

ASTUDY ON APPLICATION OF ARTIFICIAL INTELLIGENCE (AI) IN HUMAN RESOURCE MANAGEMENT (HRM) PRACTICES IN HEALTHCARE INDUSTRY

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Abstract

The healthcare sector in India is evolving along with the rest of the world as AI becomes increasingly integrated into HR practices. Studying artificial intelligence applications and evaluating their impact on human resources in the healthcare sector is the primary objective of the study. And discusses about how AI is being used in HR practices in the Indian healthcare sector, emphasizing how it can improve productivity, increase decision-making, and solve challenges this industry experiences. AI technology is being used to increase employee engagement overall, optimize workforce management, personalize employee training, and simplify the recruitment process. This paper highlights the potential for AI to transform HR processes in the Indian healthcare sector while thoroughly examining these difficulties. The data is collected from secondary sources that was obtained from newspapers, company websites books, research papers, and articles published in reputable journals worldwide. The findings emphasize the significant advantages that AI may bring, especially in the vital and labour-intensive healthcare industry. AI can automate repetitive HR processes, optimize talent acquisition, tailor training, and manage workforce dynamics.

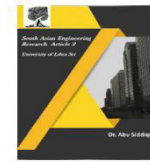
Key words:

Artificial intelligence, human resource management, machine learning, healthcare,

1. Introduction

The use of AI to HRM can improve an organization's ability to attract and choose workers who are most qualified to carry out their duties. Additionally, it can have a favourable impact on employee retention, growth, and efficient utilization. We exist at an era in which digital communication and technology rule the day. As a result, many jobs are undergoing significant changes (Sivathanu and Pillai 2018). One of the most significant influencing elements in a company or sector is technology. As a result, the company must reframe its identity to reflect the modern ideas in technology, such as machine learning and artificial intelligence (Jović, Tijan et al. 2022).

The effectiveness and efficiency of HR functions have been found to increase with the integration of machine learning into HRM. The employee experience can be enhanced, and organizational procedures can be optimized by utilizing machine learning applications (Garg, Sinha, et al., 2022). Businesses that are adept at utilizing emerging technology tend to achieve more success. The facial recognition feature is very important in the hiring process and work division. People's performance can be evaluated by utilizing machine learning, artificial intelligence, and employee information evaluation (Nawaz 2020).



Especially in the healthcare industry, HRM is essential while facing competitive problems (Olan et al., 2022). AI is a useful tool for supporting organizations because it can automate various business process steps and provide a large amount of data, which can accelerate and optimize all HRM phases. These four dimensions of AI are mechanical, analytical, empathetic, and intuitive (Huang & Rust, 2018).

The purpose of this study is to investigate employee performance and HRM in the healthcare industry. This study specifically aims to ascertain the possible advantages of introducing creative and digital solutions in healthcare facilities as well as the effect of these technologies on HR performance. To emphasize the significance of implementing AI, we refer

1.1 AI in Healthcare industry's HRM practices

The application of AI in healthcare is anticipated to increase significantly at least through 2023. Healthcare uses AI-based algorithms to speed up the system, save costs, and enhance treatment. AI is transforming the healthcare industry in several ways, including the use of tailored

1.1.1 Recruitment Automation

In healthcare, evaluating candidates based on skills and potential is crucial, especially with labour shortages and a predicted shortfall of 15 million healthcare workers by 2030. AI is assisting employers in finding qualified candidates by comparing job descriptions and resumes. One such an email to these prospects enticing them to apply for openings.

1.1.2 Provide personalized candidate journeys

AI can assist by providing customized job recommendations and personalized

to the “theory of resistance” (Ram, 1987; Zaltman & Wallendorf, 1983; 2020 Kaur).

