

Impact Of Artificial Intelligence on HR Processes: A Conceptual Framework

Ratna Thakur¹ and Dr B.S Rathore²

¹Research Scholar - School of Business, Mody University of Science and Technology, Lakshmangarh, Dist: Sikar, Rajasthan

Email: ratnathakur21.sob@modyuniversity.ac.in

²Professor - School of Business, Mody University of Science and Technology, Lakshmangarh, Dist: Sikar, Rajasthan

Email: bsrathore.sob@modyuniversity.ac.in

Received: 04/09/2025

Revised: 19/09/2025

Accepted: 09/10/2025

Published: 24/10/2025

ABSTRACT

The purpose of studying the impact of artificial intelligence (AI) on Human Resource (HR) processes is to understand how AI technologies are transforming and enhancing the field of Human Resources Processes. This research examines the applications and usage of AI in HR processes and further present a conceptual framework on AI applications associated with specific HR processes. Design/Methodology/Approach: A total of 78 articles have been reviewed. The titles and abstracts of 58 articles have been identified as potential articles. In addition, 20 studies have been excluded. In total, 38 studies have been selected for data extraction. The reviewed articles provide brief information about the AI technologies used in HR. Findings: Use of AI has led to a paradigm shift in HRM practices. Now-a-days, the main focuses of AI-enabled HRM practices are on recruitment and selection, human capital, re-skilling and up-skilling towards new proficiencies, managing a distant and reliant workforce, and improving employee engagement. Through efficient hiring and selection procedures, onboarding, career and development, performance management, learning facilitation, and talent management, AI is streamlining remote work. AI- driven technologies utilizing data mining (DM), predictive analytics, natural language processing (NLP), intelligent robots, machine learning (ML), virtual and augmented reality (VR/AR), etc. have made it possible to manage human resource management (HRM) practices efficiently, which has improved employee well-being, automation, and cost savings. Limitations: The study is conceptual and relies on secondary data from research papers, publications (Scopus, Emerald and Google Scholar database), survey reports and other sources. By conceptual framework, we have organized and illustrated the relationships between key concepts or variables in conceptual manner. Originality/Value: This is a unique study which develops a conceptual framework to present a strategic and managerial view on AI applications associated with specific HRM dimensions in an organization.

Keywords: Artificial Intelligence, Human resource, Processes, Impact, Conceptual framework.



© 2025 by the authors; licensee Advances in Consumer Research. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY-NC-ND) license(<http://creativecommons.org/licenses/by/4.0/>).

INTRODUCTION

The development of computer systems that are capable of executing tasks that usually require human intelligence is known as artificial intelligence or AI. Learning, reasoning, problem-solving, perception, understanding a language, and decision- making are some of these tasks. The ultimate goal of artificial intelligence is to build machines that possess cognitive abilities similar to those of humans. The implementation of Artificial Intelligence (AI) into Human Resources (HR) processes is growing more common. The aim is to

enhance and maximize the efficiency of HR- related tasks such as talent management, recruitment, and employee engagement.

Artificial intelligence (AI) has a positive impact on HR processes in organizations (Niehueser, W. & Boak, 2020). originated that the introduction of AI improved the speed and efficiency of work processes, and employees who used the new technology were positive about its effects(Iqbal, 2018). also stated that AI has positive impacts on the management of workers in

companies, automated recruiting procedures to employee performance reviews, AI is being used in HR practices

Artificial Intelligence

Artificial intelligence (AI) refers to the technology of training machines with human intelligence (that is, to gather information, process information, make decisions, and process other human-like processors). One common example of artificial intelligence solutions that have touched daily life is the complex set of algorithms and software that powers Siri on the iPhone (Bostrom and Yudkowsky 2011; Luckin 2017).

What is artificial intelligence (AI): Machines, particularly computer systems, imitate the workings of human intelligence. Examples of AI applications include expert systems, machine learning, natural language processing, speech recognition, and machine vision.

How AI functions: What we commonly refer to as AI is often simply a component of AI, such as machine learning, as interest in AI rises. In order to create and refine machine learning algorithms, AI involves the usage of specialised hardware and software. Significant amounts of labelled training data are typically consumed by AI systems, which then analyse the data for correlations and patterns before applying those patterns to forecast future states. Chatbots can learn to have actual conversations with people using text chat samples, while image recognition software can learn to identify and describe objects in photographs by studying millions of instances. The three main focuses of AI programming are learning, reasoning, and self-correction.

Learning processes: This area of AI programming is involved with gathering data and formulating rules for turning that data into information that can be used. Algorithms are sets of rules that instruct computers on how to carry out specific tasks step-by-step.

Reasoning processes: This area of AI is concerned with selecting the best algorithm to achieve a desired result. Self-correction processes: This feature of AI programming aims to continuously improve algorithms and guarantee they deliver the most accurate outcomes. Why is Artificial Intelligence important: Artificial intelligence is significant because it can offer businesses completely undiscovered operational insights and, in some situations, outperform humans at certain tasks. AI systems frequently do jobs fast and accurately, especially for repetitive, detail-oriented tasks like reviewing numerous legal documents to make sure that essential fields are correctly filled out. The biggest and most successful businesses of today use AI to enhance

operations and acquire a strategic advantage (e.g. Google).

HR Processes

Perspectives on HR processes (Amit & Belcourt, 1999). defines HRM processes as the routines by which a firm attracts, socializes, trains, motivates, evaluates, and compensates its human resources (Ansari & Srinivasan, 2020). defines HRM as the process of managing people in organizations in a structured and thorough manner, covering staffing, retention, pay and perks, performance management, change management, and exits(Václav et al., 2011). presents a modern approach to HR management, defining a set of business processes handled by HR managers, and the relationship between HR business processes, performance drivers, and ICT tools.

The Impact of Artificial Intelligence on HR Processes

An era has begun with the integration of Artificial Intelligence (AI) into Human Resources (HR) processes, which has opened up new opportunities and modified traditional approaches. Here are a few instances:

Hiring/ Recruiting and Acquiring Talent: Talent acquisition and recruitment are two of the most important sectors where AI has had a big impact. The hiring process has been made more efficient by chatbots for first interactions, AI-driven candidate matching, and automated resume screening.

Employee Onboarding: AI makes it easier for fresh hires to adjust, from personalized onboarding experiences to automated document processing. Chatbots and virtual assistants offer instant support by responding to inquiries and helping staff members through the onboarding process, resulting in a satisfying first impression.

Performance Management: AI-driven insights are helpful for goal-setting, performance reviews, and feedback analysis. This makes it possible to identify growth opportunities, conduct assessments that are more accurate, and create development programs that are customized to the needs of each employee.

Training and Development: AI has made personalized and adaptive training programs available in the field of learning and development. AI creates personalized learning routes through assessing performance data and individual learning preferences. This ensures employees receive training that is relevant and effective.

This leads to a workforce that is more skilled and flexible while also improving the process of skill development.

