

The Role of Science Artificial Intelligence for Trend of Digital HRM

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Abstract: The science in the world is moving very fast, and technological support is an important factor in the development of this increasingly fast-paced business world. There is something very promising when technology becomes a very reliable tool, as a substitute for the use of muscle-based or human labors. One of the technologies that greatly support the performance of business organizations is the use of digital technology in human resource governance. Of these digital technologies, it is still focused on the use of artificial intelligence technology for integrative HR management. This research is a literature review of several articles related to machine learning. The review was conducted from some of the recent research efforts that utilize machine learning. Furthermore, this review is derived from multiple literacies and includes an attempt at problem solving efforts that are divided into section areas from the perspective of each AI category. AI can change the way the human resource management domain functions in an organization. It is making changes in all aspects of human resource management starting from human resource planning. Enormous data is available in human resource information systems (HRIS) available in organizations.

Keywords: Artificial intelligent; HRM; Science.

Introduction

One of the technologies that greatly support the performance of business organizations is the use of digital technology in human resource governance of these digital technologies, it is still focused on the use of artificial intelligence technology for integrative HR management (Vrontis et al., 2023). Feeding AI models with big data can provide asset managers with recommendations that influence decision-making around portfolio allocation and/or stock selection, depending on the type of AI technique used (Mirete-Ferrer et al., 2022; Zhang et al., 2022). Big data has replaced traditional datasets, which are now considered a commodity easily available to all investors, and is being used by asset managers to gain insights in their investment process (OECD, 2021).

There is a fashion element to discussions about AI, particularly in marketing, where the boundary between advanced analytics and AI is definitely fuzzy (Mendel & Bonissone, 2021). Analytics has evolved to where it can

handle problems which are relatively unstructured and come up with suggestions in a way that would once have been considered "expert" and even defined as AI. One essential characteristic of AI that distinguishes it from classic "advanced analytics" is automation of feedback loops and improvement i.e. learning by the system (machine learning) about how to do things better, and this in turn implies that conclusions are being tested and assessed against certain criteria, as opposed to being reviewed by humans who then make decisions about what to do next (Stone et al., 2020).

For the investment community, information has always been key and data has been the cornerstone of many investment strategies, from fundamental analysis to systematic trading and quantitative strategies alike. While structured data was at the core of such 'traditional' strategies, vast amounts of raw or unstructured/semi-structured data are now promising to provide a new informational edge to investors deploying AI in the implementation of their strategies. AI allows asset managers to digest vast amounts of data

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from multiple sources and unlock insights from the data to inform their strategies at very short timeframes (OECD, 2021).

However, in the research area of human resource management, there is still a lack of an overall ML application framework, combined with the specific dimensions of human resource management, to analyze its specific application. Therefore, based on the six dimensions of human resource management and the main technical applications of ML, this paper proposes a conceptual AI application to HRM model to guide enterprises how to use AI technology to assist human resource management (Jia et al., 2018).



Figure 1. Illustration of A.I on HRM
Source: <https://google.com>

AI is not just heading for our industry and it will radically change the use of machinery we use in marketing (Van Giffen et al., 2022). There are numerous ways businesses can take advantage of Artificial Intelligence and Machine Learning to create a more comprehensive marketing and HRM plan (Kumari, 2021).

Method

The type of research used in this study is descriptive research with a qualitative approach. The data taken, identified in the following order: data collection; data sorting; data analysis; conclusion making. As for data analysis, there is a predetermined sequence in accordance with the empirical steps taken, namely as follows: Examination of data; suspected data findings; Data confirmation; Diagnosis; and Action (Subagio & Sitepu, 2023).

The description of the data, presentation, analysis and findings that will be obtained from this study will be written in the paragraphs below, in the research discussion segment. AI fulfills its destiny to become a

business instrument, which in the discourse of this study is the marketing of various products, both from the government and from the business world, from micro to multinational scale (Sugiharto et al., 2023). The HR supervision department further clarifies the supervision responsibility, applies AI technology to supervision methods and means, and improves the degree of supervision automation and intelligence.

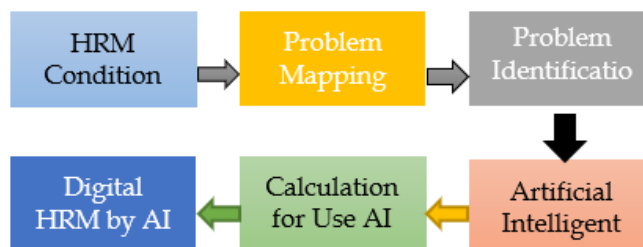


Figure 2. Flow Method of Study

Result and Discussion

The Beginnings of Artificial Intelligent

Humans are gradually being substituted by of artificial intelligence and robots in virtually all departments in organizations. For some workers this might mean they have to find a new job, or a new orientation in terms of skills. Whatsoever, this revolution is upsetting the workforce. Human Resource professionals now have the responsibility of overseeing the placement of robots and AI, ensuring that everything goes smoothly, and intervening when problems arise (Azah & Atah, 2021; Vishwanath & Vaddepalli, 2023).

