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Artificial Intelligence in Hospital Human Resource Management: A Systematic Review and Bibliometric Analysis

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ABSTRACT

Purpose: This study examines research trends on the application of Artificial Intelligence (AI) in hospital human resource management (HRM) and explores its implications for employee performance and career development.

Research Method: A Systematic Literature Review (SLR) and bibliometric analysis were conducted on 30 articles published between 2020 and 2025. Relevant studies were identified through a structured keyword search and screened using the PRISMA protocol. VOSviewer was employed to map research trends, thematic clusters, and keyword relationships.

Results and Discussion: Our major research clusters were identified as: AI and employee performance; AI in recruitment and talent management; career development and employee engagement; and digital transformation with data analytics. Publications increased substantially after 2023, reflecting growing interest in AI-driven HRM. The literature indicates a shift from operational efficiency and automation toward strategic workforce management, data-driven decision-making, talent optimization, and sustainable career development. AI is increasingly recognized as a tool for enhancing organizational adaptability and human capital effectiveness in hospitals.

Implications: Healthcare organizations should integrate AI with workforce capabilities and organizational readiness to improve employee performance and support sustainable career development.

Originality: This study provides a comprehensive synthesis of AI research in hospital HRM by combining PRISMA-based review procedures with bibliometric analysis.

Keywords: artificial intelligence; hospital; HRM; employee performance; career development; bibliometric analysis.

1. Introduction

Digital transformation has brought significant changes across various organizational sectors, including healthcare. Hospitals, as complex healthcare service organizations, are required to continuously improve operational efficiency, service quality, and human resource performance. One of the technologies increasingly adopted to support this transformation is Artificial Intelligence (AI). The implementation of AI in healthcare organizations is not only related to clinical systems but is also being applied to human

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resource management (HRM) to enhance decision-making effectiveness, work efficiency, and the career development of healthcare personnel. The implementation of this technology is seen as capable of optimizing workforce management through more accurate data analysis, objective performance evaluation systems, and technology-based competency management (Arifian, 2025; Lutfi & Mohammadi, 2025).

In hospital management, human resources are a strategic factor that determines the quality of healthcare services. The performance of healthcare workers, job satisfaction, and organizational commitment are important indicators of the hospital organization's success. Research shows that the quality of human resource management is significantly related to improvements in organizational performance and the quality of health services (Abdullah *et al.,* 2021; Gile *et al.,* 2018). With the development of digital technology, various organizations have begun integrating AI into HR management practices, including recruitment, performance analysis, career planning, and employee competency development. This technological integration enables organizations to make data-driven decisions and to strategically enhance the effectiveness of workforce management (Úbeda García *et al.,* 2025).

Several previous studies have discussed the application of AI in human resource management from various perspectives. Several studies highlight the role of AI in enhancing employee productivity and job satisfaction through more objective and data-driven performance management systems (Anshori *et al.,* 2025; Usman *et al.,* 2025). Other research shows that AI can assist organizations in talent analysis, employee retention prediction, and workforce competency development through predictive analytics technology (Căvescu & Popescu, 2025; Khojin & Syaifullloh, 2025). Moreover, various literature reviews emphasize that integrating AI into HRM can enhance organizational efficiency and support digital transformation in the healthcare sector (Astawa & Mahayasa, 2024; Koleangan *et al.,* 2024). Several studies also highlight the importance of career development and the enhancement of digital skills for the workforce in facing the implementation of Artificial Intelligence (AI). Technological transformation demands that organizations adjust their competency development strategies so that employees can adapt to changes in digital-based work systems (Prabowo *et al.,* 2024; Kusworo, 2026). In the hospital sector, the integration of AI with hospital management information systems is also beginning to support the management of healthcare personnel and managerial decision-making more effectively (Lanang Triana *et al.,* 2024).

Although various studies have discussed the implementation of Artificial Intelligence (AI) in human resource management and the healthcare sector, most research still focuses on conceptual aspects or on case studies of specific organizations. Research that specifically maps trends in the development of studies on the application of Artificial Intelligence (AI) in human resource management in the hospital sector remains relatively limited. Moreover, studies that integrate the systematic literature review approach with the PRISMA method and bibliometric analysis using VOSviewer to identify research patterns, scientific collaboration, and the development of research themes in this field are still rarely conducted. In fact, mapping research trends is very important for understanding the development of the literature, identifying dominant research themes, and determining the direction of future research.

Based on these conditions, there is a research gap: studies on the relationship between the application of Artificial Intelligence (AI) in hospital human resource management and its implications for employee performance and career development have not been comprehensively analyzed using bibliometric and systematic review approaches. Therefore, this research is novel in integrating a

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PRISMA-based systematic literature review with a bibliometric analysis using VOSviewer to identify research trends, patterns of scientific collaboration, and main themes in the literature on the application of AI in hospital human resource management.

This research uses a systematic literature review approach, following the PRISMA protocol, to select and evaluate the literature. Next, a bibliometric analysis was conducted using VOSviewer to map relationships among keywords, research topic trends, and collaboration networks in scientific publications on the application of AI in human resource management in the hospital sector. This approach allows researchers to obtain a comprehensive overview of research developments and identify future research opportunities. The objective of this research is to analyze research trends on the application of Artificial Intelligence in hospital human resource management and to identify its implications for employee performance and career development through a systematic literature review based on PRISMA and a bibliometric analysis using VOSviewer. The results of this research are expected to contribute to the academic literature on technology-based human resource management and provide practical insights for hospital organizations to optimize the use of AI to improve healthcare worker performance and employee career development.

The remainder of this paper is structured as follows. Section 2 presents a literature review and hypothesis development. Section 3 provides methodology. Section 4 presents findings and discussion. Section 5 provides a conclusion.

2. Literature Review and Hypothesis Development

2.1 Artificial Intelligence in Human Resource Management

The development of Artificial Intelligence (AI) has transformed the paradigm of human resource management across organizations, including the healthcare sector. AI enables organizations to process large volumes of data, conduct predictive analytics, and enhance decision-making efficiency across various HR management functions, such as recruitment, performance evaluation, competency development, and employee career planning. The integration of AI into human resource management (HRM) also supports organizations in creating more objective, data-driven performance management systems, thereby improving overall organizational effectiveness. Several studies show that the application of AI in HRM can enhance operational efficiency and support organizations' digital transformation. AI helps organizations identify employee potential, predict workforce needs, and improve the quality of decision-making in human resource management (Úbeda García *et al.,* 2025; Lutfi & Mohammadi, 2025). Additionally, the integration of AI in HRM also plays a role in enhancing organizational innovation and fostering the creation of management systems that are more adaptive to changes in the business environment.

In the hospital sector, the use of AI in HR management is becoming increasingly important due to the complexity of healthcare organizations and the need for effective workforce management. The implementation of AI can assist hospital management in analyzing healthcare workers' performance, monitoring work productivity, and designing more targeted career development strategies (Lanang Triana *et al.,* 2024; Koleangan *et al.,* 2024).

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2.2 Artificial Intelligence and Employee Performance

Employee performance is one of the main factors determining an organization's success in achieving its strategic goals. In healthcare organizations, the performance of healthcare workers greatly influences the quality of service provided to patients. Therefore, various organizations are beginning to use digital technologies, including AI, to enhance the effectiveness of performance management systems. Previous research shows that the use of AI in HRM can help organizations conduct performance evaluations more objectively and in a more data-driven manner, thereby increasing employee productivity. AI-based systems can analyze various performance indicators in real time, provide faster feedback, and assist management in identifying factors affecting employee performance (Anshori *et al.,* 2025; Usman *et al.,* 2025). In addition, AI can also be used to develop a more transparent and accurate performance appraisal system, thereby increasing work motivation and employee commitment to the organization.