LITERATURE REVIEW

TITLE	AUTHORS	RESEARCH METHODOLOGY	OUTCOME
"Artificial intelligence	Pawan Budhwar et.al (2022)	This paper discusses the role of artificial intelligence in human	AI-based applications are being integrated into firms" HRM approaches for managing people

challenges and opportunities for international HRM: a review and research agenda”		resource management. It reviews the existing literature and offers a future research agenda. a systematic review	in domestic and international organizations. Adopting these technologies has resulted in how work is organized in local and international firms, firms’ resource utilization, decision-making, and problem-solving. Research on AI- based technologies for HRM is limited and fragmented, and a future research agenda is needed to analyse the role of AI-assisted applications in HRM functions and human-AI interactions in large multinational enterprises(Budhwar et al., 2022).
“Artificial intelligence, robotics, advanced technologies and human resource management: a systematic review”	Demetris Vrontisa et.al (2021)	This paper discusses the impact of artificial intelligence, robotics and other advanced technologies on human resource management. It finds that these technologies offer several opportunities for HRM but also considerable challenges at a technological and ethical level. A systematic search 13,136 potentially relevant studies, 45 articles	Intelligent automation technologies offer several opportunities for HRM, but also considerable challenges at a technological and ethical level. The impact of these technologies has been identified to concentrate on HRM strategies and activities. This study discusses these shifts in detail, along with the main contributions to theory and practice and directions for future research(Vrontis et al., 2021).
“A review paper on artificial intelligence at the service of human resources management”	Siham Berhil et.al (2020)	This paper reviews recent research efforts on computer science techniques proposed to solve human resources problems. It focuses on suggested artificial intelligence methods and summarizes the IT solutions already made in human resources for the period between 2008 and 2018.	Human Resources data analysis (HR analytics) is becoming increasingly important for businesses to improve profitability. Artificial Intelligence (AI) methods are being used to solve Human Resources problems and risks. This review paper provides an archive and reference for computer scientists working on HR, summarizing the IT solutions already made in human resources for the period between 2008 and 2018(Berhil et al., 2019).
“Artificial Intelligence Reshaping Human Resource Management : A Review”	Isha Tewari et.al (2020)	This study was a literature review AI technology is changing the way organizations appoint, manage, and engage their workforce. It is enabling machines to make decisions more accurately than humans and causing HR professionals to take up more strategic roles.	AI is transforming the way organizations appoint, manage, and engage their workforce. AI is enabling machines to make decisions more accurately than humans based on existing data sets and behavioral patterns. AI is providing key benefits to HRM such as streamlining processes, increasing productivity, boosting efficiency, and reducing costs. The impact of AI on HR processes is changing the way organizations appoint, manage, and engage their workforce(Tewari & Pant, 2020).
“Artificial Intelligence in Human Resources Management: Challenges and a Path Forward”	Prasanna Tambe et.al (2019)	This paper discusses the four challenges in using data science techniques for HR tasks and proposes practical responses to these challenges.	There is a gap between the promise and reality of artificial intelligence in HR management. Four challenges have been identified in using data science techniques for HR tasks: complexity of HR phenomena, constraints imposed by small data sets, accountability questions associated with fairness and other ethical and legal constraints, and possible adverse employee reactions to management decisions via data-based algorithms. These principles are economically efficient and socially appropriate for using data science in the management of

			employees(Tambe et al., 2019).
“Artificial Intelligence in Human Resources Management: A Scoping Review”	D. Gelinas et.al (2022)	This paper discusses the application of Artificial Intelligence in Human Resources Management. It reviews 85 articles and discusses implications and future research opportunities.	There is a growing interest in the application of Artificial Intelligence in Human Resources Management. A scoping review was conducted to guide future research, which identified 85 articles and classified them based on the 6 dimensions of the Human Resource Life Cycle A seventh dimension Legal and Ethical Issues was also identified and integrated into the existing HR Life Cycle framework. The AI tools used in the HR processes under investigation include those that help with recruiting, performance management, and training(Gelinas et al., 2022).
“Artificial Intelligence in Human Resource Management: A Qualitative Study in the Indian Context”	Eric Premnath et.al (2020)	This paper explores the application, benefits and challenges of integration, and the limitations of AI in HRM within the Indian context. Top level HR Professionals	AI is slowly being adopted in the Human Resources function in India, but there is still hesitation to fully integrate it. The benefits of using AI in HRM include increased efficiency and effectiveness. The AI tools used in the HR processes under investigation include various forms of interviews(Premnath & Chully, 2020).
“The application of Artificial Intelligence (AI) in Human Resource Management: Current state of AI and its impact on the traditional recruitment process”	J. Johansson et.al (2019)	This paper discusses the application of Artificial Intelligence (AI) in Human Resource Management. It describes the current state of AI and its impact on the traditional recruitment process.	Artificial Intelligence (AI) is increasingly being used in Human Resource Management (HRM) to Automate and streamline the recruitment process. AI can be used to identify and select the best candidates for a job, as well as to reduce the time and cost associated with the recruitment process. AI can also be used to improve the accuracy of job descriptions, as well as to provide insights into the performance of current employees(J. Johansson, 2019).
“Making the business case for AI in HR: two case studies”	Boris Altemeyer et.al (2019)	This paper looks at two case studies of businesses using AI for HR purposes. It finds that AI removes bias, saves time and resources, and improves the cultural fit and diversity of recruits. The intervention is AI, computer science and machine learning to assess, recruit and retain staff.	AI can remove bias from assessment, recruitment and training processes. AI can save businesses significant time and resources. AI can improve the cultural fit and diversity of their recruits. The AI tools used in the HR processes under investigation include computer science and machine learning(Altemeyer, 2019).
“Automation of the HR functions enhance the professional efficiency of the HR Professionals- A Review”	M. Nawaz et.al (2014)	This paper discusses how automation of HR functions can enhance the professional efficiency of HR professionals. It describes how automation can help with tasks such as monitoring employees, managing payroll, and handling employee benefits.	Automation of HR functions can enhance the professional efficiency of HR professionals. Organizations are investing in HR automation to streamline HR processes, retain data, control data, and enhance communication processes. The AI tools used in the HR processes under investigation include streamlining of the HR processes, data retention, data control, communication process enhancement, and connectivity to all areas of an organization(Nawaz & Gomes, 2014).
“Analysis of the Impact of Artificial Intelligence in Enhancing the Human	Valeriia Biliavska et.al (2022)	This paper discusses the importance of using artificial intelligence in human resource practices. It describes how AI-based HR apps can	AI-based HR apps can increase employee productivity and help HR personnel become more knowledgeable advisors. AI- enabled HR solutions can evaluate, predict, diagnose, and locate more

