



# The Impact of Artificial Intelligence on Human Resource Management

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## ABSTRACT

Artificial Intelligence (AI) is revolutionizing human resource management (HRM) by automating repetitive tasks, enhancing decision-making processes, and creating new job opportunities. This paper explores the implications of AI on HR functions such as recruitment, selection, employee development, and performance management. It also addresses the ethical considerations and challenges associated with AI adoption in HRM. The findings suggest that while AI can significantly improve HR efficiency and effectiveness, it is crucial to implement AI responsibly to avoid ethical pitfalls and ensure alignment with organizational values and societal norms.

**Keywords:** Artificial Intelligence, Human Resource Management, Recruitment, Selection, Employee Development.

## INTRODUCTION

Human resource management is now evolving into a position where it has begun to develop and cultivate competitive advantages and greater distinction in individuals. AI automates HR processes that may otherwise be repetitive and time-consuming, such as cognitive tasks. AI technology already has and will continue to affect HR work, replacing jobs and/or some activities. It often has the effect of producing jobs and/or new activities. For several firms, the HR model is adapting the way they operate. If AI can lead to a growth in HRM inventiveness, downsizing HR may well be counterproductive. Therefore, we discuss the impact and role of AI on HRM along with a variety of different perspectives [1, 2, 3]. As AI technology gets more affordable and at the same time, the HR team is differentiated, regardless of what has already occurred, many HR managers should be prepared to implement AI. This part of the discussion will concentrate on the position of intelligent systems, or the hardware and software necessary for machine knowledge, in the implementation of the research. One further result of AI shift on occupations is the opportunity for payment which AI can produce. We can, in theory, define particular qualifications and expertise that AI cannot grasp or imitate. These specific positions and individuals may include duties and skills of HR administrators. In certain conceptual documents, however, a national survey of AI experts, AI has the ability to take over any job. Equals the sum of data. All that is automated can be replicated [4, 5].

## FUNDAMENTALS OF ARTIFICIAL INTELLIGENCE

Artificial intelligence does not have a universal definition that encompasses all applications, although it is often understood to be the automation of tasks that typically require human intelligence. The relationships between humans and AI in the context of human resource management require an understanding of both AI and humans. AI can be broken down into two types: artificial narrow intelligence (ANI) and artificial general intelligence (AGI). ANI refers to AI that is efficient in performing a single task or set of associated tasks, while AGI refers to AI with human-like intelligence that is capable of performing a wide range of tasks. The focus of most current research is on ANI, which can be applied to interpreting unstructured data, making predictions, or assisting in decision making. In order to distinguish between inclusive and exclusive terminology, the term "artificial intelligence" (AI) was chosen as defined in this paper [6, 7]. Based on its development model, ANI can be divided into two categories.

The first is a model developed through computer-based programming, such as expert systems and the minimum viable product (MVP) model. These models, however, rely heavily on human experience coding or the rules of the system, and there is currently no universally-used MVP model. Some of the latest ANI development technology uses statistical methods in machine learning models. Rather than being explicitly programmed, many machine learning models have the ability to learn on their own. The deep learning model, one of the subsets of this approach, emerged in 1981 before developing into its current form. It is currently a widely-used AI technology in the field of human resources, and can be used to assist in decisions or forecasts.

### **DEFINITION AND TYPES OF AI FUNDAMENTALS OF ARTIFICIAL INTELLIGENCE**

With the rise in the use of these technologies in the field of human resource management, it is necessary to better understand AI, beginning with defining and classifying it. There is no universally accepted definition of AI. However, AI can be regarded as the science and engineering of making intelligent computer programs, which can embody any form of intelligence that is also found in humans, such as problem-solving, adaptation and learning, extensive knowledge, natural language communication, and creativity, to name but a few. In contrast to a computer program operated by humans, the 'intelligence' that is expressed in such computer programs is intended to be autonomous, so that the program can solve problems and engage in tasks independently. That is, a minimum requirement for calling an intelligent program 'an AI program' is that it must work autonomously [8, 9]. The field of AI is a tangle of various definitions and types, and another area of confusion is defining AI as weak, strong, general, or narrow. The World Summit AI includes another type of AI in the definition: 'AI: Software that is able to replicate cognitive functions, like problem-solving or learning, that we would usually perform using the human brain.' Therefore, according to their definition, AI can be as intelligent as humans, which introduces a different understanding of AI in the global community. Based on the different definitions of AI, a company that is involved in the application of AI can better understand what exactly AI can do for the business. However, in order to minimize ambiguity, this research follows the conventional classification of AI, as follows: [10, 11].