2.3 Artificial Intelligence and Career Development

The development of digital technology also influences organizational strategies in developing employee careers. In the era of digital transformation, organizations are required to provide career development systems that are more adaptive to the changing needs of workforce competencies. AI can help organizations design more targeted career development programs through employee data analysis, competency identification, and prediction of future skill needs. Research shows that AI can be used to identify employees' potential, design career paths aligned with individual competencies, and provide relevant training recommendations to enhance employees' skills (Căvescu & Popescu, 2025; Prabowo *et al.,* 2024). Thus, the use of AI in HRM can help organizations create a more effective, data-driven career development system. In hospitals, the career development of healthcare workers is crucial to improving the quality of healthcare services and ensuring organizational sustainability. The implementation of AI in HRM can assist hospital management in designing more systematic and sustainable career development strategies.

2.4 Employee Performance and Career Development

Employee performance is also closely related to career development within the organization. Employees who demonstrate high performance tend to have greater opportunities for promotion, increased responsibilities, and professional development. Therefore, organizations typically use performance evaluation results to design employee career development programs. Previous research shows that improving employee performance can encourage better career development because organizations tend to provide promotion and training opportunities to high-performing employees (Atatsi *et al.,* 2019). In addition, an effective performance management system can also help organizations identify leadership potential and design more strategic career development programs.

In the hospital sector, the relationship between healthcare performance and career development becomes an important factor in enhancing work motivation and retaining a quality workforce. Therefore, employee performance is expected to positively impact career development within the hospital organization.

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2.5 Conceptual Framework

Based on the literature review, this research develops a conceptual framework that explains the relationship between the application of Artificial Intelligence in human resource management and employee performance and career development within hospital organizations. AI in Human Resource Management is expected to influence not only employee performance but also career development, both directly and through enhanced performance. This conceptual framework provides a theoretical basis for analyzing research trends in the application of AI in hospital human resource management and its implications for employee performance and career development, using a systematic literature review and bibliometric analysis.

Conclude this section by summarizing how the literature review and hypotheses align with your research aims, emphasizing the study's potential contributions to theory, practice, or policy. Therefore, based on this relationship, the hypothesis proposed in this study is as follows:

H1: *Artificial Intelligence in Human Resource Management Positively Impacts The Performance of Hospital Employees.*

H2: *Artificial Intelligence In Human Resource Management Has a Positive Impact on The Career Development of Hospital Employees.*

H3: *Employee Performance Positively Influences the Career Development of Hospital Staff.*

3. Research Method

This research uses a systematic literature review (SLR) combined with bibliometric analysis to examine the development of research on the application of Artificial Intelligence in hospital human resource management and its implications for employee performance and career development. The research procedure refers to the PRISMA Protocol guidelines, which include four main stages: identification, screening, eligibility, and inclusion. The initial stage of the research begins with determining research objectives and formulating research questions, followed by developing a literature search strategy. This research integrates the stages of SLR and bibliometric analysis because both have a similar flow, starting from the establishment of objectives, data collection, to the systematic analysis and interpretation of results.

Data collection was conducted chronologically by accessing several reputable scientific databases, including Google Scholar, ScienceDirect, and Wiley Online Library. Literature search was conducted by entering keywords in the title, abstract, and keywords sections. The combination of keywords used in this research is: (“artificial intelligence” OR “AI”) AND (“human resource management” OR “HRM” OR “hospital HR”) AND (“employee performance” OR “job performance”) AND (“career development” OR “career growth”). Next, the search was limited to articles and reviews, and to the publication period between 2020 and 2025. This time frame was chosen to reflect recent developments in research over the past decade relevant to advancements in digital technology, particularly AI in the healthcare sector. The next stage is the literature selection process based on the established inclusion and exclusion criteria. Inclusion criteria are articles that discuss the application of AI in HR management, particularly in the healthcare or hospital sector, and that relate to employee performance and career development. Meanwhile, exclusion criteria include articles that are not relevant to the topic, not available in full text, or do not use clear scientific methods. This process is carried out to ensure the quality and relevance of the analyzed data.

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In the data extraction stage, the selected articles are analyzed to answer the following research question:

- **RQ1:** What are the research trends related to the application of Artificial Intelligence in hospital human resource management based on bibliometric analysis using VOSviewer?
- **RQ2:** What theoretical and methodological approaches are used to explain the relationship between AI, employee performance, and career development?
- **RQ3:** What are the implications of the research findings for hospital management strategies in enhancing HR performance and technology based career development?

The final stage is a bibliometric analysis using VOSviewer to map the relationships among keywords (co-occurrence), author collaboration networks (co-authorship), and publication trends. This analysis aims to identify the direction of research development, dominant themes, and research gaps that can serve as the basis for further study development. Meanwhile, the next step is document screening or extraction, applying the inclusion and exclusion criteria established in the previous identification stage. At this stage, all articles and reviews are extracted (screened) to determine the data suitable for SLR analysis. The selection criteria are presented in Table 1.

Table 1. Selection Criteria

No	Inclusion Criteria	Exclusion Criteria
1	Articles written in English and Indonesian relevant to Artificial Intelligence in Hospital Human Resource Management	Articles not written in English or Indonesian (**n = 58**)
2	Articles containing relevant keywords such as "artificial intelligence", "human resource management", "hospital HR", "employee performance", and "career development" in the title, abstract, or keywords	Articles that do not match the research criteria or do not contain relevant keywords (**n = 78**)
3	Non-duplicated articles	Duplicated articles (**n = 7**)

Data extraction using the exclusion criteria described above yielded 143 articles. The articles were then assessed for eligibility. The collected data will be evaluated using the following quality assessment criteria:

- Was the article published in a journal listed in Google Scholar, PubMed, or ProQuest between 2020 and 2025?
- Does the article cover the concept of the role of artificial intelligence in hospital human resource management, particularly in relation to employee performance and career development? If the research questions align with this focus, the article meets the quality assessment criteria for eligibility.

The flowchart in Figure 1 summarizes the details of the SLR and bibliometric analysis in the following steps: (1) Identification of articles based on keywords. Systematic data search in Google Scholar and journal articles from 2020 to 2025 (2) in screening; 196 articles were extracted using exclusion criteria. A total of 143 articles were excluded, and 53 articles proceeded to the next level; (3) in terms of eligibility, the articles had to be validated and completed, and (4) finally, 30 articles in full text that were eligible for Systematic Literature analysis were included, and their content was reviewed

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manually. Data synthesis continued with the extraction of article data corresponding to the Research Questions (RQs) and their thematic organization.

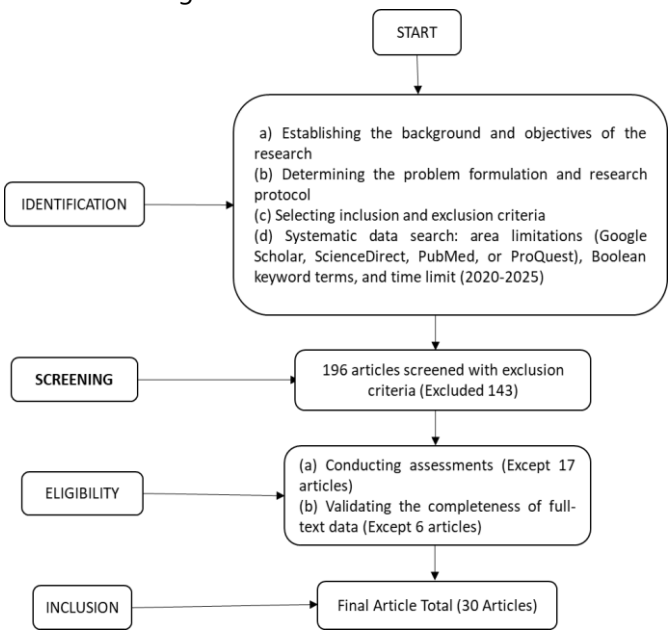

Figure 2. The flowchart

4. Results and Discussion

4.1 Analysis Results

4.1.1 RQ1: Trends in Artificial Intelligence Research in Hospital Human Resource Management

Network Visualization in VOSviewer maps the conceptual relationships among keywords based on their co-occurrence frequency in the literature. Each color on the map indicates a theme cluster formed by the semantic relationships among variables. At the same time, a node's size reflects the intensity of discussion of a term within the research network. This mapping serves as the main instrument for answering RQ1, which concerns how research trends related to the application of Artificial Intelligence (AI) in hospital human resource management (HRM) evolve and interact with supporting concepts such as employee performance, career development, data analytics, and digital transformation. Based on the visualization results, there are four main clusters representing the theoretical and empirical orientations in research during the 2020–2025 period.