Resource Practices”		boost employee productivity and how AI enabled HR solutions are capable of evaluating, predicting, diagnosing, and locating more powerful and capable employees. 230 men and women aged 23 to 45 years old (83% male and 17% female).	capable employees. Phenomenological research is an appropriate qualitative research design for exploring the impact of AI on HR practices. Employee Productivity, Employee Performance(Biliavska et al., 2022).
“An Empirical Study of Artificial Intelligence and its Impact on Human Resource Functions”	Garima Bhardwaj et.al (2020)	This paper is based on the use of artificial intelligence and its impact on HRM due to technological advancement in IT landscape. The aim of the present research is to examine the relationship between artificial intelligence and Human resource functions in IT industry in Delhi/NCR location whether this relationship is moderated by innovativeness and ease of use at HR operations. A multiple regression method was used to test hypothesis and confirmed positive relationship between these two factors establishing about the increased use of AI at work results better HR functional performance. 115 HR professionals in Delhi/NCR.	A positive relationship was found between artificial intelligence and Human Resource functions in IT industry in Delhi/NCR. AI has a significant relationship with innovativeness and ease of use, which reflects AI's effects on HR with innovations and ease of use. AI is coming as a new revolution in industry with new name Industry4.0. The effectiveness of AI tools in improving the HR processes is confirmed by a positive relationship between the increased use of AI at work and better HR functional performance(Bhardwaj et al., 2020).
“Artificial intelligence in human resource management in the Global South”	Nir Kshetri et.al (2020)	This paper examines the use of artificial intelligence in human resource management in the Global South. Study was multiple case studies.	AI deployment in HRM can enhance efficiency in recruitment and selection and gain access to a larger recruitment pool. AI deployment in HRM can reduce the likelihood of subjective criteria such as nepotism and favoritism in recruitment and selection. It finds that AI deployment in HRM can enhance efficiency in recruitment and selection, reduce subjective criteria in recruitment and selection, and have a potentially positive impact on the development, retainment and productive utilization of employees. (Kshetri, 2020).
“Intelligent human resources for the adoption of artificial intelligence: a systematic literature review”	Mariana Namen Jatobá et.al (2023)	This paper is a systematic literature review of the impact of artificial intelligence on human resources. It finds that there is a growing academic interest in the topic and that the application of AI stands out in the strategic HR and AI cluster as a means of achieving profit maximisation and the overall development of the organisation. the Scopus	Four thematic clusters were identified: Strategic HR and AI, Recruitment and AI, Training and AI and Future of Work. There is a growing academic interest in studying the implementation of AI to develop the HR sector. AI stands out in the strategic HR and AI cluster as a means of achieving profit maximization and the overall development of the organisation(Jatobá et al., 2023).

		database, which gathered 61 articles between 2002 and 2022.	
“A systematic literature review on the impact of artificial intelligence on workplace outcomes: A multi-process perspective”	Vijay Pereira et.al (2021)	This paper is a systematic review of the impact of artificial intelligence on workplace outcomes. It looks at 60 papers published over 25 years and finds that AI can have both positive and negative impacts on workplace outcomes.	This is the first systematic review to explore the relationship between artificial intelligence and workplace outcomes. The review researches the AI-workplace outcomes nexus by drawing on the major functions of human resource management and the process framework of “antecedents, phenomenon, outcomes” at multiple levels of analysis (Pereira, 2023).
“Algorithmic Hiring in Practice: Recruiter and HR Professional’s Perspectives on AI Use in Hiring”	Lan Li et.al (2021)	This paper discusses recruiters and HR professionals' perspectives on the use of AI-enabled hiring software. It finds that the software can be useful for sourcing and assessment, but there are some concerns about data accuracy and lack of control. 15 agency recruiters, in-house recruiters, HR managers, HR consultants, and HR data analysts	AI-enabled software can provide efficient processing of candidate data, allowing for broader and more diverse candidate pools. Implementation of AI-enabled software for assessment varies depending on the industry and hiring scenario. AI-enabled software can redefine HR professionals' job content by automating or augmenting pieces of the existing hiring process (Li et al., 2021).
“Application of Artificial Intelligence in Human Resource Management Practices”	Pooja Tiwari et.al (2021)	This paper discusses the application of artificial intelligence in human resource management practices. It uses quantitative research to study the relationship between artificial intelligence and different HR functions. The results indicate that artificial intelligence has a positive influence on both the factors of ease of use and innovativeness. HR professionals from different IT companies	Artificial Intelligence has a role in different HR practices, from talent acquisition to assessing performance. Quantitative research and regression methods were used to analyse the data. Results indicated a positive link between AI and HR functions, such as ease of use and innovativeness (Tiwari et al., 2021).
“Introducing artificial intelligence into a human resources function”	Wilfried Niehueser et.al (2020)	This paper examines the attitudes of employees in a company dedicated to strategic recruitment towards the introduction of artificial intelligence (AI) into their work processes. It uses semi-structured interviews and survey data to study the effects of AI on employees. 116 employees in a company dedicated to strategic recruitment.	The introduction of AI improved the speed and efficiency of the work processes. Employees who had used the new technology were positive about its effects. A proportion of employees who had not used the new system were less sure that it would improve their ability to do their job (Niehueser, W. & Boak, 2020).
“HR Professionals’ Intention to Adopt and Use of Artificial Intelligence in Recruiting Talents”	Mohammad Sarwar Alam (2020)	The purpose of this study is to explore the antecedents of behavioral intention to use artificial intelligence (AI) in recruiting talents by the HR professionals in Bangladesh. The study uses structural equation modeling (SEM) The use of artificial intelligence (AI) by HR	The Unified Theory of Acceptance and Use of Technology (UTAUT) was used to explore the antecedents of behavioral intention to use artificial intelligence (AI) in recruiting talents by the HR professionals in Bangladesh. Structural equation modeling (SEM) via SmartPLS was used to collect 226 replies from the end- users of AI. All hypotheses were supported, indicating that AI can be used to improve the recruiting process in

		professionals in recruiting talents in Bangladesh. 226 HR professionals in Bangladesh, mostly in the range of 30-40 years, male and female. study was quantitative research strategy	Bangladesh(Alam et al., 2020).
“AI in talent acquisition: a review of AI-applications used in recruitment and selection”	E. Albert et.al (2019)	This paper explores the current use of artificial intelligence (AI) in the recruitment and selection of candidates. It finds that most companies adopting these AI-tools tend to be larger, tech-focused and/or innovative firms. study was 2 step approach HR managers, consultants and academics.	11 areas across the R&S Process where AI-applications can be applied, but practitioners currently rely mostly on three: chatbots, screening software and task automation tools. Companies have yet to reach an inflection point as they currently show reluctance to invest in that technology for R&S(Albert, 2019).
“Identifying opportunities for artificial intelligence in the evolution of training and development practices”	S. Maity et.al (2019)	This paper explores the opportunities for their organization/department requires artificial intelligence in training and development practices. It is based on interviews with 27 HR and training professionals from across eight organizations.	92.6% of HR/training professionals believe knowledge management practices. 63% of respondents believe personalized learning is a requirement. 51.9% of respondents prefer on-the-go learning tools for their employees(Maity, 2019). The findings suggest that personalized learning and on-the-go learning tools would be useful for employees.
“AI: the HR revolution”	Fred Gulliford et.al (2019)	This paper discusses how artificial intelligence (AI) and robotics are already influencing every industry and how Qlearsite uses AI to unleash the business potential in workforces data. It describes how businesses can use AI to better understand their workforce, identify performance hurdles, and develop strategies to clear them.	AI and machine learning can be used to unlock the potential of workforce data. AI implementation strategies have been met with challenges from HR leaders, but the benefits are evident and measurable. AI can be used to solve complex issues, such as absenteeism, which would be difficult and expensive for employees to do. The optimal use of AI tools in HR processes is to use them to better understand the workforce, identify performance hurdles, and develop strategies to clear them(Gulliford & Parker Dixon, 2019).
“The Future of HR in the Presence of AI: A Conceptual Study”	Dr. Tanvi Ranaet.al (2018)	This paper discusses the role of artificial intelligence (AI) in human resources management (HRM). It suggests a collaborative approach between AI and HRM, highlighting the complementary role of HRM in effective utilization of AI.	AI is increasingly being used in HRM functions, leading to fears of human resources being replaced by machines The current study suggests a collaborative approach between AI and HRM, with AI being used as a supporting tool for HR. Organizations should focus on implementing AI as a supporting tool for HR, rather than replacing HR. The optimal use of AI tools in HR processes is a collaborative approach by highlighting the complementary role of HRM in effective utilization of AI(Rana, 2018).