The positive aspect is that HR departments seeking to fill positions can make effective use of technology like machine learning and artificial intelligence. By using these tools, recruiters may expeditiously sift through vast quantities of candidate data, enabling them to propose qualified candidate matches without having to manually go through piles of resumes. Talent with the necessary qualifications is needed by hospital systems and other healthcare companies. AI can make it easier for HR and Talent Acquisition departments in the healthcare industry to find, attract, and retain qualified individuals.

care, predictive analytics, and virtual assistants. Using devices with artificial intelligence integrated in is another example (Kumar et al., 2023). AI is revolutionizing HR by streamlining procedures and enhancing judgment. Important advancements consist of:

tool is Workable, which does more than just parse resumes for you. With the information it gathers, it creates a list of suitable applicants that it scrapes from LinkedIn and other websites. It even composes

application journeys, enhancing the candidate experience. This approach not only makes the hiring process smoother but also strengthens the employer brand, attracting more top talent.



1.1.3 Remain compliant

Healthcare companies place a high value on consent and privacy, which includes safeguarding applicant and employee data. Through preference centre apps, AI can help by centralizing the gathering and

archiving of candidate preferences and consent. This guarantees adherence to legal requirements and instils trust in the legal team by making it simple for HR teams to monitor and report changes.

1.1.4 Increase diversity and inclusion

In a recent study, 36% of healthcare leaders identified Diversity, Equity, and Inclusion (DE&I) as a major challenge for the coming year. AI can assist by uncovering candidates who might be overlooked in manual recruiting processes.

As AI algorithms become more advanced, they can identify relevant skills and infer additional abilities that candidates might possess or develop, recommending those who may have been previously missed.

1.1.5 Focus on hard-to-fill roles

In the healthcare industry, some roles are more difficult to fill due to skill shortages, such as the predicted global shortage of 13 million nurses by 2030. AI can help by analyzing open roles to identify which are hardest to fill and estimating how long it

might take to fill them. By using skills data and market insights, AI enables recruitment teams to prioritize their efforts effectively, focusing on filling the most challenging positions more quickly or with additional resources.

1.1.6 Decrease bias in hiring

Traditional hiring methods often involve biases related to factors like university prestige, age, or years of experience. To reduce bias, healthcare organizations can

use AI-powered candidate matching based on skills, making the recruitment process more equitable and transparent.

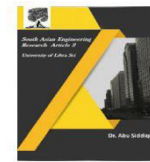
When algorithms are trained with appropriate data, they can uncover "hidden gems" both inside and outside the

organization, helping recruiters find ideal candidates who might otherwise be overlooked.

1.1.7 Using AI to retain talent

With 43% of healthcare workers planning to leave their jobs or already having new positions lined up, retention is a critical concern. AI can enhance employee engagement and retention by supporting internal mobility programs. For instance,

AI-powered Talent Marketplaces can help identify new roles and opportunities for existing employees, allowing them to transition smoothly within the organization.



1.1.8 2Develop potential career paths for employees

Although just 29% of respondents in the healthcare industry have access to skill development programs, AI can close this gap by helping workers see different career routes and opportunities, including lateral moves they may not have previously

2. Literature review

Umasankar Murugesan a, Padmavathy Subramanian b, Shefali Srivastava a, Ashish Dwivedi (2023), the author discusses the effects of AI on the workplace in the context of Industry 4.0, which unifies AI and the Internet of Things (IoT). 271 HR professionals from the IT, manufacturing, and administrative domains participated in the survey, which **Dr. Mandeep Kaur, Dr. Rekha AG, Dr. Resmi AG & Dr. Franco Gandolfi (2023)**, the author emphasizes how AI may improve HRM through different insights, improved abilities, and analytical support for better people management. The study performs a PRISMA-compliant bibliometric assessment of 247 Scopus-indexed articles from 1993 to 2020. It finds that, with 70% of the relevant articles

Gayatri Panda, Manoj Kumar Dash, Ashutosh Samadhiya, Anil Kumar and Eyob Mulat-weldemeskel (2023), to investigate AI's involvement in HRR, the study looked at 98 publications. It concluded that AI enhances employee competency, performance and risk management, leadership abilities, well-being, and compensation management. Additionally, the study emphasizes how AI may help HR teams become more proficient, deal with challenges related to job loss, improve working conditions, and

thought about. AI can help employees take the necessary steps for professional advancement by detecting their individual training needs. This will ultimately increase their motivation and engagement in their roles.