Cluster 1: Artificial Intelligence and Employee Performance

The first cluster represents the core of digital transformation in hospital human resource management through the integration of Artificial Intelligence (AI), focusing on improving employee performance, productivity, and decision-making quality. Conceptually, the relationship between these variables can be explained through the resource-based view (RBV) and technology acceptance model (TAM) perspectives, where AI is positioned as a strategic resource capable of creating competitive advantage through the optimization of HR capabilities and organizational operational efficiency (Úbeda-García *et al.,* 2025; Kusworo, 2026).

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Empirically, various studies show that implementing AI in human resource management practices significantly improves workforce performance in the healthcare sector. AI-based systems, such as decision support systems and machine learning, have proven capable of enhancing the quality of data-driven decision-making, particularly in medical staff scheduling, performance evaluation, and more accurate and adaptive workforce planning (Wang *et al.,* 2026; Safshekan *et al.,* 2026). This is reinforced by findings indicating that integrating AI into hospital management information systems can enhance data management effectiveness and support more efficient administrative processes (Lanang Triana *et al.,* 2024; Amelia *et al.,* 2021). Furthermore, AI helps reduce the administrative burden on healthcare workers by automating routine tasks, allowing medical staff to focus more on patient care. This condition has a direct implication on the improvement of service quality and individual performance, as explained in a study on the relationship between internal service quality and employee performance mediated by work well-being (Abdullah *et al.,* 2021). Moreover, the implementation of AI has been shown to enhance productivity and job satisfaction among healthcare workers by providing a more structured, technology-based work system (Anshori *et al.,* 2025; Namatovu & Kyambade, 2025).

From a productivity perspective, the use of AI in HRM drives increased operational efficiency through the optimization of work processes, the reduction of human error, and the acceleration of large-scale data analysis. Literature reviews show that organizations that adopt AI in HRM experience significant increases in productivity and accuracy compared to conventional systems (Ketut Witara, 2025; Anggraeni *et al.,* 2026). In addition, AI contributes to the development of more objective, data-driven performance appraisal systems, thereby enhancing transparency and accountability in employee performance management (Khojin & Syaifullloh, 2025). Strategically, AI functions not only as a technological tool but also as an enabler of the transformation of hospital organizations towards more adaptive and data-driven systems. The integration of AI in HRM enables organizations to develop more proactive human resource management strategies, including competency development, workforce retention, and increased employee engagement (Dima *et al.,* 2024; Usman *et al.,* 2025). This is in line with findings that the application of AI in HRM can strengthen the relationship between HRM practices and overall organizational performance (Gile *et al.,* 2018; Purwadhi *et al.,* 2025).

Thus, this cluster emphasizes that AI plays a crucial role in enhancing the performance and productivity of the hospital workforce by optimizing decision-making, improving operational efficiency, and developing technology-based work systems. These findings reinforce AI's role as a key driver of the transformation of HR management in the healthcare sector, with a focus on improving service quality and the organization's competitiveness in a sustainable manner.

Cluster 2: Artificial Intelligence in Recruitment and Talent Management

The second cluster, containing the keywords recruitment, talent management, automation, human capital, and digital HR, reflects a fundamental transformation in human resource management practices in the increasingly digitized healthcare sector. From the perspective of the resource-based view (RBV) theory, human capital is seen as a strategic asset that can provide a competitive advantage to the organization, making the optimization of recruitment processes and technology-based talent management crucial in enhancing the performance of hospital organizations (Gile *et al.,* 2018; Purwadhi *et al.,* 2025).

Empirically, the adoption of Artificial Intelligence (AI) in the recruitment process has shifted conventional selection mechanisms towards more data-driven decision-making. Technologies such as

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natural language processing (NLP) and predictive algorithms enable organizations to automatically screen candidates, analyze competency fit, and predict future performance potential more accurately and objectively (Safshekan *et al.,* 2026; Dima *et al.,* 2024). This is in line with findings that HR digitalization can enhance the efficiency of the selection process while minimizing the subjective bias that often occurs in traditional recruitment (Astawa & Mahayasa, 2024; Lutfi & Mohammadi, 2025). Furthermore, the integration of AI into talent management extends beyond recruitment to include competency development, career planning, and employee retention. AI-based systems can identify training needs in a personalized manner by analyzing individual performance and competency data, thereby supporting the development of human resources that are more adaptive to changes in the work environment (Kusworo, 2026; Prabowo *et al.,* 2024). Furthermore, the use of predictive analytics in HR allows organizations to anticipate turnover rates and design more effective retention strategies (Căvescu & Popescu, 2025).

In the healthcare sector, the implementation of AI in HR functions also contributes to increased productivity and job satisfaction among healthcare workers through more precise job placements and optimal workload management (Anshori *et al.,* 2025; Wang *et al.,* 2026). This aligns with the concept of internal service quality, which emphasizes the importance of employee well-being as a mediator in enhancing organizational performance and commitment (Abdullah *et al.,* 2021). However, the transformation towards digital HR also presents challenges, particularly regarding the readiness of technological infrastructure, data quality, and ethical issues in the use of AI, such as algorithmic transparency and employee privacy protection (Koleangan *et al.,* 2024). Therefore, hospital organizations need to adopt a strategic approach that focuses not only on technology implementation but also on strengthening HR capabilities and sustainable digital governance (Suprayitno, 2025; Úbeda-García *et al.,* 2025). Overall, this cluster indicates a paradigm shift from traditional HR approaches to a more adaptive, predictive, and strategic AI-based HR management system. This transformation not only enhances operational efficiency but also strengthens HR's role as a strategic partner in supporting organizational performance and the sustainable career development of healthcare professionals.

Cluster 3: Artificial Intelligence and Employee Career Development

The third cluster, which includes career development, training, skill development, learning systems, and employee engagement, represents a significant shift in the landscape of hospital human resource management research towards a more strategic and technology-based approach. These findings indicate that the implementation of Artificial Intelligence (AI) is no longer limited to administrative functions but has evolved into a key instrument for supporting the sustainable and adaptive career development of healthcare professionals in response to organizational dynamics (Astawa & Mahayasa, 2024; Úbeda-García *et al.,* 2025).

