

AI: INNOVATION OR DISASTER IN REFERENCE TO HUMAN CAPITAL**Dr. Pooja Sharma**

Associate Professor, Gitarattan International Business School, Delhi

Prof. (Dr.) Urvesh Chaudhery

Professor, Gitarattan International Business School, Delhi

Dr. Sneha Chaudhry

Associate Professor, NDIM, Delhi

Abstract

Collecting reliable data and analyzing it for use in business growth and daily operations is crucial in today's competitive industries. Artificial intelligence enables the completion of tasks in the industry more quickly and effectively. Artificial intelligence is becoming more prevalent in areas like Departments of marketing, finance, human resources, and production. Organizations can inform their current performance and daily operations by deploying AI systems. Due to mounting commercial pressure, harsh managers recognized the value of artificial intelligence in the workplace. The nature of the research article is descriptive. The researcher used secondary data, which was information gathered from research papers, books, websites, blogs on human resources, survey results, etc. The study's main goals were to analyze artificial intelligence's position in the human resource department and comprehend its difficulties. According to the research study's findings, robotics companies can perform a greater range of human resource department tasks thanks to AI. Researcher concludes Recruitment, hiring, data analysis, data collection, workload reduction at work, and improved workplace efficiency is certainly helpful to some extent but full reliability on robotics will not be a good decision. Human Capital cannot be fully replaced by AI.

Keywords: Artificial Intelligence, Human Capital, Innovation, Disaster

Introduction

Technology like artificial intelligence is defining modern paradigms for conducting business. It is a solution that automates and completes the majority of low-value HR tasks so that the strategic scope of work can receive more attention. AI has the potential to drastically alter the employee experience across the board, from hiring to talent management, by quickly and accurately analyzing vast amounts of data. AI skills are reaching new heights and shaping the way we live today.

Any organization's success depends on how well its people, processes, and technology work together to deliver value at the lowest possible cost. The majority of back office transactional labour is automated with artificial intelligence, allowing for speedy service delivery.

The main goal of artificial intelligence is to overcome cognitive problems by giving machines the ability to "think like humans." Its main elements include high-speed computation using sophisticated machine algorithms to handle and process enormous amounts of data. Machine learning and deep learning are the two key technologies that power artificial intelligence today.

Machine Learning

This area of artificial intelligence allows for the creation and production of predictions based on specific data patterns, which aids in making appropriate decisions. Algorithms can theoretically learn from stored data without being explicitly programmed to do so. Key applications of machine learning in the context of human resources include:

- Find employees who are at high risk of leaving, so that HR can use forecasts to have dialogues with them and keep them.
- Customized Feeds: By using predictive analysis to offer career routes and training programmes, you can give each user a customized experience.
- Finding anomalies in data Find instances and observations in the database that don't fit a given pattern.

Deep Learning

It is a sophisticated type of machine learning that uses neural network architecture to grasp a lot of data. Deep learning defines and establishes fundamental parameters around data and then lets the machine discover patterns on its own to learn. It can manage much more and more complicated data. Key applications of deep learning in the context of human resources include:

Speech Recognition: While it can be challenging to understand the many different human languages and tones, deep learning algorithms can identify and react to human speech inputs, ensuring problem resolution.

Chatbots: NLP (Natural Language Processing), which trains chatbots to comprehend human language, tone, and context, is quickly becoming a powerful tool for automating the provision of HR services.

Literature Review

Artificial intelligence, or AI, is the name given to sophisticated computerised systems and computers that simulate "cognitive" processes including learning, thinking, and planning (Lu, Li, Chen, Kim, & Serikawa, 2018; Ludger, 2009). Artificial intelligence (AI) is a category of intelligent tools and technologies (Lu et al., 2018). AI includes, among other things, genetic algorithms (Lee, 2018), the Internet of Things (Ghosh, Chakraborty, and Law, 2018), artificial neural networks (Elkatatny, Tariq, Mahmoud, Mohamed, and Abdurraheem, 2018), smart robots (Liu et al., 2017), machine learning (Glikson (Abou-Zahra et al., 2018). There are more and more applications that use artificial intelligence; these applications fall on a spectrum between weak and strong AI; strong AI robots have the same level of intelligence as people (Nilsson, 2005; Raj & Seamans, 2019). The latter type, however, which entails automatic procedures and

algorithms capable of independently carrying out all activities without human intervention, is still a field in development (Glikson & Woolley, 2020).

