

THE INTEGRATION OF ARTIFICIAL INTELLIGENCE INTO THE HUMAN RESSOURCES SECTOR

Armend Berisha

Universum College, Kosovo, aramberisha@gmail.com

Abstract: The integration of artificial intelligence (AI) into the human resources (HR) sector marks a profound transformation. This evolution, driven by the automation of tasks and advanced data analysis, is redefining HR processes, offering professionals new perspectives to improve efficiency and the employee experience. This transformation is underway and is deeply impacting how businesses operate. A key question arises: How is AI transforming the field of human resources? AI is a true driver of change for HR operations. It operates at several levels, from administrative management to talent management and recruitment. Its impact is such that it transforms traditional practices and encourages companies to rethink their HR strategy. Data analysis and automation are at the heart of this revolution. Automating repetitive tasks: One of the first benefits of AI in HR is the automation of repetitive and time-consuming tasks. Thanks to sophisticated algorithms, it is possible to delegate administrative activities that consume significant amounts of HR team time, allowing them to focus on higher-value tasks. Simplify administrative management with chatbots that can answer frequently asked questions or automate onboarding processes. These automation tools enable employees to get quick answers to common questions, such as those related to leave management or access to HR documents. Using AI systems reduces the workload of HR teams and saves time.

Keywords: Artificial Intelligence, Human Resources, Automation, Personalization

1. INTRODUCTION

AI is revolutionizing the HR profession AI boosts productivity and efficiency in human resources organizations. However, many leaders and HR professionals are unaware of the support it can offer for processes such as recruitment, talent management, onboarding, and employee experience, among others. The role of HR is evolving to that of a strategic business partner. Gone are the days when HR was limited to processing applications and answering questions about employee benefits. Today, HR proactively contributes to the overall success of the business. Furthermore, HR has new tools at its disposal, with artificial intelligence (AI) being the most significant development in its ongoing digital transformation. In fact, 38% of HR leaders have explored or implemented AI solutions to improve process efficiency within their organizations. GenAI adoption in HR is rapidly increasing. The share of HR leaders who are actively planning or already deploying GenAI has jumped from 19% in June 2023 to 61% by January 2025. This sharp rise highlights growing recognition of GenAI's power to reshape HR processes. (<https://www.gartner.com/en/human-resources/topics/artificial-intelligence-in-hr>) When deployed effectively, AI can accelerate HR processes and improve employee interactions. However, many HR professionals and managers don't fully grasp all the benefits AI can offer within their HR strategy. Discover the scope of AI in HR, how it enhances HR functions, and the challenges to avoid during implementation. The Scope of AI in HR Artificial intelligence (AI) is a technology that enables machines to exhibit human-like reasoning and capabilities, such as autonomous decision-making. By processing large amounts of training data, AI learns to recognize language, identify patterns and trends, proactively solve problems, and predict future conditions and outcomes. In the context of human resource management, sometimes called human capital management or HCM, AI involves the use of a wide range of constantly evolving tools to automate routine, structured, and process-oriented tasks. It is revolutionizing the way companies attract, recruit, retain, and develop their employees. AI Technologies in HR First, it is essential to understand the different types of AI technologies available for HR. While many discussions refer to AI as a single, overarching tool, in reality, several distinct technologies apply to specific HR tasks. (Jacob, S. Souissi, S. Patenaude, N. 2022)

2. AI TOOL TYPE DESCRIPTION EXAMPLES OF AI IN HR

Generative AI Learns patterns and structure from training data and uses existing content and data to generate new content, including text, images, other media, and programming code. • Creates job descriptions, employee performance objectives, and interview questions. • Updates content to reflect evolving policies. Conversational AI Replicates human conversations using technologies such as chatbots or virtual agents and natural language processing to help bots understand user intent. • Allows employees to easily update their personal information and view job-related details. • Allows employees to request or provide feedback about their roles. • Provides employees with quick answers to HR questions through assistants and chatbots that gather and summarize information. Deep

Learning Performs advanced analytics on HR data to gain deeper insights and provide strategic recommendations. • Provides personalized recommendations for training, roles, projects, team dynamics, mentors, and peer relationships. Automation Uses AI-driven intelligence to perform simulations that inform HR decision-making. • Recommends the most appropriate benefits for specific employees. • Detects fraud in payroll processing. (Patesson, L. Ajzen, M. & Inglebert-Frydman, A. 2024, 68p)