RESEARCH GAP

A full study or investigation on the role of AI-assisted applications in HR Processes is required.

There is a small and fragmented body of work on artificial intelligence (AI) in human resource processes (HRP) in its entirety.

There is a lack of a comprehensive knowledge of how AI-based technologies are incorporated into organizations’ HR practices, as well as their influence on work organization, decision-making, problem-solving and resource utilization. Therefore, further study is needed on the implications of AI adoption in HR Processes.

OBJECTIVES

- ❖ To identify the current AI tools and technologies are being used in HR Processes/ practices.
- ❖ To analyze the types of AI tools are being used for each HR Process.
- ❖ To design a conceptual framework of AI on HR processes.
- ❖ To examine the impact of AI tools on organizational outcomes.

RESEARCH METHODOLOGY

This paper is a conceptual paper, relevant information and data were collected from secondary sources, mostly the study was on the basis of review of literature. A number of websites, journals, and publications have been reviewed in order to find out the various elements of Artificial Intelligence technologies and the way they relate to different HR practices like recruitment, training and development, performance measurement, employee benefits etc.

Sampling Design

A total of 78 articles have been reviewed. The titles and abstracts of 58 articles have been identified as potential articles. In addition, 20 studies have been excluded. In total, 38 studies have been selected for data extraction. The reviewed articles provide brief information about the AI technologies used in HR.

Sources of Data

In a conceptual paper, the sources of data typically revolves around theoretical frameworks, existing literature, and conceptual models rather than empirical data gathered through experiments or observations. Here are some common sources of data in a conceptual paper:

Literature Review:

- ❖ Books and Journals: Academic books and peer-reviewed journals are crucial sources for understanding existing theories, models, and concepts related to my topic.
- ❖ Articles: Relevant articles that contribute to the theoretical understanding of the subject.
- ❖ Theoretical Frameworks:
- ❖ Established Theories: Drawing on established theories in my field provides a foundation for building and expanding my conceptual framework.
- ❖ Models and Frameworks: Utilize existing conceptual models or frameworks that help explain or organize the concepts relevant to my paper.
- ❖ Conceptual Models:
- ❖ Existing Models: Referencing existing conceptual models that have been proposed by researchers in the field is valuable for building my own conceptual framework.
- ❖ Diagrams and Visual Representations: Visual representations of concepts, models, or frameworks will enhance the clarity of my conceptual paper.
- ❖ Online Resources:
- ❖ Websites and Online Platforms: Some concepts and frameworks may be discussed or presented on reputable websites, online platforms, or forums.
- ❖ Limitation of this study: A Conceptual paper often lack empirical data, as they are focused on theoretical frameworks and ideas. This can be a limitation when compared to studies that involve empirical research and data analysis. A conceptual paper synthesizes and organizes existing ideas, theories, and concepts rather than presenting new empirical data.

Figure 1.1 Overview of the Conceptual Framework



Artificial Intelligence-

Artificial Intelligence (AI) has created a revolutionary effect on Human Resources (HR) processes, resulting in increased effectiveness, improved decision-making and overall efficiency.

Human Resource Processes

Maintaining efficient HR processes is crucial for achieving a pleasant and productive work environment. The effectiveness and efficiency of these processes have been further improved by the use of technology, such as AI and HR software. In addition, HR professionals play a vital role in maintaining a positive corporate culture and advancing the company's overall goals.

Outcomes/ Results

Organizations are managing their workforces in new and innovative ways as a result of the successful integration of Artificial Intelligence (AI) into HR processes. While the findings demonstrate how effectively AI has impacted HR processes, it's essential for businesses to handle any ethical issues, protect customer data, and make sure that integrating AI technology is consistent with the company's purpose and fundamental principles. A pleasant employee experience also depends on establishing a balance between automation and human interaction.

Figure 1.2 Detailed overview of the Conceptual Framework

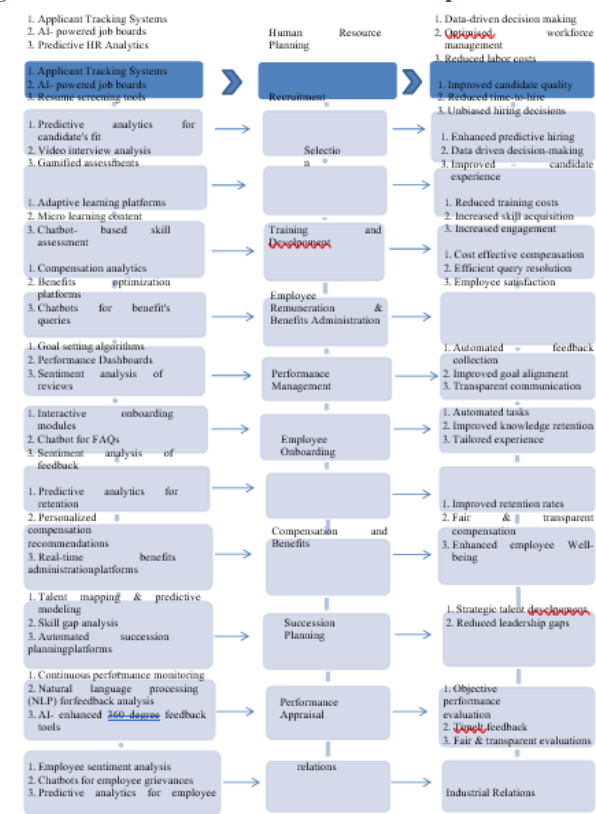


Figure 1.3 Detailed overview of Artificial Intelligence Tools on HR Processes

Human Resource Planning:

AI Tool: Applicant Tracking Systems, AI-powered job boards, Predictive Analytics

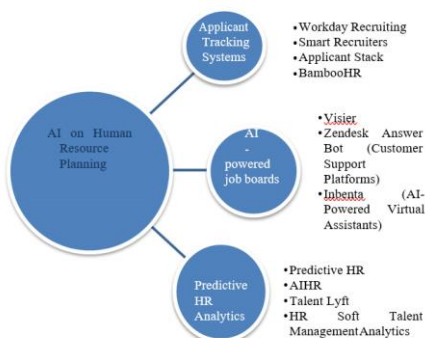


Fig. 1.3.1 Artificial Intelligence on Human Resource Planning

How to cite: Ratna Thakur and B.S Rathore. Impact of Artificial Intelligence on HR Processes: A Conceptual Framework. *Advances in Consumer Research*. 2025;2(5):161–177.