focused on three components of HR preparedness and five AI applications in HR. The investigation, which was carried out with the use of SPSS and AMOS tools, showed that HR competencies and organizational flexibility are critical for sustained development, and that AI supports these aspects of HR.

published since 2010, most of the research in this subject has been done recently. The distribution of resources, hiring talent, and training and development are the main themes that have been found. Additionally, the study points out areas in need of further investigation and offers suggestions for future studies on AI applications in HRM.

make better decisions—especially in the wake of the COVID-19 pandemic.

Ranjitha S1, Usha K (2011), This research examines how AI, also known as machine learning, functions in HRM. AI is viewed as a copy of human intelligence. The purpose of the article is to examine how AI is being used in HR and evaluate how it might enhance organizational procedures and employee engagement. By compiling information from primary and secondary sources, the article also discusses the difficulties that organizations



encounter when integrating AI in HR, and it offers recommendations for improving AI's efficacy in HR management.

Dr. Ganesh Chavan, Dr. Zafar Khan (2022), The present study investigates the present discussion about the application of AI in HRM, wherein researchers differ over the potential advantages or disadvantages of AI for humankind. The research examines the positive and negative aspects of AI in HRM as well as its general effects on HRM management.

Mohand Tuffaha, Bharti Pandya, M Rosario Perello-Marin (2022), The unrealized potential of AI in HRM is examined in this study, with a particular emphasis on chatbot use in hiring. Even with AI's widespread application, little is known about the limitations and usefulness of chatbots, particularly in the Indian market. After conducting a qualitative investigation of a subset of Indian firms, the study concludes that although chatbots are beneficial for HR professionals in many ways, they are not as effective when it comes to hiring mid- and senior-level positions. Through an analysis of the advantages and disadvantages of chatbots in India's hiring procedures, the article provides insightful information for HR managers and academics alike.

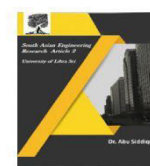
Kenekwue O. Okeyika, Victor C. Ibeto, Austin I. Okere and Boniface Umoh (2023), The study focuses at the difficulties in conducting a fair and effective resume screening process, which is a big problem in the hiring process for

Dr. Owais Ahmed (2018), This study focuses at how AI is changing a number of industries at an unprecedented rate, including HR. The significance of AI was

human resources. It seeks to examine the difficulties facing HR management practices today, appraise the state of AI in hiring, and weigh the benefits and drawbacks of implementing AI in HR. The article is based solely on secondary data from books, research papers, and internationally renowned journals and employs a grounded theory methodology. According to the report, there has been significant advancement in the creation of specialized AI systems, especially in sectors like healthcare, even though general-purpose AI is still not fully realized in HR or any other discipline.

Lan Li, Tina Lassiter, Joohee Oh, Min Kyung Lee (2021), The study investigates the effects of utilizing AI-enabled hiring software in HR procedures, with a particular emphasis on how it affects sourcing and evaluation in the hiring process. In-depth interviews with fifteen recruiters and HR specialists have shown that AI software improves productivity by speedily analyzing candidate data, providing access to larger and more varied candidate pools. AI is a useful tool for sourcing since it may help find candidates, but adoption of the technology may be impeded by worries about data accuracy and lack of control over algorithmic matching. The application of AI in evaluation varies by hiring scenario and industry, and by automating portions of the hiring process, it may change the responsibilities that HR professional perform.

highlighted when the sophisticated AI robot Sophia took part in a United Nations summit on sustainable development. According to the study, hiring managers



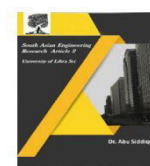
can choose from a variety of AI solutions, from entry-level tools to sophisticated programs, all of which improve HR's capacity to forecast a candidate's likelihood of success in the workplace. The goal of the study is to shed light on the developments and applications of AI in the HR domain, demonstrating how these tools are changing hiring procedures and HR policies in general.