They have found their jobs exhausting and tiring before the integration of AI and robot. The Human Resource has received additional training and their new job is not repetitive and mentally stimulating. In their new role, they can take on a greater task, and they can use their insight and ability to make decisions on a large scale. What they are doing now and how they are doing it has a greater impact on the entire organization’s operations than ever before. By setting up robots to work with them, their work can seem more meaningful (Azah & Atah, 2021; Smids et al., 2020).

From 1957 to 1974, AI flourished. Computers could store more information and became faster, cheaper, and more accessible. Machine learning algorithms also improved and people got better at knowing which algorithm to apply to their problem. Early demonstrations such as Newell and Simon’s General Problem Solver and Joseph Weizenbaum’s ELIZA showed promise toward the goals of problem solving and the interpretation of spoken language respectively. These successes, as well as the advocacy of leading researchers (namely the attendees of the DSRPAI) convinced government agencies such as the Defense

Advanced Research Projects Agency (DARPA) to fund AI research at several institutions. The government was particularly interested in a machine that could transcribe and translate spoken language as well as high throughput data processing. Optimism was high and expectations were even higher. In 1970 Marvin Minsky told Life Magazine, "from three to eight years we will have a machine with the general intelligence of an average human being." However, while the basic proof of principle was there, there was still a long way to go before the end goals of natural language processing, abstract thinking, and self-recognition could be achieved.

The term Machine Learning was first coined by John McCarthy in 1956 when he organized the first academic conference on the subject. But the journey to understand if machines can really think started long before that. In Vannevar Bush's *As We May Think* (1945) he proposed a system that amplifies people's knowledge and understanding. Five years later Alan Turing wrote a paper on the idea of machines that could simulate humans and the ability to do intelligent things, such as playing chess (1950). Machine Learning is a big umbrella. Under it, we find visual recognition, voice recognition, natural language processing, expert systems, affective computing, and robotics (Siregar et al., 2020).

We now live in the age of "big data," an age in which we have the capacity to collect huge sums of information too cumbersome for a person to process. The application of artificial intelligence in this regard has already been quite fruitful in several industries such as technology, banking, marketing, and entertainment. We've seen that even if algorithms don't improve much, big data and massive computing simply allow artificial intelligence to learn through brute force. There may be evidence that Moore's law is slowing down a tad, but the increase in data certainly hasn't lost any momentum. Breakthroughs in computer science, mathematics, or neuroscience all serve as potential outs through the ceiling of Moore's Law.

AI and HRM

In the present scenario, business is conducted with the needs and demands for the international business motive, also goods transfer takes place from one country to another, services, managerial knowledge, and technology transfer also takes place between countries. Globalization made the entire world small in the means of communicating with others (Varadaraj & Al Wadi, 2021).

The financial and economical patterns of the world have been integrated with better advancement. In today's digital world where digital human resource

management plays a prominent function when compared to conventional human resource management due to the demand of the organization. Many organizations need high-efficient Digital Human Resource Management for better organizational performance (Varadaraj & Wadi, 2021; Dasmadi, 2023).

The HR department must welcome digital transformation in HR and must also upgrade the policy of HR according to the need for digital transformation. Digital Human resources management faces many challenges and difficulties in order to give the best quality of work for the organization across the world. In order to achieve in the competitive market structure organization must expand the trading globally (Varadaraj & AlWadi, 2021 ;Dasmadi 2023).

Performance Appraisal

The HR professionals are responsible for the recruitment of talent for the organization and the right candidates need to be hired. Finding the right candidate can be difficult as you try to locate the right person in a pool of many talents. Shortlisting candidates and screening resume to find a suitable candidate for the job can be a challenging task for HR executives (Sanyaolu & Atsaboghena, 2022). AI can enhance the granularity of performance appraisal by HR administrators by making it possible for them to assess performance over smaller ranges of observation, therefore contribute to more precise interventions for improving cumulative performance (Sakka et al., 2022).

Training and Development

Training is particularly crucial to keep abreast with the pace of technological development can play a role in this respect, at the level of scheduling, arranging, and coordinating virtual training activities, such as online courses and remote classrooms. Beyond these logistical tasks, AI can also play a higher role in assigning employees to tailored training activities, based on their personal needs (Sakka et al., 2022).

Employee Motivation and Engagement

ML provides the information processing muscle to parse and learn from big data, mobilizing vast and diverse datasets, for instance several terabytes' worth of professional biographies and performance appraisal histories. This is bound to result in more effective management interventions, as well as in more fitting opportunities for professional development in line with individual (Sakka et al., 2022).

AI can also perform background checks such as checking through candidates' social media profiles to ensure that the candidate chosen is the most qualified. This will save the recruiter time, ensure a fair recruiting process, and ensure that the best candidate is hired. Most

businesses struggle with engaging and re-engaging prospects because it takes time to do so. Companies typically do not hear back from or respond to candidates after applying for a position or after the interview.