3. APPLICATION OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCES

AI Applications in HR Implementing AI in HR can enhance many HR functions, from recruitment and training to improving employee engagement and retention. The use cases for AI, and particularly generative AI, to optimize HR functions continue to grow. Here are some examples illustrating how HR professionals can leverage artificial intelligence to address key people-related challenges. Streamlining Recruitment Nearly the entire recruitment process can be optimized with AI. This helps attract and hire the right talent while reducing recruitment time by several weeks: • Use a common skills framework to attract, source, and recruit talent globally, through automated processes, personalized communications, and cross-functional workflows. • Simplify the recruitment process for recruiters and hiring managers with AI-powered recruitment software that automates repetitive tasks, including generating unbiased interview questions and job descriptions tailored to the role. • Skip the resume and profile review stage with intelligent recruitment analytics that identifies the skills the recruiter is looking for and submits matching resumes. • Manage skills and aptitude tests to rank candidates based on their fit for the role. • Provide unbiased feedback on interviews after evaluating a candidate. • Deploy conversational interfaces, such as recruitment chatbots, to communicate directly with candidates 24/7 and keep them engaged throughout the recruitment process. • Uncover "hidden talent" using AI tools that scan various external data sources, such as job boards, social media, and professional networks, to identify the skills of potential candidates and invite them to apply for open positions. Onboarding Automation Once candidates are hired, HR can use AI to streamline the onboarding process, especially for remote employees and external resources who cannot participate in traditional in-person sessions: • Provide 24/7 onboarding support worldwide using HR chatbots, reducing the need for human staff to handle phone calls, emails, and in-person meetings. • Create personalized and engaging onboarding experiences for new hires. • Automate data and workflows throughout the onboarding process by automatically sending recruitment documents, company policies, login credentials, and role-specific permissions.(Meijerink, J., Boons, M., Keegan, A. et Marler, J. 2021, 1-18.pp)

4. PERSONALIZED TALENT MANAGEMENT

It's essential to evolve a company's recruitment strategy and employee skills to retain top talent in the long term. But with hundreds, or even thousands, of employees, it's nearly impossible for HR teams to know each individual's capabilities and aspirations. Here's how AI helps HR optimize talent management processes to prepare the workforce for the future: • Skills frameworks: Compile comprehensive skills frameworks (called skills ontologies) that map employee skill sets, match them to job requirements, and identify complementary skills to develop • Accurate skills assessments: Use machine learning and natural language processing to assess complex human skills like creativity and emotional intelligence with greater objectivity • Personalized growth opportunities: Recommend tailored training, mentors, assignments, and career paths based on an employee's specific skills, interests, and aspirations • Upskilling and reskilling: Recommend personalized training programs to prepare employees for new opportunities and enable learning anytime, anywhere • Talent mobility: Identify and develop internal talent by identifying transferable skills and suggesting new roles or projects, fostering internal career mobility • Real-time performance analytics: Conduct performance reviews that regularly deliver data-driven feedback to help managers and employees improve in real time • Strategic talent planning: Use powerful predictive analytics to anticipate future talent needs and help HR plan for acquiring the skills required to meet the company's future challenges Enhancing the Employee Experience The ability to retain and engage top talent is a competitive advantage for any business, but it's not just about offering career opportunities. HR can leverage AI to deliver satisfying interactions in several ways. • Personalized employee journeys: Tailor support and resources to each individual's preferences, needs, and work style, so your employees feel valued and supported at every stage of their career. • Improved accessibility and efficiency: Deploy tools such as AI copilots to help your employees access information, complete tasks, and resolve issues quickly. By streamlining their daily work, your employees can focus on more meaningful and value-added tasks. • Proactive employee well-being support: Use IoT sensors to monitor stress, emotional state, and workload, promoting the mental and physical well-being of your employees and reducing burnout, absenteeism, and health issues. • Real-time feedback and support: Implement regular feedback mechanisms that provide your employees with real-time guidance and encouragement to help them achieve their goals. • Satisfactory self-service options: Reduce the need for manual human intervention with self-service features that allow access to and management of

core HR information in real time. Employees can perform simple tasks themselves, such as updating their personal data, viewing other employees' profiles, and interacting with time, payroll, and recognition/rewards functions. Generative AI helps employees perform more complex self-service tasks. It can ingest company policy and procedure documents and then answer HR-related questions in conversational language, using, for example, a chatbot or AI assistant to answer questions about benefits or a pay stub. It can also help managers draft job descriptions and create new roles. (Chevalier,F./ Dejour. 2021)