Koncheva V.A., Odintsov S.V., Khmel'nitski Leonid (2019), This section talks about how blockchain technology can revolutionize several industries, including human resources (HR) and the labour market. Blockchain has a lot to offer HR professionals, including better hiring, career development, and talent management. Because labor law is so important to society relations and economic consequences, the text highlights how important it is to regulate these relationships. Establishing safe and dependable procedures for electronic registrations is more crucial than ever to guarantee high-quality connections among participants, given the rise in digital transactions.

Prof (Dr) Madhuri Sanap (2023), AI has revolutionized established procedures in HR, improving employee experience and corporate efficiency. The influence of AI in HR is highlighted in this overview, which also covers its uses, advantages, drawbacks, and potential future developments. Furthermore, AI chatbots and virtual assistants improve employee engagement by offering personalized, real-time help and responding to common HR questions, freeing up HR experts to focus on more important projects.

Manju Amla, Prof. (Dr.) Meenakshi Malhotra (2017), This study focused into the idea of "digital transformation" in HRM and how new technologies are assisting HR departments and staff members. The study is descriptive in nature, and it makes use of secondary data from sources such as academic papers, company reports, websites, and expert blogs. The study has looked at how to make the fundamental tasks of human resource management—hiring, screening, interviewing, and onboarding—smarter, quicker, and more efficient. It has also examined the concept of "SMACI," THE WEB OF TECHNOLOGY, and the application of AI, HR Chatbots, Machine Learning, and Robot Process Automation (RPA). The study made a literary contribution as well by examining the different instruments that businesses employ to grow and improve their HR departments.

Dr. Abdul Quddus Mohammed (2019), This research examines the swift assimilation of breakthroughs in data and information processing, along with developments in HRM, that are revolutionizing organizational contexts. It is concentrated on the field of human resource analytics, which is defined as an analytical thinking-centered, data-driven approach to human resource management that is fast becoming a crucial part of organizational structures. The study examines the body of research on HR analytics and how it relates to firms' use of predictive decision-making. It also comprises a critical analysis of the ways in which pertinent IT infrastructure and provisions are established to integrate HR analytics into organizational structures. The purpose of this analysis is to



demonstrate how critical HR analytics are to optimizing decision-making procedures and raising overall organizational efficacy.

Akshitha R, Preethi P (2022), To support organizational growth, the study paper examines how AI enhances data gathering and analysis for a number of departments, including HR, Finance, Marketing, and Production. It makes use of secondary data from publications, surveys, and research papers, among other sources. According to the report, AI greatly improves HR operations by handling hiring, data analysis, and workload reduction, all of which lead to higher workplace productivity. The study emphasizes how important AI is to updating HR procedures and solving industry issues.

Pranay Kumar Laxmipuram (2024), Organizations in the Fourth Industrial Revolution (4IR) period strive to automate processes using cutting-edge technologies, with AI being a major advancement in this regard. AI can automate a number of tasks within HRM systems by using Machine Learning (ML) and Natural Language Processing (NLP). By automating workflows and streamlining employee operations, this integration improves decision-making skills. In addition to increasing efficiency, the use of AI in HRM is changing the field of human resource management systems (HRMS).

Dr. B. Sankar Naik (2024), The use of AI in HRM in Indian IT organizations is examined in this study paper. AI is described as a technology that facilitates machine learning to carry out jobs that have historically been performed by humans, improving decision-making and optimizing HR operations. The study intends to investigate the effects of AI on

HR practices, and the difficulties encountered in the HR department. It is based on secondary data from multiple sources. The results show that AI greatly enhances HR operations through data management, burden reduction, and increased productivity.

Richa Verma, Dr. Srinivas Bandi (2020), The article examines the exponential rise in AI during the last ten years and how it has affected IT firms, especially in the field of HR. Because AI gives robots the ability to reason and carry out jobs that humans have always done, HR recruiters can use AI software to expedite and improve the effectiveness of recruiting and selection procedures. The study goes into detail on AI's legitimacy and ability to improve HR tasks, emphasizing the technology's significant advantages for raising overall hiring efficacy.