1. ANI, or Narrow AI
2. AGI, or General AI
3. ASI, or Superintelligent AI

### **ADOPTION OF AI IN HUMAN RESOURCE MANAGEMENT**

Over the past years, AI (artificial intelligence) has been increasingly adopted in a variety of HR (human resources) processes. These are integrated in activities such as managing work, measuring productivity, providing feedback, selecting and recruiting, and employee development. The anticipation is that areas with a higher number of data points (such as recruitment selection, learning and development, suggestions for promotions, legal case predictions, etc.) will be increasingly invaded by tech in the future. AI has been proven to mitigate cognitive and physiological biases in various meta-analyses. A study, as an example, revealed that technology used to hide identity in symphony orchestra hiring explained up to 30% of the variance in success [12, 13]. There are several AI tools on the market that are embedded in HR recruitment processes; most of these tools evaluate CVs or applications and are built and operationalized through machine learning techniques such as Natural Language Processing or neural networks, among others. The technical specifications and underlying themes of most of these tools are proprietary. Still, what AI does is it identifies correlations between existing successful employees and their traits and performance. This way, AI instructs the HR recruiter to shortlist and hire candidates that have similarities to existing employees. AI tools are integrated into HR processes to screen and invite interviews for job applicants. In today's selection practices, the vast majority of AI is used in screening applicants (intake) and during live interviews (as an interviewer), while in the future, the divide between these AI HRM processes will increasingly narrow. Both processes, though, have their limitations and potential ethical concerns [14, 15].

### **RECRUITMENT AND SELECTION**

A majority of research has been done with regard to the use of AI in the Human Resource Management function. This pertains especially to the area of recruitment and selection, as nearly half of the research content available is confined to this subject [16]. Recruitment and selection have been impacted by tremendous advancements in technology. AI is revolutionizing and transforming this aspect of HR with its specific applications. AI tools such as Machine Learning, Deep Learning, and Natural Processing are filtering out the most relevant talent from the gigantic piles of CVs. Gigantic data extracts from socio-professional beings as well as econometric data are enabling predictive analytics to screen the profiles and

evaluate them in each step of a specific recruitment process [17]. Implications of recruiting and selecting candidates with the help of AI are numerous, beginning with AI's ability to detect individuals who would integrate within an organization, perform better, give back productive years to the organization, higher ROI, etc. Moreover, the applicants that are hired via algorithms will start off being successful from the moment that they begin the tasks that the job requires as a result of the superior qualities of artificial intelligence that are favored in the selection process [18]. Furthermore, the applicants that have been recommended by algorithms for hiring are more satisfied when they begin work in their new role since they were aware of the competitive nature of the selection process and were willing to make a show of hands. The main threat of hiring through AI is related to data protection issues that are raised by the potential partaking of personal data for the completion of candidate profiling [19]. The question that must be answered is the following: To what extent is it ethical to allow for the intelligent profiling of applicants, on the basis of their public or non-public digital footprints, such as keystrokes when carrying out psychometric tests, online tests, or e-assessments, and in-depth background of social web usage, such as entries on social networking websites like Facebook, LinkedIn, or Twitter (amongst many others)? Specifically, the use of social media (CRM) for talent analytics would result in some candidates potentially being rejected instantly because they have incompatible views, lifestyle, or values which conflict with a particular (elite employer) [20, 21]. The increasing predictive accuracy of such approaches results in the elimination of another layer of potential hires. The main potential benefit of hiring through AI is associated with the global accessibility of the tools and the application for the resolution of many different issues regarding hiring effectiveness, turnover, and fit, among others. The benefits also include biased-human evaluator removal, personality trait-based hiring that can also predict employee success, and a significant reduction in time and money spent on CV assessment [22, 23]. If AI applications grow gradually more widespread and firms tend, as it is hoped, to put a direct assessment of the personality into place alongside online candidate risk data assessment, then social media (CRM) usage would probably turn out not to be invasive and would appear, in recruitment terms, mainly for confirmation as opposed to investigative purposes due to data protection and GDPR considerations [24].