In this context, AI serves as an enabler of a more precise competency development system through predictive analytics and machine learning. This technology enables hospital organizations to identify competency gaps in real time, map individual training needs, and provide personalized learning program recommendations based on employee profiles (Safshekan *et al.,* 2026; Namatovu & Kyambade, 2025). This is in line with the concept of strategic human resource development, which emphasizes aligning individual development with organizational goals (Prabowo *et al.,* 2024). Additionally, the integration of AI in digital learning systems (e-learning systems) also enhances the flexibility and accessibility of training, thereby supporting lifelong learning in the healthcare sector (Lanang Triana *et*

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al., 2024; Lutfi & Mohammadi, 2025). Furthermore, the use of AI in career development has been shown to increase employee engagement. Employees who receive technology-based development support tend to have a positive perception of the organization, particularly regarding fairness, transparency, and career opportunities (Usman *et al.,* 2025). This directly increases intrinsic motivation and job satisfaction, ultimately strengthening organizational commitment (Anshori *et al.,* 2025). These findings are consistent with social exchange theory, in which the organization's investment in employee development is reciprocated by increased engagement and performance (Abdullah *et al.,* 2021).

In addition, employee engagement is closely correlated with workforce retention, especially in the healthcare sector, which faces high turnover rates. AI enables more proactive talent management through predictive analysis of employee turnover risk, allowing organizations to design timely, data-driven interventions (Căvescu & Popescu, 2025; Wang *et al.,* 2026). Thus, the implementation of AI not only enhances the effectiveness of training and development but also serves as a sustainable retention strategy. Overall, this cluster emphasizes that integrating AI into career development and organizational learning systems is an important determinant of improving the quality of hospital human resources. This approach not only strengthens the technical and adaptive competencies of healthcare workers but also creates a more engaging, productive, and sustainability-oriented work ecosystem for organizational performance (Kusworo, 2026; Ketut Witara, 2025).

Cluster 4: Digital Transformation and Data Analysis in Hospital Human Resources

The fourth cluster, which includes data analytics, digital transformation, healthcare management, information systems, and innovation, shows that the implementation of Artificial Intelligence (AI) in hospital management does not stand alone as a single technology, but rather is integrated into a broader digital transformation ecosystem. From a theoretical perspective, this aligns with socio-technical systems theory, which emphasizes that the interaction between technological and organizational social systems strongly influences the success of technology. Digital transformation in hospitals demands the integration of information systems, managerial processes, and human resource capabilities that are adaptive to technological changes (Effendy *et al.,* 2024; Purwadhi *et al.,* 2025).

Empirically, various studies show that AI plays a strategic role in processing big data to support evidence-based management. The use of data analytics enables hospital organizations to conduct more precise HR planning, including workforce demand projections, workload analysis, and real-time employee performance evaluations. A study by Wang *et al. (2026) emphasizes that AI-based HR management systems can enhance the efficiency of healthcare staff scheduling and optimize organizational* performance. Additionally, the application of predictive analytics in HRM has been shown to enhance employee retention and the effectiveness of talent management (Căvescu & Popescu, 2025; Safshekan *et al.,* 2026). Furthermore, the integration of AI in hospital information systems strengthens managerial functions through process automation, improved data accuracy, and accelerated information flow between work units. This is in line with the findings of Amelia *et al. (2021), which show that the performance of hospital accounting information systems significantly determines the quality of organizational* decision-making. In a broader context, the development of AI-based information management systems also drives innovation in healthcare services and the continuous improvement of service quality (Lanang Triana *et al.,* 2024; Trenggono & Bachtiar, 2023). However, the success of AI implementation in this cluster is determined not only by technological sophistication but also by the organization's overall readiness. Factors such as digital infrastructure, an organizational culture that

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supports innovation, and employees' digital competencies become the main determinants. Research shows that the lack of HR readiness and resistance to change can be significant barriers to the adoption of AI technology (Anggraeni *et al.,* 2026; Suprayitno, 2025). Therefore, hospital organizations need to develop strategies to strengthen digital competencies through AI-based training and development to enhance workforce readiness (Kusworo, 2026; Prabowo *et al.,* 2024).

In addition, the quality of internal services and employee well-being play important roles in supporting the effectiveness of technology implementation. Abdullah *et al. (2021) emphasize that good internal service quality enhances job satisfaction and employee performance, ultimately strengthening the success of organizational* transformation. This indicates that AI integration must be balanced with a human-centered management approach to ensure technology delivers optimal added value. Thus, this fourth cluster affirms that AI serves as an enabler in the digital transformation of hospitals aimed at improving organizational performance. The integration of data analytics, information systems, and managerial innovation results in a more adaptive, efficient, and data-driven approach to HR management. However, the sustainability of AI implementation heavily relies on the holistic synergy among technology, people, and organizational systems.

The four clusters in the network visualization show mutually reinforcing evolutionary connections in the development of Artificial Intelligence (AI) in hospital human resource management. The first cluster emphasizes the initial foundation of improving efficiency and operational performance, which then develops in the second cluster through the optimization of recruitment and data-driven talent management. This development continues in the third cluster, which focuses on career development and employee engagement as part of a sustainable performance enhancement strategy. The integration of these three clusters reaches a more comprehensive stage in the fourth cluster, where AI is implemented within a holistic digital transformation framework through data analytics, information systems, and organizational innovation. Conceptually and empirically, this pattern emphasizes a paradigm shift from the operational use of AI to a strategic role in creating competitive advantages for hospital organizations, grounded in evidence-based management and digital capabilities (Anggraeni *et al.,* 2026; Wang *et al.,* 2026; Úbeda-García *et al.,* 2025).

In the early period around 2020–2022, studies on Artificial Intelligence (AI) in hospital human resource management still focused on improving operational efficiency and employee performance. AI was utilized as a tool to automate work processes and data processing, and to enhance the productivity of healthcare workers. This approach positions technology as a supporting instrument in administrative and operational activities, so its contributions are more visible in terms of work efficiency and effectiveness (Trenggono & Bachtiar, 2023; Astawa & Mahayasa, 2024). In addition, classical factors that influence employee performance, such as the quality of internal services and work welfare, remain a primary focus for optimizing performance (Abdullah *et al.,* 2021; Atatsi *et al.,* 2019).

Entering 2023, there has been a shift in research focus towards the utilization of AI in more strategic managerial functions, particularly in recruitment, talent management, and data-driven decision-making. AI is increasingly used to improve the accuracy of workforce selection, identify employee potential, and support more objective, data-driven decision-making systems (Căvescu & Popescu, 2025; Safshekan *et al.,* 2026). This indicates that the role of AI is no longer limited to administrative functions but has evolved into an integral part of a more modern and adaptive HR management system (Úbeda-García *et al.,* 2025; Dima *et al.,* 2024).

In the 2024–2025 period, research developments are increasingly comprehensive, with an emphasis on career development, employee engagement, and organizational digital transformation. AI

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is used to design more structured career paths, provide training recommendations tailored to individual needs, and enhance employees' work experiences through integrated digital systems (Prabowo *et al.,* 2024; Kusworo, 2026). Additionally, the integration of AI into data analytics and hospital information systems fosters more proactive, innovative, and sustainable HR management (Effendy *et al.,* 2024; Lanang Triana *et al.,* 2024).

The interconnections among concepts in this research indicate that HR management remains a central element linking various dimensions, such as employee performance, career development, and digital transformation. However, in the current context, this relationship is strengthened by data analytics, digital competencies, and organizational innovation, which enable evidence-based management (Anggraeni *et al.,* 2026; Khojin & Syaifullloh, 2025). This emphasizes that HR management in the digital era is no longer merely administrative; it has evolved into a strategic function that integrates technology, people, and organizational systems.

Overall, the development of this research trend reflects a paradigm shift from using AI as a tool to enhance operational efficiency to a strategic role in hospital human resource management. AI not only improves employee performance but also shapes adaptive career development systems, enhances employee engagement, and strengthens the organization's competitiveness in the era of digital transformation (Anshori *et al.,* 2025; Usman *et al.,* 2025; Arifian, 2025). Thus, the integration of AI into HR management is a key factor in creating innovative, responsive, and sustainable hospital organizations.