Peigong Li, Anna Bastone, Talal Ali Mohamad, Francesco Schiavone (2023), this study, which focuses on a healthcare facility in Dubai, investigates how the use of AI affects organizational performance and human resource practices in the healthcare industry. Using primary and secondary data for qualitative analysis, the study shows how AI may enhance HR management and lead to improved financial and organizational results. However, because of its environment, the study's conclusions might not apply to the entire sector. However, it offers insightful theoretical, managerial, and policy information about how AI affects HRM and business performance.

Bertalan Mesko, Gergely Heteyi, and Zsuzsanna Gyorffy (2018), This essay explores how AI might improve data analysis, administrative duties, decision-

making, diagnoses, and the human resources issue in the healthcare industry. It also emphasizes the necessity of addressing technological, moral, and legal issues prior to the complete integration of AI. The authors discuss whether AI will enhance or displace doctors and stress the significance of updating medical education

3. Research methodology

The data required for this study is gathered from using secondary source. This study takes up under descriptive method of research. The secondary data for the study

3.1 Objectives

1. To study digital transformation in HRM context.
2. To study the challenges faced by AI in implementation in work process

Digital transformation in Human Resource Management in Healthcare Industry

AI can completely transform the ways in which you hire and manage your workforce. It can do this by automating monotonous operations, analysing large volumes of data, and enhancing the general effectiveness of your HR and staffing procedures.

4.1 Recruiting and Hiring

By automating many of the repetitive and time-consuming procedures involved in the recruitment process, AI can assist you

4.1.2 AI powered Chatbots

Chatbots have AI capabilities to screen and interact with applicants. These chatbots may set up interviews, respond to inquiries from candidates, and give status updates on applications. You may free up your time to concentrate on more strategic parts of

to better prepare healthcare workers. The authors contend that while AI is not meant to take the role of caretakers, those who use it well will probably perform better than those who don't. The essay emphasizes how important it is to deal with ethical issues and get ready for AI's expanding involvement in healthcare.

collected from the various sources like journals, research papers and website and sample size limited to descriptive research.

3. To identify the benefits of having the digital transformation for HR and businesses.
4. To understand the impact of AI in HR.

to identify top talent quickly and efficiently.

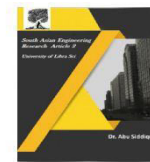
4.1.1 Job aggregator software

This software interface aggregates job openings from various websites onto one page, making it easier for managers to find suitable candidates. Job brokers, or platforms where HR agents post openings, use this software to distribute listings and provide data analytics. These tools help managers fill technical positions by collecting and organizing job postings from across the internet, simplifying the job search for candidates.

recruitment, such candidate interaction and relationship building, by automating these processes.

4.1.3 Applicant Tracking System (ATS)

Using an ATS is another method of automating the hiring process with



artificial intelligence. ATSS evaluate resumes, find suitable applicants, and monitor each applicant's advancement through the hiring process using AI algorithms. By automating numerous manual procedures related to recruitment, you can lower the possibility of human error.

Finally, you may utilize AI to set up an automated system for arranging interviews, giving candidates the freedom to set their own times based on their availability. To reduce the possibility of cancellations and missed appointments, the system can also automatically remind both you and the candidate.

4.2 Candidate Matching

AI can improve candidate matching by identifying the most qualified applicants for each post through the analysis of candidate data using machine learning algorithms. These technologies reduce bias in the hiring process, find the best candidates, prioritize recruitment efforts, and lower the possibility of hiring errors.

4.2.1 Candidate Scoring System (CSS)

Using a CSS is one approach to use AI for improved candidate matching. To generate a candidate score based on their credentials, experience, and other relevant criteria, this system employs algorithms to analyse candidate resumes, social media profiles, and other pertinent data. Another option is to utilize a candidate matching system, which compares candidate data with job requirements such as skills using AI algorithms – Skills, Experience, Education

4.3 Onboarding

It can take months of nurturing and assistance to achieve the optimum results

from the onboarding process, which can be time- and resource-intensive. Through task automation and more individualized onboarding for new hires, AI can help you accelerate this process.