Outcome: By utilizing AI-powered tools such as applicant tracking systems, job boards, as well as predictive HR analytics, organizations can optimize workforce administration, make data-driven decisions, and reduce labour expenses. Predictive Analytics leverages historical HR data to identify patterns and trends. It considers factors like employee performance, turnover rates, and business growth. AI algorithms build predictive models based on the historical data. By analyzing past trends and current data, Predictive Analytics can forecast future workforce needs. This allows HR professionals to anticipate changes in demand for specific skills, employee turnover, and overall staffing requirements. HR teams can run different scenarios to understand the potential impact of various factors on the workforce. For example, they can simulate the effects of a market expansion or a downturn, helping the organization prepare for different eventualities.

Recruitment:

AI Tool: Applicant Tracking System (ATS), AI- powered job boards, Resume screening tools

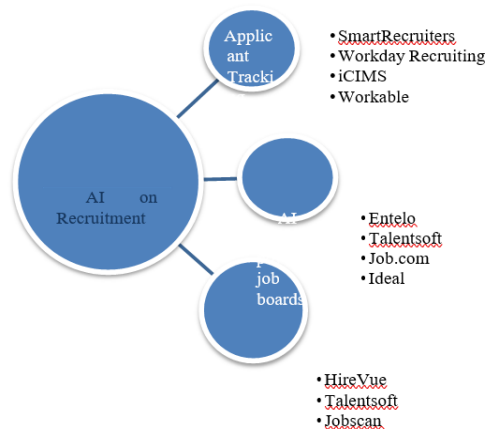


Fig. 1.3.2 Artificial Intelligence on Recruitment

Outcome: By utilizing AI tools such as resume screening, job posting optimization, and video interview analysis, organizations can reduce costs and time, increase effectiveness by facilitating more diverse and well-selected candidates, and enhance the employee experience through streamlined communication and personalized approaches. An ATS maintains a centralized database of candidate information, including resumes, application forms, and communication history. This allows recruiters to efficiently search and retrieve candidate data. ATS can automate the process of posting job openings on various job boards, career websites, and social media platforms. This ensures that job listings reach a wider audience, increasing the pool of potential candidates. ATS often includes CRM functionalities, enabling recruiters to build and manage relationships with potential candidates over time. This is particularly useful for creating talent pipelines for future hiring needs. Some advanced ATS systems use AI algorithms to match candidate profiles with job requirements.

Keyword matching algorithms then compare this information with job requirements. ATS automates the initial screening process, eliminating the need for recruiters to manually review each resume. This significantly reduces the time and effort required for the screening phase.

Selection

AI Tool: Predictive analytics for candidate's fit, Video interview analysis, Gamified assessments

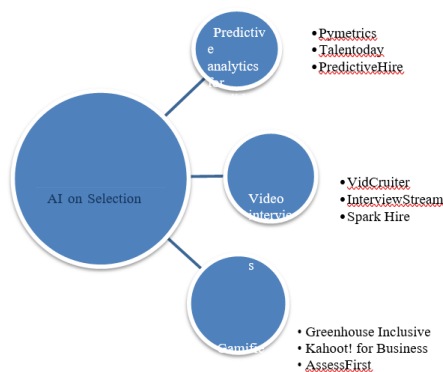


Fig. 1.3.3 Artificial Intelligence on Selection

Outcome: Companies may improve their predictive recruiting, make data-driven choices, and provide candidates a more

How to cite: Ratna Thakur and B.S Rathore. Impact of Artificial Intelligence on HR Processes: A Conceptual Framework. *Advances in Consumer Research*. 2025;2(5):161–177.

engaging assessment experience by using AI technologies such as gamified assessments, video interview analysis, and predictive analytics for applicant fit. The integration of Behavioral Assessment Tools in the selection process yields significant outcomes, including objective evaluation of candidates' suitability, reduced bias, and improved cultural fit. These tools utilize artificial intelligence to analyze and interpret candidates' responses to situational, role-specific, or personality-based questions.

The data-driven insights from behavioral assessments aid in identifying individuals whose characteristics align closely with the organization's culture, fostering a better fit between candidates and the workplace environment. Ultimately, the use of AI-powered Behavioral Assessment Tools enhances the overall quality and fairness of the selection process, contributing to more informed hiring decisions and positive organizational outcomes.

Training and Development

AI Tool: Adaptive Learning Platforms, Micro- Learning Platforms, Chatbot- based Skill Assessment

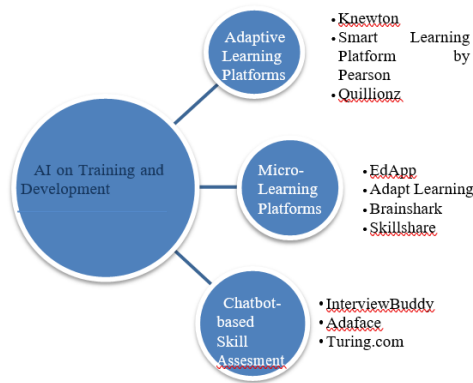


Fig. 1.3.4 Artificial Intelligence on Training & Development

Outcome: By utilizing artificial intelligence (AI) tools such as adaptive platforms, personalized learning recommendations, and virtual reality simulations, organizations can decrease training expenses, enable specialized learning trajectories, augment skill acquisition, and foster greater employee engagement and opportunities for skill development. The integration of Personalized Learning Platforms (PLPs) into training and development endeavors results in tangible benefits such as tailored learning trajectories, enhanced skill acquisition, and ongoing knowledge expansion. Through the customization of content and delivery methods in accordance with these insights, personalized learning platforms guarantee engagement and relevance for employees during their training experiences.

As a result, the process of skill development is more streamlined, as it accommodates individual progress and caters to their particular learning requirements. By providing adaptive content recommendations, these platforms foster continuous professional development and knowledge acquisition, thereby ultimately contributing to the cultivation of a workforce that is adequately equipped, flexible, and perpetually evolving to meet the demands of the organization.

Employee Remuneration & Benefits Administration

AI Tool: Compensation Analytics, Benefits Optimization Platforms, Chabots for Benefits Queries

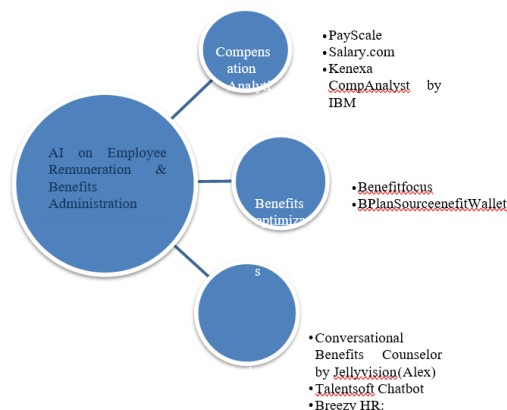


Fig. 1.3.5 Artificial Intelligence on Employee Remuneration & Benefits Administration

Outcome: Businesses may achieve cost-effective pay, improve employee happiness with personalized benefits, and quickly handle benefits-related questions by using AI solutions including compensation analytics, benefits optimization

How to cite: Ratna Thakur and B.S Rathore. Impact of Artificial Intelligence on HR Processes: A Conceptual Framework. *Advances in Consumer Research*. 2025;2(5):161–177.

platforms, and chatbots for benefit-related inquiries. An employee remuneration and benefits administration that incorporates the artificial intelligence (AI) tool Compensation Benchmarking produces compensation structures that are based on data, competitive benefits, and improved retention strategies. This feature empowers human resources professionals to devise equitable and competitive compensation packages, thereby guaranteeing that personnel are adequately compensated. Organizations can maintain competitiveness by dynamically adjusting their compensation strategies through the utilization of real-time market data.

