5), 1521–1536.

Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. *Nature Machine Intelligence, 1*(9), 389–399.

Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. *Academy of Management Annals, 14*(1), 366–410.

Köchling, A., & Wehner, M. C. (2020). Discriminated by an algorithm: A systematic review of discrimination and fairness by algorithmic decision-making in the context of HR recruitment and HR development. *Business Research, 13*(3), 795–848.

Madiega, T. (2021). Artificial intelligence act. *European Parliamentary Research Service Study*.

Meijerink, J., Bondarouk, T., & Lepak, D. P. (2021). When HRM meets machines: Comparing the value of human and algorithmic HRM through the lens of value creation. *International Journal of Human Resource Management, 32*(12), 2579–2602.

Mikalef, P., Conboy, K., Lundström, J. E., & Popovic, A. (2022). Artificial intelligence-enabled dynamic capabilities and their effect on firm performance. *Technological Forecasting and Social Change, 170*, 120877.

Mittelstadt, B. D. (2019). Principles alone cannot guarantee ethical AI. *Nature Machine Intelligence, 1*(11), 501–507.

Möhlmann, M., Zalmanson, L., Henfridsson, O., Gregory, R. W., & Lyytinen, K. (2021). Algorithmic management of work on online labor platforms: When matching meets control. *MIS Quarterly, 45*(4), 1999–2022.

Morley, J., Floridi, L., Kinsey, L., & Elhalal, A. (2021). From what to how: An initial review of publicly available AI ethics tools, methods and research to translate principles into practices. *Science and Engineering Ethics, 27*(1), 4.

Parent-Rocheleau, X., & Parker, S. K. (2021). Algorithms as work designers: How algorithmic management influences the design of jobs. *Human Resource Management Review, 31*(4), 100765.

Rahwan, I. (2018). Society-in-the-loop: Programming the algorithmic social contract. *Ethics and Information Technology, 20*(1), 5–14.

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.

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

Santoni de Sio, F., & Van den Hoven, J. (2018). Meaningful human control over autonomous systems: A philosophical account. *Frontiers in Robotics and AI, 5*, 15.

Siau, K., & Wang, W. (2020). Artificial intelligence (AI) ethics: Ethics of AI and ethical AI. *Journal of Database Management, 31*(2), 74–87.

Smuha, N. A. (2021). From a "race to AI" to a "race to AI regulation": Regulatory competition for artificial intelligence. *Law, Innovation and Technology, 13*(1), 57–84.

Stahl, B. C., Antoniou, J., Ryan, M., & Macnish, K. (2021). Organizing AI ethics: Problems, practices, and principles. *AI & Society, 36*(2), 535–547.

Umbrello, S., & van de Poel, I. (2021). Mapping value sensitive design onto AI for social good principles. *AI & Society, 36*(2), 451–467.

Van Esch, P., Black, J. S., & Ferolie, J. (2021). Marketing AI recruitment: The next phase in job applicant attraction. *Computers in Human Behavior, 115*, 106632.

Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019). Good gig, bad gig: Autonomy and algorithmic control in the global gig economy. *Work, Employment and Society, 33*(1), 56–75.

Zeng, Y., Lu, E., & Huangfu, C. (2019). Linking artificial intelligence principles. *arXiv preprint arXiv:1812.04814.*