4.3.1 Chatbot

During onboarding, a chatbot can offer new hires on-demand assistance and direction. It will provide useful materials and responses to frequently asked topics, which might lessen the workload of HR employees. It guarantees that new hires have access to the data they require to be successful in their position.

4.3.2 Machine learning

Develop unique onboarding programs for every new hire using machine learning algorithms. AI can personalize an onboarding plan for a new worker by analysing data such as their interests, experiences, and job requirements. With improved onboarding and retention rates, this feature will make new hires feel more supported and engaged. Moreover, laborious onboarding procedures like document verification, granting access to business gear, software, and IDs, and training can all be automated.

4.4 Employee Training and Development

AI enhances employee training and development by offering personalized learning experiences tailored to individual needs. It analyses employee data, such as performance metrics and learning preferences, to recommend relevant training programs and development opportunities. This approach helps employees improve their skills, advance in their careers, and gain access to promotions. Additionally, AI-powered VR



training programs simulate realistic healthcare scenarios, providing staff with hands-on experience in a safe environment, boosting their confidence and preparedness for complex situations.

4.5 Nursing and Managerial Assistance

As it is well known, the care procedure frequently results in an excess of paperwork for the medical personnel. The industry is moving toward electronic systems that integrate and digitize medical records in response to this workload, with the help of AI-based technology. Furthermore, the employment of chatbots has been recognized as a potentially useful instrument for conversing with patients and their families at medical facilities.

4.5.1 Molly

AI-driven, computer-generated avatars that offer round-the-clock medical support are called virtual nurses, like Molly. They help with things like making appointments, handling medications, providing post-discharge care, and responding to emergencies. Virtual nurses are always available to communicate with patients, keep an eye on health information, and offer prompt advice. Through the management of repetitive chores and remote monitoring, their utilization improves patient participation, provides convenience, and lowers healthcare costs.

4.5.2 Cortona

Using predictive and advanced analytics, The Cleveland Clinic, a nonprofit multispecialty academic medical centre in Cleveland, Ohio, started utilizing Microsoft Cortana, an AI digital assistant, in 2016 to "identify potential at risk patients under ICU care." From 7 p.m. to 7 a.m., Cortana monitors "100 beds in 6

ICUs" through integration with Cleveland Clinic's e-Hospital system. A University of Pittsburgh Medical Centre AI system is also able to listen in on and pick up on discussions that take place in hospital rooms between physicians and patients.

4.6 Hospital management optimisation:

With the ever-growing demand for healthcare services, hospitals' enterprise management systems are becoming increasingly chaotic. However, carefully tuned machine learning-based systems can master administrative data processing and facilitate most hospitals' executive functions, including staff scheduling, supply chain and inventory management, resource allocation, medical records management, and compliance monitoring.

4.7 Predictive analytics

In March 2016, Johns Hopkins University Hospital partnered with GE Healthcare to implement AI-driven predictive analytics to enhance operational efficiency. The hospital's Command Centre processes 500 messages per minute, integrating data from 14 different IT systems across 22 high-resolution monitors. This AI technology has significantly improved various operations: emergency room patients are assigned beds 30% faster, transfer delays from operating rooms have decreased by 70%, ambulance dispatch times have improved by 63 minutes, and the hospital's ability to accept complex cases from other facilities has increased by 60%.

4.7.1 Alexa robots

The Cedars-Sinai Hospital, a non-profit tertiary 958-bed hospital located in Los Angeles, California, employs Alexa robots developed by Amazon as virtual nursing assistants in inpatient rooms. Alexa

completes nurses' repetitive tasks to assist patients with their daily routines, reminds patients to take medications or to attend appointments, and helps answer medical questions.