Performance Management

AI Tool: Goal setting Algorithms, Performance Dashboards, Continuous analysis of feedback



Fig. 1.3.6 Artificial Intelligence on Performance Management

Outcome: By utilizing AI tools such as performance dashboards, goal setting algorithms, and 360-degree feedback analysis, it is possible to automate the accumulation of feedback, deliver insights based on data, and guarantee equitable evaluations, transparent communication, and efficient development planning. The incorporation of Continuous Feedback Systems, an AI tool, into Performance Management results in real-time performance insights, goal alignment, and employee growth. These systems use artificial intelligence to facilitate ongoing feedback exchanges between managers and employees, replacing traditional annual reviews with a dynamic, continuous feedback loop. This approach provides real-time insights into employee performance, fostering agility and adaptability. By aligning individual goals with organizational objectives, these systems contribute to a more transparent and collaborative work environment.

Employee Onboarding

AI Tool: Interactive onboarding modules, Chatbot for FAQs, Sentiment analysis of feedback

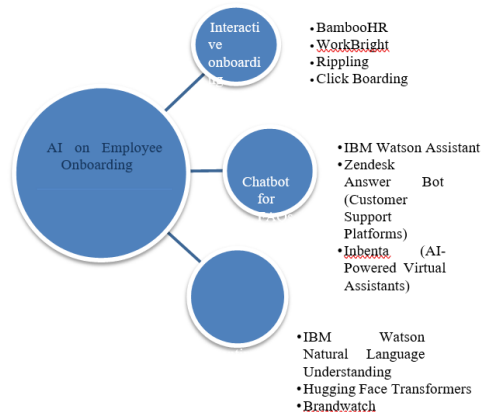


Fig. 1.3.7 Artificial Intelligence on Employee Onboarding

Outcome: By implementing AI tools like interactive modules and Chatbot's for FAQs, the induction process can be optimized, tasks can be automated, knowledge retention can be improved, and new employees will be provided with a personalized and hospitable experience, which will ultimately lead to a reduction in stress levels. The implementation of Automated Onboarding Workflows, an AI tool, in the employee onboarding process results in a smooth transition, enhanced compliance, and positive employee experiences. By leveraging automation, these workflows streamline the onboarding process, ensuring that necessary tasks such as paperwork, documentation, and training modules are efficiently managed and completed. This not only reduces administrative burdens but also facilitates a consistent and standardized onboarding experience for all employees. Automated workflows can also incorporate AI-driven features, such as chatbots for answering common queries, providing timely information, and guiding new hires through the orientation process.

The outcome is a well-organized onboarding process that minimizes delays, ensures compliance with regulatory requirements, and contributes to positive first impressions, setting the stage for long-term employee engagement and satisfaction.

Compensation and Benefits

AI Tool: Predictive Analytics for Retention, Personalized Compensation Recommendations, Real-Time Benefits Administration Platforms

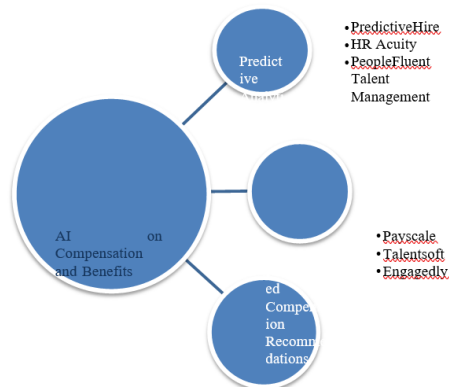


Fig. 1.3.8 Artificial Intelligence on Compensation & Benefits

Outcome: Organizations can increase employee well-being through dynamic benefit adjustments, ensure fair and transparent compensation decisions, and increase retention rates by utilizing AI tools such as personalized compensation recommendations, real-time benefits administration platforms, and predictive analytics for retention. The utilization of Benefits Optimization Algorithms, an AI tool, in Compensation and Benefits administration leads to outcomes characterized by cost-effective benefits packages, increased employee satisfaction, and enhanced retention. These algorithms analyze diverse employee data, considering factors such as demographics, preferences, and usage patterns, to tailor benefits offerings to individual needs. By optimizing benefit plans based on data-driven insights, organizations can design packages that are not only cost-effective for the company but also resonate with employees, addressing their unique requirements. The result is an improved overall compensation and benefits strategy that fosters higher employee satisfaction, reinforces the organization's commitment to employee well-being, and contributes to enhanced retention rates by aligning rewards with individual preferences and needs.

Succession Planning

AI Tool: Talent Mapping and Predictive Modeling, Skill Gap Analysis, Automated Succession Planning Platforms

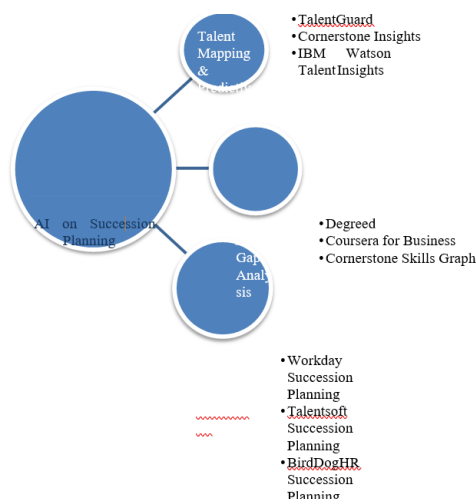


Fig. 1.3.9 Artificial Intelligence on Succession Planning

Outcome: Employing AI technologies like skill gap analysis, talent mapping and predictive modeling, and automated succession planning platforms, businesses may decrease leadership gaps, increase employee engagement, and develop people strategically by offering clear career progression routes. The incorporation of Talent Mapping and Predictive Succession Models, utilizing AI tools, into Succession Planning yields outcomes characterized by the identification of high-potential employees, effective leadership development, and seamless transitions. These tools leverage advanced

How to cite: Ratna Thakur and B.S Rathore. Impact of Artificial Intelligence on HR Processes: A Conceptual Framework. *Advances in Consumer Research*. 2025;2(5):161–177.

analytics to assess employee performance, skills, and potential for leadership roles. By mapping talent across the organization, predictive models can identify individuals with the capabilities to fill critical roles in the future. This enables organizations to proactively invest in the development of high-potential employees, ensuring a robust pipeline of leaders. The outcome is a succession planning strategy that is data-driven, anticipates organizational needs, and facilitates smooth transitions, reducing the impact of leadership gaps and fostering long-term organizational stability and success.