Table 2. Frequency of Articles Based on Year of Publication

Year of Publication	Frequency (f)	Percentage (%)
2020	4	13.33%
2021	6	20%
2022	0	0%
2023	3	10%
2024	9	30%
2025	8	26.67%
Total	30	100%

Data show that publications increased significantly after 2023, peaking at 30% in 2024 and then at 26.67% in 2025, with no publications in 2022, and the period from 2020 to 2021 contributed only 33.33%. This pattern indicates that interest in research on Artificial Intelligence (AI) in hospital human resource management has rapidly developed post-pandemic, in line with the need for digital transformation and improved workforce performance. In addition to increasing quantitatively, the focus of research has shifted from operational aspects such as efficiency and automation to strategic approaches that include career development, employee engagement, and data-driven decision-making. This reflects a paradigm shift, in which AI is no longer seen merely as a technical tool but as a strategic element for enhancing the competitiveness and sustainability of hospital organizations in the digital era.

4.1.2 RQ2: Theoretical and Methodological Approaches in Explaining the Relationship between Artificial Intelligence, Employee Performance, and Career Development

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The conceptual framework that positions Artificial Intelligence (AI) as the main driver of hospital HR management transformation empirically aligns with the dynamics of the four identified research clusters. In the first cluster, the role of AI as a tool for enhancing operational efficiency is reflected in a direct path to employee performance through automation and data analysis (Wang *et al.,* 2026; Anshori *et al.,* 2025). Developments in the second cluster reinforce the strategic dimension of AI in recruitment and talent management, supporting the quality of data-driven decision-making and improving work experience (Căvescu & Popescu, 2025; Safshekan *et al.,* 2026).

Furthermore, the third cluster emphasizes the importance of mediating variables such as technology-based training, employee engagement, and digital competencies in linking AI to performance improvement and career development (Usman *et al.,* 2025; Kusworo, 2026; Prabowo *et al.,* 2024). The comprehensive integration in the fourth cluster indicates that the effectiveness of the relationship is significantly influenced by the readiness of the organizational system, including technological infrastructure, information systems, and a work culture that is adaptive to digital innovation (Effendy *et al.,* 2024; Lanang Triana *et al.,* 2024; Purwadhi *et al.,* 2025). Thus, the relationship between AI, employee performance, and career development is multidimensional and systemic, with AI acting as a catalyst that integrates technical, human, and organizational aspects to create sustainable competitive advantage for hospitals (Úbeda-García *et al.,* 2025; Anggraeni *et al.,* 2026).

4.1.3 RQ 3: Implications of Research Findings on Hospital Management Strategies in Enhancing HR Performance and Technology-Based Career Development

The strategy for improving human resource performance in hospitals needs to be based on the consistent integration of Artificial Intelligence (AI) in the HR management process. Research findings indicate that the use of AI in workforce management, such as automated scheduling, data-driven performance evaluation, and decision support systems, can enhance employee efficiency and productivity (Wang *et al.,* 2026; Anshori *et al.,* 2025; Ketut Witara, 2025). Therefore, hospital management needs to ensure that the implementation of technology focuses not only on technical aspects but also on improving work quality, which directly impacts individual and organizational performance (Abdullah *et al.,* 2021; Atatsi *et al.,* 2019). AI-based HR development policies also need to be accompanied by the enhancement of employees' digital competencies to ensure optimal utilization of technology (Kusworo, 2026).

Technology-based performance management and career development need to be supported by a structured and sustainable organizational system. AI enables hospitals to identify employee potential, design more targeted career paths, and provide training recommendations that align with individual needs (Prabowo *et al.,* 2024; Safshekan *et al.,* 2026). Thus, HR management strategies are no longer reactive but have become more proactive and data-driven. The use of digital learning systems and AI-based training has also been shown to enhance employee engagement, ultimately strengthening performance and workforce retention (Usman *et al.,* 2025; Namatovu & Kyambade, 2025).

Employee experience becomes a strategic factor in linking technology implementation with performance improvement and career development. The integration of AI in the workplace, such as the use of digital platforms for communication, training, and evaluation, can enhance comfort and efficiency at work (Dima *et al.,* 2024; Virgillito & Ledda, 2026). Therefore, investment in technology must be accompanied by user-friendly system design and clear workflows so that employees can adapt well.

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Continuous, technology-based training programs also need to be developed to ensure that employees possess skills relevant to digital advancements (Anggraeni *et al.,* 2026; Lutfi & Mohammadi, 2025).

Organizational HR policies need to balance technology and organizational values. Effective AI implementation must be supported by an adaptive work culture, visionary leadership, and transparent communication (Purwadhi *et al.,* 2025; Suprayitno, 2025). Research findings indicate that the success of AI implementation is strongly influenced by organizational readiness, including technological infrastructure and employees' digital literacy (Al-Qudimat *et al.,* 2025). Therefore, hospital management needs to develop a comprehensive digital transformation strategy that simultaneously encompasses technical, human, and organizational aspects (Arifian, 2025; Effendy *et al.,* 2024).

Moreover, a data-driven approach in decision-making is key to enhancing the effectiveness of HR management. AI enables real-time data analysis to monitor performance, identify training needs, and evaluate the effectiveness of HR policies (Căvescu & Popescu, 2025; Khojin & Syaifullloh, 2025). Thus, hospitals can design more accurate and evidence-based management policies (Úbeda-García *et al.,* 2025; Astawa & Mahayasa, 2024). This also allows the organization to respond to environmental changes more quickly and accurately.

Another strategic implication is the need for policy adjustments to local contexts and organizational characteristics. Differences in technology readiness levels, work culture, and resource availability across hospitals require a flexible approach to AI implementation (Gile *et al.,* 2018; Koleangan *et al.,* 2024). Investment in technology infrastructure, workforce competency development, and the improvement of information system quality are important factors in supporting this strategy's success (Amelia *et al.,* 2021; Lanang Triana *et al.,* 2024).

Overall, the research findings affirm that the application of Artificial Intelligence in hospital HR management has broad strategic implications. AI not only enhances employee performance but also helps shape a more adaptive, structured, and sustainable career development system (Trenggono & Bachtiar, 2023; Integrating Artificial Intelligence in HRM, 2025). Therefore, hospitals need to integrate technology, human resource development, and organizational strategies holistically to achieve a competitive advantage in the digital era.

4.2 Discussion

The findings confirm a fundamental paradigm shift in the role of Artificial Intelligence (AI) within hospital human resource management, evolving from an operational support tool into a strategic enabler of organizational transformation. Early applications of AI were primarily oriented toward efficiency, automation, and workload reduction, particularly in administrative and clinical support functions, which significantly improved productivity and service effectiveness (Trenggono & Bachtiar, 2023; Wang *et al.,* 2026). This operational contribution is further supported by evidence that AI adoption enhances job satisfaction and productivity among healthcare workers by improving work systems and reducing manual workload (Anshori *et al.,* 2025; Ketut Witara, 2025).

From a theoretical standpoint, this transformation reflects a shift from traditional performance-based HR management toward a more integrated and strategic approach. Human resource management is no longer limited to administrative functions but has become a central driver of organizational performance, as evidenced by the strong relationship between HR practices and hospital outcomes (Gile *et al.,* 2018; Purwadhi *et al.,* 2025). In this context, AI enhances decision quality and organizational responsiveness through data-driven systems and predictive analytics (Safshekan *et al.,*

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2026; Venugopal *et al.,* 2024). This aligns with the broader argument that AI enhances the strategic role of HR by integrating knowledge, technology, and organizational capabilities (Úbeda-García *et al.,* 025).