#### **CHALLENGES AND OPPORTUNITIES**

While AI appears to offer many opportunities, it affects our HRM in multiple respects. The contemporary discussions on AI are usually centered on whether AI technologies are about to fully replace human workers. Yet, as many researchers have seen, the application of AI in organizations, especially its implications in HRM or people management, leads to very complex, challenging, and distributive social and ethical issues, which form a critical concern of this study. When organizations intend to smoothly introduce AI into their HRM, they have to consider the ethical or moral issues raised concerning their staff and organizations and address related public interests to ensure that AI investments generate the organizational trust valued by businesses [13]. The AI integration often identifies a number of dilemmas, as it encourages ambiguities and trade-offs due to the inconsistent interests of different stakeholders, as it is with e-HRM and Technological HRM. For instance, the emergence of increasing spying technologies such as wearables and employee-monitoring technologies in HRM linked to often the Double Loop Panopticon is causing major ethical dilemmas and challenges that the firms need to address concerning their employees and the Asian societies they operate within. It is argued that organizations in Asia need to ensure the intention and uses of AI are executed in socially responsible ways in accordance with their host societies' value systems, norms, beliefs, and culture. Businesses are more likely to succeed only if they are able to win the confidence of their key stakeholders by addressing their worries and fears that AI may have a transformative effect on their people when implemented at their workplaces [25].

#### **ETHICAL CONSIDERATIONS**

As AI systems increasingly enter HR practice, concerns about bias, inaccuracy, and the lack of control are growing. There is a wealth of concerns about potential misuse, and indeed abuse, of AI in HR. For example, as Copeland points out, psychological profiling based on the analysis of social media, the use of satnav systems to track employee location outside of working hours or the use of biotech to screen employees for certain genetic characteristics could be seen as ethically objectionable. In Star Trek terms, concerns arise related to privacy and the protection of personal data, but also regarding the moral and social implications [26].

In HR, poorly executed or unethical AI can perpetuate or even amplify biases and be a threat to corporate reputation, regardless of its effectiveness. Not only can it lead to legal consequences, but it can also destroy the trust, confidence, and loyalty towards the employer and ultimately damage the social fabric. AI ethics brings us into the realm of how we would like the world to be, and the implications of AI use and non-use for the organization, society, and the environment. In other words, discussions about AI

ethics result from the growing gap between the capability of responsible human action and the technology designed and delivered to make decisions for managing human resources [25].

#### **FUTURE TRENDS AND RECOMMENDATIONS**

Future trends in AI usage in human resource management Research was not conducted to predict future trends. However, these are some of the projected future trends: - Prognosis and evidence-based HR (e-HRM) will become more widely used. - HR employees' number may decrease due to the use of AI. - Other jobs within the HR field may emerge due to an increase in the use of AI. Possible emerging professions and occupations may include data analysts and data maintenance. - The use of big data to predict new trends in the HR management field. - An increase in the discovery of potential new applications of AI within the field of HR, recruiting and selection in particular. - AI usage will detect bias and increase the usefulness of selection technology. Bias may be detected before the hiring phase, and not only within the hiring process [27].

Recommendations for practitioners, teachers, and HR managers Organizations should be aware of the capabilities and limitations of AI implementations. Some of the applications of AI within HR will render organizational success irrelevant if the AI is not fed with reliable data regarding organizational performance. AI applications within HR have great potential in identifying potential bias in work and in pre-employment practices. AI also has the potential to predict individual and organizational performance by assessing a candidate's speech, facial expressions, responses to questions, and competencies. Despite increasing advancements in automation, high-contact positions and positions requiring a high level of human contact, empathy, or creative and innovative skills will still continually emerge. It is advised that practitioners, teachers, and HR managers consider using these AI applications. When helping organizations automate HR processes, use HR analytics and big data, and predict future trends, make sure organizations conduct training specifically in these areas. Data governance training should also be prioritized due to data protection. Mean scores and gender differences within the appropriate population are two concepts that AI should be fed. This concept is necessary in order for a forecasting AI to be able to function. If large technologies that are using AI are not already predicting behavior or performance, they eventually will. This AI is advancing at a rapid pace [28].

#### **CONCLUSION**

Artificial Intelligence is reshaping the landscape of human resource management by automating routine tasks, improving decision-making accuracy, and uncovering new opportunities for innovation in HR practices. The integration of AI into HR processes, particularly in recruitment and selection, demonstrates significant benefits such as enhanced efficiency, reduced bias, and better candidate-job fit. However, the ethical implications, such as data privacy concerns and potential biases in AI algorithms, must be carefully managed. Organizations must prioritize transparency, fairness, and data protection to build trust and ensure the ethical use of AI in HRM. As AI technology continues to evolve, HR professionals must stay informed and prepared to adapt to these changes, leveraging AI's potential while addressing its challenges responsibly.

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