Performance Appraisal

AI Tool: Continuous Performance Monitoring, Natural Language Processing (NLP) for Feedback Analysis, AI-Enhanced 360-Degree Feedback Tools

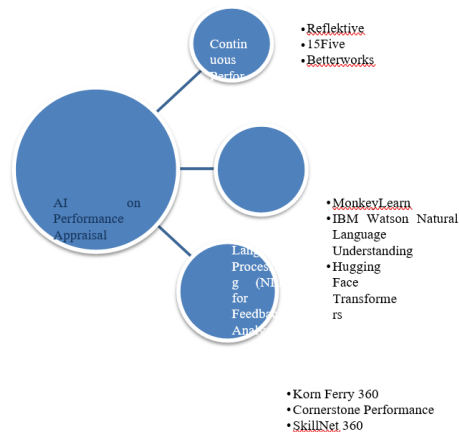


Fig. 1.3.10 Artificial Intelligence on Performance Appraisal

Outcome: Businesses may accomplish objective performance assessments, fast feedback, and fair and transparent appraisal procedures by using AI solutions such as continuous performance monitoring, natural language processing (NLP) for feedback analysis, and AI- enhanced 360-degree feedback platforms. The integration of 360-Degree Feedback Analysis, an AI tool, into Performance Appraisal results in comprehensive performance assessments, targeted development plans, and fair evaluations. This tool gathers feedback from multiple sources, including peers, subordinates, and supervisors, providing a holistic view of an employee's performance. AI algorithms analyze this diverse feedback to identify patterns and trends, offering a more objective and unbiased evaluation. The outcome is a nuanced understanding of an employee's strengths and areas for improvement, enabling the creation of targeted development plans.

Industrial Relations

AI Tool: Employee Sentiment Analysis, Chatbots for Employee Grievances, Predictive Analytics for Employee Relations

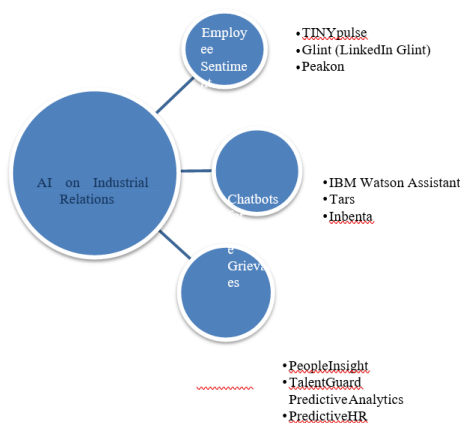


Fig. 1.3.11 Artificial Intelligence on Industrial Relations

Outcome: Through the use of AI technologies, such as chatbots for employee complaints, employee sentiment analysis, and predictive analytics for employee relations, organizations may use data-driven insights to improve communication, resolve conflicts in a proactive manner, and improve employee relations overall. The implementation of Sentiment Analysis and Employee Engagement Surveys, leveraging AI tools, in Industrial Relations yields outcomes marked by proactive conflict resolution, a positive workplace culture, and heightened employee satisfaction. Sentiment analysis algorithms assess employee sentiments by analyzing language patterns and expressions in communication channels, allowing organizations to identify potential issues early on.

The outcomes include the ability to address concerns promptly, fostering a proactive approach to conflict resolution, and the cultivation of a positive workplace culture. By understanding and responding to employee sentiments, organizations can enhance employee satisfaction, strengthen industrial relations, and create an environment conducive to productivity and collaboration.

RESULTS/ FINDINGS OF THE STUDY

The findings of the study states that AI makes it easier to work by improving hiring and selection processes, onboarding, training and development, performance management and talent management. The use of AI on HR processes results in the automation of repetitive and time-consuming processes. As an illustration, a chatbot or a virtual assistant (very common tools) automates the scheduling of interviews, the answering of candidate questions, and facilitates onboarding processes.

Human resource management (HRM) practices can now be managed effectively and efficiently with the help of AI-driven technologies such as data mining (DM), predictive analytics, big data analytics, natural language processing (NLP), etc.

This have enabled organizations to streamline their HR management processes, improving employee well-being, automating processes, and reducing costs.

IMPLICATIONS OF THE STUDY

The study may contribute to greater awareness as well as knowledge of how AI impacts HR processes or practices. The findings of the study may be useful to practitioners, policy makers, educators and researchers who want to gain a better understanding of the implications of AI on HR Processes.

RECOMMENDATION

It is advised to conduct empirical research on the implications of AI on HR Processes to validate the theoretical concepts outlined in the Conceptual Framework. Incorporating the these concepts into educational curricula could include proposing specific courses, modules or training programs that implement the proposed concepts to train future practitioners in the field. These concepts can be used in organizational structures, policy making, or in professional practice. I invite researchers, practitioners and educators to share their feedback on my findings and suggest improvements based on practical experience or new insights in the future.

REFERENCES

1. Verma, A. "A Review of Artificial Intelligence and Its Application in the Future Medical Field." *International Journal of Scientific Research in Engineering and Management*, vol. 6, no. 12, 2022, doi:10.55041/IJSREM17329.
2. Ramesh, A. N., C. Kambhampati, J. R. T. Monson, and P. J. Drew. "Artificial Intelligence in Medicine." *Annals of the Royal College of Surgeons of England*, vol. 86, no. 5, 2004, pp. 334–338, doi:10.1308/147870804290.
3. Leake, David B. "Artificial Intelligence." *History*, 2002, pp. 1–11. legacy.cs.indiana.edu/ftp/leake/p-01-07/p-01-07.pdf.
4. Amit, Raphael, and Monica Belcourt. "Human Resources Management Processes: A Value-Creating Source of Competitive Advantage." *European Management Journal*, vol. 17, no. 2, 1999, pp. 174–181, doi:10.1016/S0263-2373(98)00076-0.
5. Ansari, S., and M. Srinivasan. "Human Resources Practices: Opportunities and Challenges (Empirical Study with Reference to IT Companies in Chennai City)." *Semantic Scholar*, 2020. www.semanticscholar.org/paper/Human-Resources-Practices%3A-Opportunities-and-Study-Ansari-Srinivasan/571892e3e3e9b1087ec39f3df8db131c66bd9abc.
6. Václav, O., Antonín P., and Petra J. "Processes, Performance Drivers and ICT Tools in Human Resources Management." *Journal of Competitiveness*, vol. 2, 2011, pp. 58–70. www.cjournal.cz/files/58.pdf.
7. Niehueser, W., and G. Boak. "Introducing Artificial Intelligence into a Human Resources Function." *Industrial and Commercial Training*, vol. 52, no. 2, 2020, pp. 121–130, doi:10.1108/ICT-10-2019-0097.
8. Iqbal, F. M. "Can Artificial Intelligence Change the Way in Which Companies Recruit, Train, Develop and Manage Human Resources in Workplace?" *Asian Journal of Social Sciences and Management Studies*, vol. 5, no. 3, 2018, pp. 102–104, doi:10.20448/JOURNAL.500.2018.53.102.104.
9. M, K. K., and R. Elangovan. "To Study Impact of Artificial Intelligence on HR Practices." *ComFin Research*, vol. 9, no. 4, 2021, doi:10.34293/commerce.v9i4.4134.
10. Tewari, I., and M. Pant. "Artificial Intelligence Reshaping Human Resource Management: A Review." *Proceedings of IEEE International Conference on Advent Trends in Multidisciplinary Research and Innovation (ICATMRI)* 2020), 2020, doi:10.1109/ICATMRI51801.2020.9398420.
11. Tambe, Prasanna, Peter Cappelli, and Valery Yakubovich. "Artificial Intelligence in Human Resources Management: Challenges and a Path Forward." *California Management Review*, vol. 61, no. 4, 2019, pp. 15–42, doi:10.1177/0008125619867910.
12. Budhwar, Pawan, Ashish Malik, M. T. T. De Silva, and P. Thevisuthan. "Artificial Intelligence—Challenges and Opportunities for International HRM: A Review and Research