4.7.2 AI robots (Paul and Maria)

Paul, an AI robot, helps doctors on patient rounds at Eunpyeong St. Mary's Hospital in Korea. Paul gives a list of inpatients who need to be treated when a doctor's ID card is scanned. The robot detects voices, follows personnel to the ward, and instantly captures discussions into electronic medical records. Additionally, it provides medical records and test results, along with other patient information, straight to the staff. In addition to ensuring quick and accurate access to patient data and utilizing machine learning to improve the effectiveness of care services, this lessens the administrative load on medical staff.

Maria, the hospital's tour robot, gives visitors directions to various parts of the facility from the foyer. Maria directs patients to the appointment schedule and the doctor's office location when they touch the robot with their personal medical ID card. Maria is also capable of directing patients to a certain hospital medical department.

4.7.3 Doc.AI

Doc.ai is an application that supports physicians' evidence-based decision-making by using natural language processing to extract insights from medical records and produce individualized treatment recommendations.

4.7.4 Tempus.AI

With the help of Tempus AI, hospitals may proactively intervene and enhance patient outcomes by identifying patients who may experience difficulties or readmission by analysing EHR data. Athenos Health Using AI and ML, an EHR solution automates coding and invoicing, freeing up medical staff members to concentrate on patient care.

4.8 Optimising staffing

4.8.1 Globus.ai

A Norway-based company Globus.ai created a system to help healthcare institutions streamline staffing. With the help of natural language processing and machine learning, the system can match healthcare employees to specific tasks based on their skill sets, making task scheduling far more efficient. Importantly, Globus. AI's system considers legal requirements when making scheduling decisions. For example, in some cases, the law limits the number of working hours or requires a professional with expertise to be present during a certain procedure.

4.8.2 Human capital management (HCM) systems

Systems for managing employees' hiring until retirement are known as HCM systems. Human resources management systems (HRMS) are another name for HCM systems. They may assist companies with following the law, saving time, reducing expenses, and utilizing their workforce.

4.8.3 Employee self-service (ESS) portals

Update contact information, download pay stubs, request time off, and enrol in

benefits are just a few of the job-related tasks that employees can now perform. Also known as HR information systems, or HRIS. Zoho People, Global Payroll software, BambooHR, Softr, Instaff,

4. Benefits of having the digital transformation for HRM practices in healthcare industry

5.1 Improved Operational Efficiency and Reduction of Medical Cost

Some AI systems are designed to support operational innovations to create additional or new value in the value chain of a healthcare organization. AI systems can perform routine operational activities much better and faster than human workers, such as managing maintenance systems, accounting, and information inquiry. AI-enabled chatbots and nursing robots can greatly improve the efficiency of operational processes.

5.2 Increased Productivity and New Job Creation

Robots and AI are unlikely to take over all human jobs. Throughout history, technological advancements have replaced some routine jobs but also created new opportunities in emerging fields. For example, while traditional printing and map publishing declined, new roles in digital editing, design, and navigation systems emerged. AI and robotics will likely continue this trend, automating repetitive tasks while creating new jobs in areas requiring creativity, problem-solving, and adaptability. Humans will remain essential in roles that machines cannot fully replicate.

directly through ESS portals, a feature of most modern HR management systems (a GreytHR, Oracle HCM etc. are some of the portals used).

5.2.1 Noom

Javanmardian from Lingampally highlighted AI's role in improving productivity in healthcare, noting significant internal gains in efficiency. Noom, an AI-enabled app for healthy living, expanded its workforce from 77 employees in 2017 to 1,100 by mid-2019. The AI system at Noom identified reasons for customer dropout, leading to the creation of Noom Coach, which provides personalized, one-on-one support. This approach acknowledges that technology alone can't change behaviour; psychological motivation is essential. As a result, Noom not only enhanced its service but also created numerous new jobs.