Furthermore, the transition to AI-driven recruitment and talent management underscores the growing importance of human capital optimization. AI enables more accurate workforce selection, competency matching, and retention strategies, thereby improving organizational effectiveness (Căvescu & Popescu, 2025; Lutfi & Mohammadi, 2025). At the same time, empirical evidence shows that HR managers perceive AI as a transformative force reshaping HR practice, including recruitment, training, and performance evaluation (Alshahrani *et al.,* 2025). However, this transformation also introduces ethical and governance challenges, particularly related to algorithm transparency, bias, and data privacy, which must be carefully managed to ensure sustainable implementation (Naoum *et al.,* 2026; Koleangan *et al.,* 2024).

Another critical dimension emerging from the findings is the role of mediating factors such as employee engagement, digital competencies, and well-being. The effectiveness of AI in improving performance is determined not only by technological capabilities but also by how organizations manage human factors. Evidence shows that employee well-being mediates the relationship between internal service quality and job satisfaction and performance (Abdullah *et al.,* 2021). Similarly, AI-driven HR practices enhance performance through increased employee engagement and perceived job security (Usman *et al.,* 2025). This indicates that a human-centered approach remains essential in maximizing the benefits of AI implementation.

In addition, the integration of AI into career development systems represents a significant advancement toward sustainable HR management. AI supports personalized learning, competency development, and career planning, enabling organizations to align individual growth with organizational goals (Prabowo *et al.,* 2024; Kusworo, 2026). This is further supported by findings that AI-driven training and skill development significantly improve employee performance and adaptability in dynamic work environments (Namatovu & Kyambade, 2025). As a result, career development becomes more proactive, data-driven, and aligned with long-term organizational strategies. Moreover, the findings highlight that AI implementation is inseparable from broader digital transformation processes. The integration of AI with hospital information systems enhances data accuracy, accelerates information flow, and improves managerial decision-making (Amelia *et al.,* 2021; Lanang Triana *et al.,* 2024). Digital transformation also requires alignment between technological infrastructure, HR capabilities, and organizational culture to ensure effective adoption (Effendy *et al.,* 2024; Purwadhi *et al.,* 2025). Studies show that organizational readiness, including digital literacy and infrastructure, is a key determinant of successful AI implementation (Al-Qudimat *et al.,* 2025; Suprayitno, 2025). However, despite its significant benefits, AI adoption also presents substantial challenges. Issues related to data governance, ethical considerations, and resistance to change remain critical barriers in hospital settings (Tantangan Penerapan AI 2025; Dima *et al.,* 2024). Additionally, while AI enhances efficiency and performance, it may also introduce risks such as technostress and over-reliance on automated systems, which can negatively affect employee well-being if not properly managed (Priyanka Gupta *et al.,* 2024).

Another important insight is the growing role of employee experience in determining the success of AI implementation. AI-based systems, including digital platforms for communication, training, and performance management, improve work efficiency and engagement when they are user-friendly and aligned with employee needs (Virgillito & Ledda, 2026; Dima *et al.,* 2024). This reinforces the argument that technological innovation must be complemented by supportive organizational policies and continuous skill development to achieve optimal outcomes (Anggraeni *et al.,* 2026). Finally,

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the findings emphasize that AI-driven HR management must be adaptive to organizational context. Differences in infrastructure, culture, and resource availability require flexible implementation strategies to ensure effectiveness (Arifian, 2025; Astawa & Mahayasa, 2024). A data-driven approach further strengthens organizational capability to respond to environmental changes through real-time analysis and evidence-based decision-making (Khojin & Syaifullloh, 2025; Qin *et al.,* 2023).

In conclusion, the integration of Artificial Intelligence in hospital human resource management represents a transformative shift toward more strategic, data-driven, and adaptive organizational systems. While AI significantly enhances employee performance, career development, and operational efficiency, its long-term success depends on the alignment between technological innovation, human resource development, and organizational readiness. A balanced approach that integrates technological advancement with human-centered management practices is therefore essential to achieve sustainable competitive advantage in the healthcare sector.

5. Concluding Remarks and Recommendation

Based on the research objectives, it can be concluded that the application of Artificial Intelligence (AI) in hospital human resource management plays a significant role in improving employe performance and supporting more structured and data-driven career development. AI not only enhances operational efficiency but also strengthens strategic functions such as workforce planning, talent management, and evidence-based decision-making. However, the success of its implementation highly depends on the organization's readiness, including technological infrastructure, digital competencies, and an adaptive work culture. Therefore, hospitals need to integrate digital transformation strategies with the sustainable development of human resource capacity to ensure optimal AI utilization and enhance the organization's competitiveness in the digital era.

Statement of Use of Generative AI

During the preparation of this work, the author used generative artificial intelligence tools to support the scientific writing process. Grammarly was used to check grammar, refine writing style, and improve clarity in scientific writing. All interpretations, analyses, and conclusions presented in this study are the sole responsibility of the author.

References

Abdullah, M. I., Huang, D., Sarfraz, M., Ivascu, L., & Riaz, A. (2021). Effects of internal service quality on nurses' job satisfaction, commitment, and performance: Mediating role of employee well-being. *Nursing Open, 8*(2), 607–619. https://doi.org/10.1002/nop2.665

Al-Qudimat, A. R., Alqudimat, M. R., Singh, K., Fares, Z. E., Ismail, M., Yasin, H. E., Al-Zoubi, R. M., & Aboumarzouk, O. M. (2025). Perception and Knowledge of Hospital Workers Toward Using Artificial Intelligence: A Descriptive Study. *Health science reports, 8*(5), e70623. https://doi.org/10.1002/hsr2.70623

Alshahrani, S. T., Choukir, J., Albelali, S., & AlShalhoob, A. A. (2025). Perceptions of the Impact of AI on Human Resource Management Practices Among Human Resource Managers Working in the Chemical Industry in Saudi Arabia. Sustainability, 17(13), 5815. https://doi.org/10.3390/su17135815

Amelia, L., Dwi Cahyono, & Elok Fitriya. (2021). Systematic Literature Review: Kinerja Sistem Informasi Akuntansi di Rumah Sakit di Indonesia. Juremi: Jurnal Riset Ekonomi, 1(2), 123–140. https://doi.org/10.53625/juremi.v1i2.232

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DOI: https://doi.org/10.60079/ahrmr.v4i2.776

Anggraeni, N. L. P. N., Adil, A. S., & Santosa, D. F. (2026). Tinjauan Literatur Sistematis: Pengaruh AI dan HRIS Terhadap Kinerja Organisasi. *International Journal of Education, Social Studies, And Management (IJESSM), 5*(3), 1843–1851. https://doi.org/10.52121/ijessm.v5i3.974

Anshori, M. I., Akbar, A., Djamaliyah, & Aisyah. (2025). The Impact of Artificial Intelligence Adoption on Job Satisfaction and Productivity of Healthcare Workers in Hospitals. *Jurnal Ilmiah Manajemen Kesatuan, 13*(6), 5901–5912. https://doi.org/10.37641/jimkes.v13i6.4321

Arifian, R. (2025). Transformasi Artificial Intelligence dalam Sistem Pelayanan Kesehatan Primer-Sekunder Daerah: Kajian Pemodelan Value Organisasi, Sumber Daya Manusia Kesehatan dan Sistem Kesehatan Daerah. *Nusantara Innovation Journal, 3*(2), 152–175. https://doi.org/10.70260/nij.v3i2.66

Astawa, I. P. P., & Mahayasa, I. G. A. (2024). Integrating Artificial Intelligence in Human Resource Management: A Systematic Literature Review. *Management and Applied Social Studies Review, 2*(1), 54–61. https://doi.org/10.32795/massiv.v2i1.5798