5. THE BENEFITS OF AI IN HR

As AI technologies advance, they become more sophisticated tools for HR departments, revolutionizing their processes and functions. Here are some examples of how AI tools for human resources add value for employers and employees: • Accelerating HR processes, freeing up resources by reducing the time and effort required for tasks such as recruitment, onboarding, and performance reviews • Increasing efficiency and productivity by automating low-value or repetitive tasks • Eliminating unconscious bias in HR text for job postings/descriptions, interview questions, performance evaluations, and compensation analysis • Enhancing employee and candidate experiences with highly personalized interactions • Boosting employee and manager productivity, enabling them to work smarter with generative AI capabilities that can process and summarize complex information, then generate reports or content quickly • Quickly analyzing large volumes of data to enable HR to make data-driven decisions with confidence • Connecting with other systems and combining HR and operational data to make decisions based on a holistic view • Anticipating and preparing for business-driven workforce changes through skills analysis and scenario planning Challenges and Concerns with AI in HR Both HR teams and employees are enthusiastic about using AI for tasks such as acquiring new skills, accessing development opportunities, and using self-service options. However, they are less comfortable with using it for tasks such as processing sensitive data, conducting performance evaluations, or monitoring employee activity. Transparency is another concern for employees. Indeed, employees want to know how the AI technologies used by their employer work, the level of accuracy and fairness of the recommendations they generate, as well as the sources and outcomes of the data that powers them. Here are some of the challenges that companies using AI-powered HR technologies may face, along with some tips on how to address them. AI Governance and Adoption Recent studies indicate that AI governance is a major obstacle to the adoption of AI by businesses and HR professionals. Two-thirds (67%) of the surveyed companies had no governance framework in place. While most of these companies were taking steps to develop one, some were less proactive, intending to manage AI like any other technology or relying on external, regional or federal-level governance. However, AI is not like any other technology. It requires a unique approach. A specific AI governance model is essential to ensure that companies develop, select, deploy, and use AI responsibly and ethically, as explained below. The good news is that guidance is available. The detailed report on AI adoption identifies 10 key steps to take to encourage an organization to begin using new AI tools.(Chevalier F. & Fournier C. 2021)

6. MASTERING AI AT WORK EMPLOYEESA

New study by SAP, which surveyed more than 4,000 managers and employees worldwide, indicates that employees' AI proficiency has a significant impact on their perception of the technology and those who use it at work. Furthermore, study participants expressed mixed opinions about using AI in important personnel decisions. To address this, organizations must prioritize and invest in AI literacy to ensure their employees fully understand this emerging technology and can leverage it effectively. The Importance of AI Literacy The SAP AI study reveals that employees have mixed opinions about AI in the workplace, and their views depend on their level of AI proficiency. Ethical Considerations and Bias When not used responsibly, AI deep learning algorithms can sometimes perpetuate biases. Businesses should partner with technology vendors who build their AI tools on principles of transparency, explainability, and fairness. For example, in talent acquisition, a responsibly managed AI tool incorporates bias checks that identify and eliminate subjective language, ensuring that job descriptions are written impartially and based on relevant job-specific evaluation criteria. Accuracy, Privacy, and Data Security Issues Like all data-driven tools, AI is subject to the "garbage in, garbage out" principle. If the data used by the model is incorrect, incomplete, or incomprehensible, the generated results will be similarly flawed. Companies looking to leverage the power of AI for HR will need tools that utilize their own high-quality internal data to ensure the relevance of the results generated within their specific context. There is also the issue of data privacy and security when combining HR and AI. Standard AI chatbots have already been involved in several data breaches due to vulnerabilities in their code, particularly with open-source tools. These issues are especially concerning for employees who must share personal data with HR AI tools, for example, when a chatbot asks them personal questions to answer their queries about employee benefits. Avoid this risk by using an AI provider for HR functions that does not share company data with external large language models (LLMs). (Chevalier, F. & Kalika, M. 2020, 193-200 pp)

7. CONCLUSION

The Risks of Over-Reliance on AI Human resources, as the name suggests, is inherently human-centric. Relying too heavily on AI for HR functions can lead to an impersonal experience and employee disengagement. This is especially true in situations requiring empathy, where AI deployment would reduce decision-making to mere data analysis. Furthermore, the company could face legal repercussions. Some governments and agencies have specific regulations, such as the GDPR in the EU, that prohibit the use of artificial intelligence for decisions impacting hiring, promotions, or salaries. For example, using ChatGPT to draft a job description carries little risk. However, relying on it for a job interview or performance review (two examples where emotional intelligence and human sensitivity are crucial) would fail to gather the necessary information and could alienate candidates and employees.