The foundation of industry 4.0 is artificial intelligence (Hecklau, Galeitzke, Flachs, & Kohl, 2016). Although there is a lack of strong empirical evidence in the literature about how artificial intelligence will affect the workplace (Rossini, Costa, Tortorella, & Portioli-Staudacher, 2019), it is generally agreed that the use of intelligent machines will fundamentally alter how organisations operate and how tasks are carried out (Hecklau et al., 2016; Huang & Rust, 2018). For example, according to Weichert et al. (2019), AI is expected to improve production and the processes that go along with it through robot-based smart manufacturing lines (Mohammadi & Minaei, 2019), intelligent scheduling systems (Kaab, Sharifi, Mobli, Nabavi-Pelesaraei, & Chau, 2019); Li, Hou, Yu, Lu, & Yang, 2017); and advanced production simulation activities (Yuldoshev, Tursunov, & Qozoqov, 2018). Additionally, artificial neural networks (ANNs) and fuzzy systems (Blohlávek, Dauben, & Klir, 2017; Peraza, Valdez, Garcia, Melin, & Castillo, 2016) can be used within organisations to solve a variety of complex engineering and financial problems. These systems are most useful when input parameters are ill-defined and multiple inputs must be processed simultaneously (Das, Pattnaik, & Padhy, 2014). Another example is how machine learning and other intelligent technology can assist identify workplace hazards by giving useful feedback based on historical injury data across many industries (Kakhki, Freeman, & Mosher, 2019). Additionally, prior research demonstrates how the usage of AI in the workplace directly affects employee results (Hughes, Robert, Frady, & Arroyos, 2019; Meisels & Schaerf, 2003).

However, some academics are quite sceptical about how corporations are using AI (e.g., Acemoglu & Restrepo, 2020; Choi & Kang, 2019; Rampersad, 2020). They draw attention to the risks posed by the use of intelligent technologies at work, including the diminution of human involvement in the creation of goods and services (Choi & Kang, 2019), the loss of labour in industries with low labour productivity (Acemoglu & Restrepo, 2020), and the replacement of human labour in middle-skill jobs requiring a high level of literacy, numeracy, and problem-solving skills (David, 2015). The unfavourable attitudes and lack of trust that managers and employees hold toward automation and intelligent technology are some of the downsides of using AI within enterprises (Frey & Osborne, 2017; Raisch & Krakowski, 2021). As a result of widespread employee anxiety that AI would jeopardise their work (Makarius, Mukherjee, Fox, & Fox, 2020), the adoption of AI may also result in decreased organisational commitment and decreased productivity (Brougham & Haar, 2018). In order to assist enterprises in overcoming some of the barriers to AI adoption, recent studies have called for a greater understanding of the impact of AI on employees and the workplace in general. The current study responds to this challenge by offering a systematic analysis of the effects of AI on workplace outcomes and by suggesting lines of inquiry and practise that can help an organisation make a more seamless transition to industry 4.0. To do this, we situate our research within the field of human resource management, which has been suggested to play a key role. To do this, we situate our research

within human resource management, which has been argued to be essential for promoting the successful adoption of AI devices and systems in the workplace (Cheng & Hackett, 2019; Maduravoyal, 2018; Strohmeier & Piazza, 2015; Tambe, Cappelli, & Yakubovich, 2019). While HRM functions as a buffer between organisational and employee outcomes (Su, Wang, and Chen, 2020), its function can be crucial in determining how firms can support the effective deployment of AI while minimising risks and maintaining favourable results for employees.

Previous research shows that HRM can help train staff to interact and accept intelligent technology, which businesses must use to maintain competitive advantages (DiClaudio, 2019). At the same time, research shows that HRM may use AI to assist both employees and businesses through a variety of its roles (Sekhri & Cheema, 2019). In order to find individuals that match certain job openings within businesses, the recruiting and selection function of HRM, for instance, uses AI to process greater volumes of data via the internet (e.g., social media) (Upadhyay & Khandelwal, 2018). AI is used by HRM's training and development department to recommend learning curricula that are relevant to job tasks and experience (Poquet & de Laat, 2021; Tripathi et al., 2012). In order to allay worries about the validity, dependability, and bias of controlling and managing performance, artificial intelligence can also be useful (Schoorman, 1988). AI can be used to spot trends that result in staff turnover and poor performance, and with the right input, it can also make more precise forecasts (Samarasinghe & Medis, 2020).