Atatsi EA, Stoffers J, Kil A (2019). Factors affecting employee performance: a systematic literature review. Journal of *Advances in Management Research, 16*(3). 329–351, doi: https://doi.org/10.1108/JAMR-06-2018-0052

Căvescu, A. M., & Popescu, N. (2025). Predictive Analytics in Human Resources Management: Evaluating AIHR's Role in Talent Retention. *AppliedMath, 5*(3), 99. https://doi.org/10.3390/appliedmath5030099

Dima, J., Gilbert, M. H., Dextras-Gauthier, J., & Giraud, L. (2024). The effects of artificial intelligence on human resource activities and the roles of the human resource triad: opportunities and challenges. *Frontiers in psychology, 15*, 1360401. https://doi.org/10.3389/fpsyg.2024.1360401

Effendy, C. A., Paramarta, V., & Purwanda, E. (2024). Peran Teknologi Informasi, Pengelolaan Sumber Daya Manusia, dan Sistem Informasi Rumah Sakit Dalam Meningkatkan Kinerja Rumah Sakit (Kajian Literatur). *Jurnal Review Pendidikan Dan Pengajaran, 7*(4), 13479–13489. https://doi.org/10.31004/jrpp.v7i4.34703

Gile, P.P., Buljac-Samardzic, M. & Klundert, J.V. (2018). The effect of human resource management on performance in hospitals in Sub-Saharan Africa: a systematic literature review. Hum Resour Health 16, 34. https://doi.org/10.1186/s12960-018-0298-4

HR Strategies for Enhancing Employee Performance in the Digital Age. (2024). Management Studies and Business Journal (PRODUCTIVITY), 1(4), 570-578. https://doi.org/10.62207/66m0fc18

Palos-Sánchez, P. R., Baena-Luna, P., Badicu, A., & Infante-Moro, J. C. (2022). Artificial intelligence and human resources management: A bibliometric analysis. Applied artificial intelligence, 36(1), 2145631. https://doi.org/10.15408/aism.v8i1.40352 https://doi.org/10.1080/08839514.2022.2145631

Ketut Witara. (2025). Pengaruh Implementasi Artificial Intelligence dalam Pengelolaan Sumber Daya Manusia terhadap Kinerja dan Produktivitas: Systematic Literature Review (SLR). Jurnal Riset Manajemen dan Ekonomi (JRIME), 3(4), 122–141. https://doi.org/10.54066/jrime.v3i4.3550

Khojin, N., & Syaifullloh, M. (2025). Inovasi Manajemen Kinerja melalui Penggunaan Artificial Intelligence dalam Penilaian Karyawan. RIGGS: Journal of Artificial Intelligence and Digital Business, 4(2), 309–317. https://doi.org/10.31004/riggs.v4i2.476

Koleangan, P. J., Robert, R., Purwadhi, P., & Widjaja, Y. R. (2024). Penerapan Artificial Intelligence dalam Manajemen SDM di Rumah Sakit: Tinjauan Literatur tentang Inovasi dan Etika. Mufakat: Jurnal Ekonomi, Manajemen Dan Akuntansi, 3(1), 435–438. Retrieved from https://jurnal.anfa.co.id/index.php/mufakat/article/view/2204

Kusworo, A. D. B. (2026). Artificial Intelligence–Based Human Resource Management and Employee Performance: The Mediating Role of Digital Skills and the Moderating Effect of Technology Acceptance in Indonesian Manufacturing Firms. International Journal of Business, Law, and Education, 7(1), 21–26. https://doi.org/10.56442/ijble.v7i1.1328

Lanang Triana, I. K. D., Agustina, P. D. C., Febrian, R., Wiadnya, I. D. G. P., & Paramarta, V. (2024). The Role of Artificial Intelligence in Developing Hospital Information Management Systems. JMMR (Jurnal Medicoeticolegal dan Manajemen Rumah Sakit), 13(1), 130–141. https://doi.org/10.18196/jmmr.v13i1.127

Volume 4, Issue 2 (2026). 267-285
e-ISSN: 2985-7570
DOI: https://doi.org/10.60079/ahrmr.v4i2.776

Lutfi, L., & Mohammadi, A. (2025). Opportunity of Implementation Artificial Intelligence in Human Resources Management. International Journal of Academic Research in Economics and Management Sciences, 14(1), 212–228. http://dx.doi.org/10.6007/IJAREMS/v14-i1/24795

Namatovu, A., & Kyambade, M. (2025). Artificial intelligence and employee performance in Uganda's healthcare institutions: exploring the mediation effects of perceived ease of use and skills enhancement. Journal of health organization and management, 39(8), 1907–1932. https://doi.org/10.1108/JHOM-01-2025-0045

Naoum, R.F., Szakadáti, T. & Balogh, G. Artificial Intelligence (AI) in human resource management (HRM): a systematic review of its dual impact on diversity, equity, and inclusion (DEI). Manag Rev Q (2026). https://doi.org/10.1007/s11301-025-00580-y

Optimizing HR Efficiency and Employee Well-being through AI-Driven Automation. (2025). Manajemen, 5(1), 153-164. https://doi.org/10.51903/manajemen.v5i1.936

Prabowo, B., Samsudin, A., Widiyanti, R. N., Gunawan, A. T. A., & Tarigan, N. E. (2024). Analisis Perencanaan dan Pengembangan Karir Sumber Daya Manusia dalam Menghadapi Artificial Intelligence. Jurnal Pendidikan Tambusai, 8(1), 1793–1799. https://doi.org/10.31004/jptam.v8i1.12655

Priyanka Gupta, Girish Lakhera, Manu Sharma, Examining the impact of artificial intelligence on employee performance in the digital era: An analysis and future research direction, The Journal of High Technology Management Research, Volume 35, Issue 2, https://doi.org/10.1016/j.hitech.2024.100520

Purwadhi Purwadhi, Yani Restiani Widjaja, Rachmad Hidayat, & Purba David Lebinson. (2025). Systematic Review : Strategi Inovasi Manajemen Rumah Sakit dalam Menghadapi Disrupsi Digital dan Tantangan Implementasi Teknologi Baru. Jurnal Ilmu Manajemen, Ekonomi Dan Kewirausahaan, 5(3), 484–505. https://doi.org/10.55606/jimek.v5i3.8068

Purwadhi, P., Yani Restiani Widjaja, Hans Ariel Satyana, & Josephine Fausta Nazuli. (2025). Peran Strategi Human Resource Management (HRM) pada Kinerja Rumah Sakit: Sebuah Narrative Literature Review . EKOMA: Jurnal Ekonomi, Manajemen, Akuntansi, 4(3), 4769–4782. https://doi.org/10.56799/ekoma.v4i3.6444

Qin, X., Huang, YN., Hu, Z. *et al.,* Human resource management research in healthcare: a big data bibliometric study. Hum Resour Health 21, 94 (2023). https://doi.org/10.1186/s12960-023-00865-x

Rethlefsen, M. L., Kirtley, S., Waffenschmidt, S., Ayala, A. P., Moher, D., Page, M. J., Koffel, J. B., & PRISMA-S Group (2021). PRISMA-S: an extension to the PRISMA Statement for Reporting Literature Searches in Systematic Reviews. Systematic reviews, 10(1), 39. https://doi.org/10.1186/s13643-020-01542-z

Safshekan, M., Feili, A., Shojaeifard, A., & Sorooshian, S. (2026). Artificial intelligence in human resource management: models for recruitment, training, performance, compensation, and retention. Frontiers in artificial intelligence, 9, 1718244. https://doi.org/10.3389/frai.2026.1718244