- Agenda.” *International Journal of Human Resource Management*, vol. 33, no. 6, 2022, pp. 1065–1097, doi:10.1080/09585192.2022.2035161.
13. Karacsony, Peter. “Analysis of the Attitude of Hungarian HR Professionals to Artificial Intelligence.” *Naše Gospodarstvo/Our Economy*, vol. 68, no. 2, 2022, pp. 55–64, doi:10.2478/NGOE-2022-0011.
14. Ardichvili, Alexander. “The Impact of Artificial Intelligence on Expertise Development: Implications for HRD.” *Human Resource Development Review*, vol. 24, no. 2, 2022, pp. 78–98, doi:10.1177/15234223221077304.
15. Hamilton, Rebecca H., and H. K. Davison. “Legal and Ethical Challenges for HR in Machine Learning.” *Employee Responsibilities and Rights Journal*, vol. 34, no. 1, 2022, pp. 19–39, doi:10.1007/S10672-021-09377-Z.
16. Fernández-Martínez, C., and A. Fernández. “AI and Recruiting Software: Ethical and Legal Implications.” *Paladyn*, vol. 11, no. 1, 2020, pp. 199–216, doi:10.1515/pjbr-2020-0030.
17. Vrontis, Demetris, Marios Christofi, Vijay Pereira, Shlomo Tarba, Andreas Makrides, and Elena Trichina. “Artificial Intelligence, Robotics, Advanced Technologies and Human Resource Management: A Systematic Review.” *International Journal of Human Resource Management*, vol. 33, no. 6, 2021, pp. 1237–1266, doi:10.1080/09585192.2020.1871398.
18. Huang, W., and A. Hayat. “Impact of Artificial Intelligence in Enterprises HR Performance in Pakistan: A Comparison Study with Australia.” *Global Journal of Management and Business Research*, vol. 19, no. 15, 2019. journalofbusiness.org/index.php/GJMBR/article/view/3074.
19. Berhil, S., H. Benlahmar, and N. Labani. “A Review Paper on Artificial Intelligence at the Service of Human Resources Management.” *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 18, no. 1, 2019, pp. 32–40, doi:10.11591/ijeecs.v18.i1.pp32-40.
20. Gelinas, D., A. Sadreddin, and R. Vahidov. “Artificial Intelligence in Human Resources Management: A Scoping Review.” *AMCIS 2022 Proceedings*, 2022. aisel.aisnet.org/amcis2022/sig_meta/sig_meta/10.
21. Premnath, E., and A. Chully. “Artificial Intelligence in Human Resource Management: A Qualitative Study in the Indian Context.” *Semantic Scholar*, 2020. www.semanticscholar.org/paper/Artificial-Intelligence-in-Human-Resource-A-Study-Premnath-Chully/89b7c75e241d98a86a6155fe8cf53448d129acf2.
22. Johansson, J. “The Application of Artificial Intelligence (AI) in Human Resource Management: Current State of AI and Its Impact on the Traditional Recruitment Process.” *Semantic Scholar*, 2019. [www.semanticscholar.org/paper/The-application-of-Artificial-Intelligence-\(AI\)-in-Johansson-Herranen/dae2da2f3c3094dbb6cecd784d6a3908e83cdc65](https://www.semanticscholar.org/paper/The-application-of-Artificial-Intelligence-(AI)-in-Johansson-Herranen/dae2da2f3c3094dbb6cecd784d6a3908e83cdc65).
23. Nawaz, M., and A. Gomes. “Automation of the HR Functions Enhance the Professional Efficiency of the HR Professionals: A Review.” *International Journal of Management, IT and Engineering*, 2014.
24. Biliavska, V., R. A. Castanho, and A. Vulevic. “Analysis of the Impact of Artificial Intelligence in Enhancing the Human Resource Practices.” *Journal of Intelligent Management Decision*, vol. 1, no. 2, 2022, pp. 128–136, doi:10.56578/jimd010206.
25. Bhardwaj, G., S. V. Singh, and V. Kumar. “An Empirical Study of Artificial Intelligence and Its Impact on Human Resource Functions.” *Proceedings of International Conference on Computation, Automation and Knowledge Management (ICCAKM 2020)*, 2020, pp. 47–51, doi:10.1109/ICCAKM46823.2020.9051544.
26. Kshetri, Nir. “Artificial Intelligence in Human Resource Management in the Global South.” *AMCIS 2020 Proceedings*, 2020. aisel.aisnet.org/amcis2020/org_transformation_is/org_transformation_is/27.
27. Jatobá, M. N., J. J. Ferreira, P. O. Fernandes, and J. P. Teixeira. “Intelligent Human Resources for the Adoption of Artificial Intelligence: A Systematic Literature Review.” *Journal of Organizational Change Management*, 2023, doi:10.1108/JOCM-03-2022-0075.
28. Pereira, Vijay. “A Systematic Literature Review on the Impact of Artificial Intelligence on Workplace Outcomes: A Multi-Process Perspective.” *Human Resource Management Review*, vol. 33, no. 1, 2023, doi:10.1016/J.HRMR.2021.100857.
29. Li, L., T. Lassiter, J. Oh, and M. K. Lee. “Algorithmic Hiring in Practice: Recruiter and HR Professionals’ Perspectives on AI Use in Hiring.” *Proceedings of the 2021 AAAI/ACM Conference on AI, Ethics, and Society (AIES 2021)*, 2021, pp. 166–176, doi:10.1145/3461702.3462531.
30. Tiwari, P., R. Pandey, V. Garg, and A. Singhal. “Application of Artificial Intelligence in Human Resource Management Practices.” *Proceedings of the Confluence 2021: 11th International Conference on Cloud Computing, Data Science and Engineering*, 2021, pp. 159–163, doi:10.1109/CONFLUENCE51648.2021.9377160.
31. Alam, M. S., T.-U.-Z. Khan, S. S. Dhar, and K. S. Munira. “HR Professionals’ Intention to Adopt and Use of Artificial Intelligence in

- Recruiting Talents.” *Business Perspective Review*, vol. 2, no. 2, 2020, pp. 15–30, doi:10.38157/business-perspective-review.v2i2.122.
32. Albert, E. T. “AI in Talent Acquisition: A Review of AI-Applications Used in Recruitment and Selection.” *Strategic HR Review*, vol. 18, no. 5, 2019, pp. 215–221, doi:10.1108/SHR-04-2019-0024.
33. Maity, S. “Identifying Opportunities for Artificial Intelligence in the Evolution of Training and Development Practices.” *Journal of Management Development*, vol. 38, no. 8, 2019, pp. 651–663, doi:10.1108/JMD-03-2019-0069.
34. Gulliford, F., and A. Parker Dixon. “AI: The HR Revolution.” *Strategic HR Review*, vol. 18, no. 2, 2019, pp. 52–55, doi:10.1108/SHR-12-2018-0104.
35. Rana, D. T. “The Future of HR in the Presence of AI: A Conceptual Study.” *SSRN Electronic Journal*, 2018, doi:10.2139/SSRN.3335670.