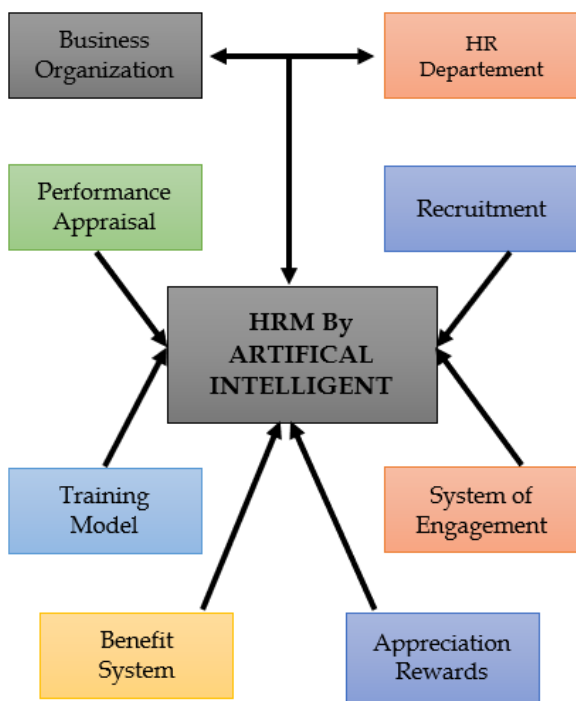


Figure 3. Model of HRM by AI
Source: Author Creation

AI can help speed up the recruitment process even as the hiring requirement continually increases (Allal-Chérif et al., 2021; Fraij & László, 2021). It can be involved in automating repetitive tasks by first working on large data analytics to get trends. It can also be used to streamline the hiring process during recruitment. AI technology such as chatbots can be added to organizations’ websites to engage visitors and increase conversation rates. Prospective candidates will be willing to drop their resumes and other basic details while chatting with the bots. Chatbots can ask questions as regards the role the candidate is interested in and answer some basic questions asked by the prospective candidate (Sanyaolu & Atsaboghena, 2022).

Digital employee management by ML or AI is about planning and implementing digital technologies to support and network the HR profession (Qamar et al., 2021; Vardarlier, 2020). Operational functions of HR such as pay roll processing, but also managerial functions such as compensation, performance management or development are “digitally” supported (Chytiri, 2019). No doubt, the study revealed that an important aspect of Human Resources Management which has been neglected over years is staff training and development (Bakare, 2020).

The positive operational effects of this digital employee management such as less cost, higher speed and quality of HR processes, increased corporation and trust among HR stakeholders, more strategic orientation, etc. are obvious. Some negative issues such as lack of user acceptance, threats to privacy, loss of personal contacts, downsizing the HR - department or burdening HR professionals with technical implementation, administration and application tasks, should not be out of consideration (Chytiri, 2019).

ML and also AI ethics is another one - very important - issue that must be addressed by HR managers, regarding growing unemployment (downsizing), hiring bias, inappropriate employee data usage, transparency (Chytiri, 2019). Mobility and remote working as significant consequences of the introduction of the digital transformation process have proven to be very successful (Barišić et al., 2021).

In being organized along a digitalization continuum, the developed typology represents a classic typology type two ideal-types characterized by minimum and maximum digitalization constitute the respective endpoints of this continuum. Two further ideal-types with successively increasing digitalization intensities are positioned between them. Evidently, the digitalization of organizations starts with the second ideal-type and gradually intensifies to the fourth ideal-type (Hadiyatno et al., 2023; Strohmeier, 2020).

While the concept of digital organizations remains rather broad on a mere terminological level, three clearly differing sub-categories of digital organizations can be distinguished based on the typology. These three types provide a concretization and categorization of digital organizations. Moreover, the digital transformation of organizations starts with the third ideal- type but fully manifests only with the fourth ideal-type. Executing previously formulated strategies based on digital technologies implies change (Strohmeier, 2020). Another fundamental condition for the digital transformation of HRM is the identification of key players within the organization (Podgorodnichenko et al., 2020). Among these we can underline in particular the role played by HR managers (Mosca, 2020).

Artificial intelligence technology has been applied to various fields (Jia et al., 2018). There is tremendous growth in technology today especially in IT and organizations who demands to reduce costs. The present computer automation has pushed itself to all chief of the organizations to more on with digitalization in each and every department. The worldwide sectors have begun pursuing on digitalization for kookiest disposal of services (Prakash et al., 2019)

Conclusion

Machine learning has made some enormous strides over the last couple of years thanks to certain technological advances, but it is safe to say that we have yet to see its full impact on the world of business and HR specifically. The important thing is not to oppose it immediately and see it as a bringer of doom. The future of HR will most probably involve a human-machine collaboration and that can end up being a good thing. To increase our insight about HRM roles more research is needed to investigate how and to what extent these roles are affected by occupational and organizational characteristics. The ethical dimensions of using digital technologies to access store and use employee data need to be even more empirically examined.

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Author Contributions

This study was conducted by me personally, so the content presented is my full responsibility. The single author provides a space for free expression so that the satisfaction of pouring thoughts can be accommodated.

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Conflicts of Interest

There is no interest conflict in this research. this research is conducted for scientific studies that are widely disseminated through this journal. Writings that are free of conflicts of interest will be disseminated without fear of the author, so that they can be free to continue working.

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