Despite these advancements, there is still no comprehensive framework that establishes HRM's function at the intersection of AI deployment and workplace outcomes. The way that various HR functions, such as "human resource planning," "recruitment and selection," "training and development," "compensation and rewards management," "performance management and appraisal," "employee and labour relations," and "health, safety, and well-being" are carried out is not currently integrated in current HRM literature.

Analysis & Findings

Personalized engagement results in an improved employee experience because of the high level of automation and the emphasis on the environment's effect on customers. Employees also expect a positive experience when they join the company. Employee experiences are being shaped by consumer technologies today, and workers are looking for options for how they would like to be supported and engaged.

AI may be successfully integrated throughout the entire employee lifecycle, from hiring and onboarding to delivering HR services and determining career paths, creating a unique employee experience.

Making decisions based on data: Although HR technology has been innovative and has enabled businesses to access real-time data, many organisations still rely on human processes to derive insights and make decisions from data.

HR departments may now analyse data to draw conclusions and provide real-time advice thanks to AI. In a sensitive and important job like human capital management, AI also eliminates many

of the typical human biases and inconsistencies. Artificial intelligence-based choices could therefore be more data-informed, consistent, and unbiased while also potentially being speedier at scale.

Intelligent automation combines automation and AI to provide machines the ability to sense, comprehend, learn, and act on their own or with minimal human involvement. Intelligent automation can make intelligent insights and decisions much like a human would, in addition to performing manual chores. Machines may be able to comprehend processes and their aberrations because to its capabilities.

Cognitive engines, a component of artificial intelligence, assist employees in making day-to-day decisions at work. These options and tasks range from:

AI Capabilities in reference to HR Functions

Updates to Employee Information: Employees have access to their personal information, which includes their address, emergency phone number, organisation information, and the status of their leave requests, among other things. Additionally, analytical and KPI-driven information, such as headcount, top performers, etc., can be aided by conversational AI.

Training: AI is a game-changer in the current world of skill gaps and enhancement.

Through conversational analytics, AI is assisting in creating tailored learning paths that will eventually take learning and development to new heights.

Managers can perform skill gap analyses and organize digital training opportunities accordingly. Managers and staff can track this training with the use of conversational AI.

Recruitment: Cognitive AI systems can assist in tapping different data sources, enabling effective candidate screening. AI is also reducing human bias in candidate short listing in addition to the foregoing. In order to enable objective candidate screening, large enterprises are working to create AI-augmented job descriptions that are more inclusive and objective.

Automation of low-value jobs: Over time, a large amount of HR time is spent on several small tasks. Typical request questions, basic perks, and on boarding procedures are a few examples. Such responses can be standardized and automated by AI, allowing the focus to be shifted to the job that is more strategically oriented.

Artificial intelligence is a key driver of how employees and businesses interact, thus employee engagement is important.

Tasks involving employee engagement, such as intelligent surveys, real-time feedback platforms, awards, and recognitions, can be effectively carried out by AI.

Artificial intelligence is playing a critical role in the integration of key HR operations, which is completely rewriting the history of the employee experience. By managing crucial areas including performance management, workforce planning, people analytics, career-pathing, and virtual support for self-service, it helps companies develop talent processes that lower employee turnover.

Lack of Skilled Talent: Integrating HR activities can be quite expensive given the scarcity of skilled workers in the field.

Privacy: Because HR data must be kept private and secret, there is a privacy concern. Integrating HR tasks using AI raises serious concerns about data protection.

Maintenance: Similar to other technology, this is ongoing. Artificial intelligence requires frequent inspections and upgrades, which makes upkeep a laborious process.

Integrating complex capabilities: Due to the shift to SAAS (Software as a Service), data availability is constrained, which reduces the potential for fully integrating HR operations into technology.