Concerns about HR Job Displacement The 2024 Work in America survey, conducted by the American Psychological Association (APA), revealed that 41% of US workers fear that AI will make their jobs obsolete, either partially or entirely, in the future. HR managers can help alleviate their team's anxieties by clearly defining which tasks will be automated by AI. Typically, routine, repetitive tasks can be handled by AI, while complex, strategic tasks related to business objectives will remain in the hands of human HR professionals. The Future of AI in HR As AI evolves within HR functions, HR professionals will increasingly focus on strategic roles such as talent management, leadership development, employee well-being, and organizational culture.(Chan, A. 2024)With routine tasks being handled by AI, HR teams have the opportunity to devote more time to high-impact areas. Below are two key AI trends in HR that are emerging for the coming years.Redefining and Creating Job Roles AI will significantly reshape the structure of roles within organizations. As routine tasks are automated, roles will require more strategic thinking, creativity, and versatility. HR professionals will need to redefine job roles, merging specialized tasks into broader, more flexible roles that leverage AI tools. This shift will necessitate the creation of new roles that combine business knowledge, AI expertise, and technical skills. Explore the Benefits of AI in HR Discover AI solutions that automate HR tasks and help you prepare your workforce for the future. Learn More Training Managers to Effectively Use AI AI will also transform how managers supervise their teams. AI-generated data will enable them to make more informed decisions regarding employee development, performance goals, and workload. Furthermore, managers will need to decide whether to incorporate AI tools for performance management, while also addressing employee concerns about this type of evaluation. The challenge will be to ensure that managers understand the appropriate level of AI usage and effectively combine AI insights with human judgment. As AI becomes more integrated into daily operations, training managers to use it responsibly and effectively will be essential. (Barabel, M. Besseyre des Horts, Ch-H. & Ferras, T. (2020, 248, p)

REFERENCES

- Jacob, S., Souissi, S., & Patenaude, N. (2022). Intelligence artificielle et transformation des métiers en gestion des ressources humaines Chaire de recherche sur l'administration publique à l'ère numérique, Université Laval, Québec, 2022
- Patesson, L., Ajzen, M., & Inglebert-Frydman, A. (2024). Intelligence Artificielle et Gestion des Ressources Humaines : A quelles conditions le recours à l'IA peut-il être un atout pour la GRH ?, Rapport de recherche du labor-H, Vol. 4, No.1, 68 pages
- Meijerink, J., Boons, M., Keegan, A. et Marler, J. (2021). Algorithmic human resource management: Synthesizing developments and cross-disciplinary insights on digital HRM. *The International Journal of Human Resource Management*, 32(12), 1-18.
- Chevalier, F., & Dejoux. (2021). C. Intelligence artificielle et Management des ressources humaines :pratiques d'entreprises. *Annales des Mines - Enjeux Numériques*, 2021, 15, pp.94-105. hal-03353080
- Chevalier F. & Fournier C. (2021). « Numérique et innovations pédagogiques : résultats de recherches en sciences de gestion », @GRH, juin.
- Chevalier, F. & Kalika, M. (2020). « L'entreprise académique étendue », in KALIKA M. (éd.) *L'impact de la crise sur le management*, Éditions EMS. pp. 193-200.
- Chevalier, F. & Fournier, C. (2020, 177-182 pp) « Education en ligne : la crise accélère la mutation », in https://shs.cairn.info/article/EMS_KALIK_2020_01_0177?lang=fr&tab=premieres-lignes&ID_ARTICLE=EMS_KALIK_2020_01_0177,
- Kalika M. (2000, 187-192pp) *L'impact de la crise sur le management*, Éditions EMS, pp. 187-192. -(<https://www.gartner.com/en/human-resources/topics/artificial-intelligence-in-hr>)
- Chan, A. (2024). Le rôle de l'IA dans l'évolution de la gestion des ressources humaines, *Stratégiste de contenu* | 7 août 2024, <https://www.oracle.com/africa-fr/human-capital-management/hr/ai-hrm/>
- Barabel, M. Besseyre des Horts, Ch-H. & Ferras, T. (2020, 248p). *L'IA au service des RH, Pour une expérience collaborateur augmentée*, Dunod.