Sakib, M., Islam, S. The impacts of machine learning on human resource management: a systematic literature review and bibliometric analysis. Futur Bus J 12, 7 (2026). https://doi.org/10.1186/s43093-025-00704-6

Sharma, C., Chanana, N., & Chen, H.-Y. (2025). Mapping the Evolution: A Bibliometric Analysis of Employee Engagement and Performance in the Age of Artificial Intelligence-Based Solutions. Information, 16(7), 555. https://doi.org/10.3390/info16070555

Suprayitno, S. (2025). Strategies for Implementing Artificial Intelligence in Human Resource Management. Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE), 8(3), 9318–9328. https://doi.org/10.31538/iijse.v8i3.7499

Kurnia, J. A. (2025). Tantangan Penerapan Ai (Artificial Intelligence) Dalam Manajemen Rumah Sakit: Literature Review Terhadap Aspek Data, Teknologi, Etika, Dan Regulasi. Integrative Perspectives of Social and Science Journal, 2(1), 1063–1071.. https://ipssj.com/index.php/ojs/article/view/153

Trenggono, P. H., & Bachtiar, A. (2023). Peran Artificial Intelligence Dalam Pelayanan Kesehatan: A Systematic Review. Jurnal Ners, 7(1), 444–451. https://doi.org/10.31004/jn.v7i1.13612

Úbeda-García, M., Marco-Lajara, B., Zaragoza-Sáez, P. C., & Poveda-Pareja, E. (2025). Artificial intelligence, knowledge and human resource management: A systematic literature review of theoretical tensions and

Volume 4, Issue 2 (2026). 267-285
DOI: https://doi.org/10.60079/ahrmr.v4i2.776
e-ISSN: 2985-7570

strategic implications. Journal of Innovation & Knowledge, 10(6), 100809. https://doi.org/10.1016/j.jik.2025.100809

Usman, O., Suryadi, S., & Sari, R. N. (2025). The Effect of AI Integration In Hr Practices on Employee Performance: Mediating Roles of Engagement and Perceived Job Security. *Bina Bangsa International Journal of Business and Management, 5*(2), 529–541. https://doi.org/10.46306/bbijbm.v5i2.161

Venugopal, M., Madhavan, V., Prasad, R., & Raman, R. (2024). Transformative AI in human resource management: enhancing workforce planning with topic modeling. *Cogent Business & Management, 11*(1). https://doi.org/10.1080/23311975.2024.2432550

Virgillito, D., & Ledda, C. (2026). Personalized AI for workplace health promotion: performance management and healthcare worker engagement through digital analytics. *Frontiers in public health, 13*, 1718474. https://doi.org/10.3389/fpubh.2025.1718474

Wang, Y., Zheng, P., Guan, Y. *et al.,* Enhancing hospital workforce planning, scheduling, and performance evaluation through an AI-driven human resource management system. Sci Rep (2026). https://doi.org/10.1038/s41598-026-43102-w

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Appendix

Table A1. Summary of 30 Articles Related to the Role of Artificial Intelligence in Hospital Human Resource Management: Implications for Employee Performance and Career Development

No	Author (Year)	Research Objectives	Research Methods and Objects	Results and Conclusions
1	Anshori *et al.,* (2025)	To analyze the impact of AI on healthcare workers' satisfaction and productivity	Qualitative case study in hospital settings	AI improves productivity, job satisfaction, and operational efficiency
2	Sari & Hargyatni (2025)	To examine the effectiveness of AI in HR efficiency and employee well-being	Mixed methods in an organizational context	AI increases HR efficiency by up to 45%, but requires transparency
3	Kusworo (2026)	To analyze the effect of AI-HRM on employee performance	Quantitative method using PLS-SEM	AI has a significant positive effect on performance through digital skills.
4	Chauhan & Tyagi (2025)	To explain HR transformation through AI	Literature review	AI enhances efficiency, recruitment processes, and employee engagement
5	Lestari (2024)	To examine AI-based HR strategies for improving performance	Literature review	AI improves decision-making accuracy and work collaboration
6	Goodwood *et al.,* (2025).	To develop a future HR model based on AI	Quantitative method using SEM	AI enhances decision-making quality and talent development
7	Usman *et al.,* (2025).	To analyze the AI impact on performance with mediating variables	SEM-PLS approach	AI improves performance through employee engagement and job security
8	Alshahrani *et al.,* (2025)	To assess HR practitioners' perceptions of AI	Survey with SEM analysis	AI positively affects recruitment, training, and performance evaluation
9	Journal of Hospitality (2025)	To examine the effect of AI on employee commitment	Experimental and longitudinal survey	AI significantly increases organizational commitment
10	Bouzerda *et al.,* (2025)	To review the role of AI in HRM	PRISMA systematic literature review	AI dominates HR automation and employee lifecycle management
11	Journal of Innovation & Knowledge (2023)	To analyze the AI impact on HR in healthcare	Qualitative study in hospitals	AI improves organizational performance and HR effectiveness
12	Basu *et al.,* (2024)	To examine AI in workforce planning	Topic modeling analysis	AI supports workforce prediction and HR decision-making
13	Mettu Narayana (2025)	To analyze AI in retention and career development	Literature review	AI supports personalized career planning
14	Anishika Singh (2025)	To examine the AI role in modern HR	Literature review	AI enhances talent management effectiveness

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No	Author (Year)	Research Objectives	Research Methods and Objects	Results and Conclusions
15	Gayatri (2025)	To analyze AI's impact on engagement and efficiency	Empirical study	AI reduces workload and improves operational efficiency
16	Huo *et al.* (2025)	To examine the AI impact on healthcare workers' well-being	Quantitative regression study	AI improves well-being through psychological needs fulfillment
17	Al-Qudimat *et al.*, (2025)	To assess healthcare workers' perception of AI	Cross-sectional survey	Most respondents believe AI improves healthcare services
18	Haque (2025)	To analyze the AI role in hospital leadership	Literature review	AI transforms leadership and HR strategies
19	Sriharan *et al.*, (2025)	To explore AI and healthcare workforce integration	Conceptual perspective	AI acts as a strategic enabler in workforce management
20	Faiyazuddin *et al.*, (2025)	To analyze the AI impact on healthcare efficiency	Comprehensive review	AI enhances operational efficiency and workforce performance
21	Safshekan *et al.* (2026)	To develop an AI-based HRM model	Qualitative expert analysis	AI improves recruitment, training, and performance management
22	Vrontis *et al.*, (2025)	To analyze AI-HRM research trends	Bibliometric analysis	Increasing trend in AI-driven career personalization
23	Balakrishnan *et al.* (2025)	To examine AI in healthcare services	PRISMA systematic review	AI improves access and workforce efficiency
24	Sadeghi (2024)	To analyze the AI impact on employee well-being	Conceptual framework	AI affects satisfaction, stress, and employee retention
25	Biswas & Talukdar (2024)	To examine AI in clinical documentation	Case study	AI reduces the administrative burden on healthcare workers
26	Sakib & Islam (2026)	To analyze the impact of machine learning in HRM	Systematic review and bibliometric	AI improves HR efficiency, decision accuracy, and career personalization
27	Naoum *et al.*, (2026)	To examine the AI impact on diversity and equity in HRM	Systematic review	AI improves efficiency but raises bias and ethical concerns
28	Sharma *et al.*, (2025)	To analyze AI trends on engagement and performance	Bibliometric analysis (Scopus/MDPI)	AI enhances employee engagement and performance
29	Qin *et al.*, (2023)	To analyze HRM trends in the healthcare sector	Bibliometric big data analysis	HRM shifts toward digitalization and data-driven decision-making
30	Li *et al.*, (2024)	To examine the AI impact on employee performance	Empirical and conceptual study	AI improves performance via engagement, but may cause technostress