Conclusion

AI-based HR interventions have the potential to significantly increase employee output and assist HR managers in improving employee performance and experience. AI-powered HR solutions can assess, forecast, and assist key stakeholders in making decisions. Adopt AI technologies that your company requires, fit with your organization's culture, and create the necessary digital maps. The AI function will eventually have a variety of effects on employees, and these effects include a quick and accurate user experience. As a result, it is extremely important to concentrate on employee needs and be aware of any potential implications.

A powerful AI system will promote a deeper comprehension of human behavior and patterns. Human behavior can be mimicked and validated for an effective employee experience by combining and thoroughly evaluating employee, mood, and intentions across various digital platforms.

Bibliography

A.J. Prado, M.M. Michalek, F.A. Cheein Machine-learning based approaches for self-tuning trajectory tracking controllers under terrain changes in repetitive tasks Engineering Applications of Artificial Intelligence, 67 (2018), pp. 63-80

B.A. Ojokoh, O.W. Samuel, O.M. Omisore, O.A. Sarumi, P.A. Idowu, E.R. Chimusa, ..., F.A. Katsriku **Big data, analytics and artificial intelligence for sustainability** Scientific African, 9 (2020), Article e00551

B.B. Nielsen, C.G. Asmussen, C.D. Weatherall **The location choice of foreign direct investments: Empirical evidence and methodological challenges** Journal of World Business, 52 (1) (2017), pp. 62-82

D.Y. Choi, J.H. Kang **Net job creation in an increasingly autonomous economy: The challenge of a generation** Journal of Management Inquiry, 28 (3) (2019), pp. 300-305

D. Minbaeva **Disrupted HR?** Human Resource Management Review (2020), p. 100820

C.Y. Murnieks, A.C. Klotz, D.A. Shepherd **Entrepreneurial motivation: A review of the literature and an agenda for future research** Journal of Organizational Behavior, 41 (2) (2020), pp. 115-143

J. Nahapiet, S. Ghoshal **Social capital, intellectual capital, and the organizational advantage** Academy of Management Review, 23 (2) (1998), pp. 242-266

N.J. Nilsson **Human-level artificial intelligence? Be serious!** AI Magazine, 26 (4) (2005), p. 68

- J.J. Phillips, P.P. Phillips **Handbook of training evaluation and measurement methods** Routledge (2016)
- R. Rahim, I. Zufria, N. Kurniasih, M.Y. Simargolang, A. Hasibuan, D.U. Sutiksno, ..., A.D. GS **C4. 5 classification data mining for inventory control** International Journal of Engineering & Technology, 7 (2.3) (2018), pp. 68-72
- S. Raisch, S. Krakowski **Artificial intelligence and management: The automation–augmentation paradox** Academy of Management Review, 46 (1) (2021), pp. 192-210
- G. Rampersad **Robot will take your job: Innovation for an era of artificial intelligence** Journal of Business Research, 116 (2020), pp. 68-74
- P. Reilly **The impact of artificial intelligence on the HR function**
- S. Robinson, C. Orsingher, L. Alkire, A. De Keyser, M. Giebelhausen, K.N. Papamichail, M.S. Temerak **Frontline encounters of the AI kind: An evolved service encounter framework** Journal of Business Research, 116 (2020), pp. 366-376
- Singh A., Chaudhery U. (2017), "An empirical study on relationship between HRD climate and organisational commitment in auto component manufacturing companies", VIRTUE (UGC Listed – S.No.5972, Vol.V Issue I (Jan-June 2017), ISSN No. 2230-7117. Page No. 14-27
- S. Elkatatny, Z. Tariq, M. Mahmoud, I. Mohamed, A. Abdulraheem **Development of new mathematical model for compressional and shear sonic times from wireline log data using artificial intelligence neural networks (white box)** Arabian Journal for Science and Engineering, 43 (11) (2018), pp. 6375-6389
- N.J. Nilsson **Human-level artificial intelligence? Be serious!** AI Magazine, 26 (4) (2005), p. 68

Weblinks

- <https://go.oracle.com/LP=86149?elqCampaignId=230263>
- <https://www.oracle.com/a/ocom/docs/applications/hcm/oracle-ai-in-hr-wp.pdf>
- <https://www.sciencedirect.com/science/article/pii/S105348222100036X>
- <https://www.employment-studies.co.uk> (2018)