5. Challenges faced by AI in implementation in work process

6.1 Cybersecurity for Privacy and Security

AI-based technologies rely on vast datasets, raising privacy concerns, especially when handling sensitive, disease-related data. Sharing patient records is challenging due to the need for confidentiality, which can hinder AI development. Additionally, AI decision-making, based on machine learning from accumulated data, often overlooks individual patient circumstances, leading to ethical, moral, and legal issues. Therefore, it's essential to establish rules and norms, including ethics, laws, and personal values, to guide AI technology in

a way that respects individual rights and societal standards.

6.2 Loss of Managerial Control

The healthcare industry is one of several that is become more integrated in the digital age. Healthcare has shifted from being primarily focused on curing illnesses to promoting healthy lives, preventive medicine, and technology assistance. AI, which can transcend time and space and integrate different facets of well-being through apps like Robot Maria, Alexa, and AI speaker Aria, is crucial to this change. These AI-powered solutions make it possible to remotely monitor, diagnose, treat, and manage patients, transforming healthcare into a team endeavor comprising consultants, specialists, and HR and ICT management professionals. Hospitals must adapt to this change by eschewing the old bureaucratic governance in favor of a more dynamic, networked approach that puts patient care ahead of strict administrative control.

6.3 Job Loss, Training/Education Needs, and the Pain of Transformation

Many repetitious tasks will eventually become obsolete due to AI-related technologies, but they will also generate new roles that are necessary to support AI systems. By resolving AI's shortcomings, healthcare AI can improve ties between patients and providers. Medical school curricula should include AI-related instruction, such as classes on data analytics, cyber ethics, human-machine convergence, and technological innovation, to prepare students for this future. This strategy will guarantee that medical experts can work with AI technologies in an efficient manner and help create new jobs. The development of

AI requires the active engagement of medical personnel, and in the rapidly changing healthcare environment, building a highly skilled professional team will be critical.

To prepare for more highly skilled positions in the AI age, Amazon recently announced that it would re-educate 100,000 employees through training programs on new technologies by 2025. "As technology changes work, they have the opportunity to advance in their career and take advantage of those changes," said Jeff Wilke, CEO of Amazon's global consumer division.

Another illustration is the recently launched educational programs for aspiring artificial intelligence specialists who can create and market AI algorithms at the Health Innovation Big Data Centre at Asan Medical Centre in Seoul, Korea.

6.4 AI Ethical issues

One of the most important topics that must be addressed in AI is ethics. AI ethics entails talking about a range of topics, such as societal impact, privacy infringement, and the maintenance of bias. The ethical implications of an AI's decisions and behaviours are called into issue during the development and implementation phases. One privacy risk is the surveillance systems that AI powers.

6.5 Legal issues with AI

AI-related legal issues are continually developing. Among the main issues in AI are matters of liability, intellectual property rights, and regulatory compliance. When an AI-based decision maker is used and the outcome is a malfunctioning system or an accident that could injure someone, the subject of accountability is

raised. Copyright-related legal problems can frequently arise because of who owns the content produced by AI and its algorithms.

Conclusion, limitations and scope for the future study

In conclusion, the application of AI in HRM practices within the healthcare industry holds transformative potential. AI can significantly enhance recruitment processes, improve employee engagement, personalize training and development programs, and streamline performance management. By reducing biases in hiring, optimizing workforce allocation, and offering data-driven insights for decision-making, AI addresses critical challenges such as workforce shortages and high turnover rates. Furthermore, AI-driven solutions can foster a more inclusive and efficient workplace, ultimately contributing to better patient care and organizational success. As healthcare organizations continue to integrate AI into their HRM practices, it is essential to balance technological advancements with ethical considerations and ensure that these innovations complement, rather than replace, the human element in healthcare. This study underscores the importance of leveraging AI responsibly to build a resilient and future-ready healthcare workforce.

List of abbreviations:

- 1) AI – Artificial intelligence
- 2) HRM – Human Resource Management
- 3) HRD – Human Resource Development
- 4) ML – Machine Learning
- 5) ATS - Applicant Tracking System
- 6) VR – Virtual Reality

- 7) EHR – Electronic Health Record
- 8) ICT – Information & Computer Technology
- 9) CSS – Candidate Scoring System
- 10) ESS - Employee self-service

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