



“USE OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE (Automobile Sector)”

Dr. Richa Bhalla¹, Rahul Singh Lunthi², Prerna Bhagat³, Dr. Nila Chotai⁴.

1. Associate Professor, ISBR Business School, Electronic City, Bengaluru, Karnataka, India,
2. ISBR Business School, Electronic City, Bengaluru, Karnataka, India,
3. ISBR Business School, Electronic City, Bengaluru, Karnataka, India,
4. Director Academics & Operations, ISBR Business School, Electronic City, Bengaluru, Karnataka, India,

ABSTRACT

Human resource management (HRM) is one area where artificial intelligence (AI) has recently experienced growth. In this work, a detailed review of the literature on the use of AI in HRM is conducted. This paper examines the advantages, difficulties, and ethical ramifications of employing AI in HRM, as well as its existing and possible future uses. The review came to the conclusion that AI has the potential to alter HRM by enhancing its selection, performance, training, and development procedures. A few of the difficulties AI encounters include bias, privacy issues, and ethical dilemmas. The report continues by listing prospective research areas and highlighting how crucial it is to balance the benefits and drawbacks of employing AI in human resource management.

INTRODUCTION

Artificial intelligence (AI), the technological advancement that has sparked extensive debates and conjecture, has assumed control of various responsibilities in the realms of science, engineering, business, and human resources. Thanks to the advancements in AI, the present generations are bestowed with great fortune. Nowadays, mundane tasks that were once performed manually are now effortlessly executed by machines, software, and other automated systems.

The utilization of AI systems enables an organization to effectively manage its present accomplishments and daily operations. The significance of artificial intelligence in the workplace has been acknowledged by resolute managers dealing with mounting business demands. Nowadays, artificial intelligence has made its way into an organisation's overall system, and one area where it has done so is in the human resource

department. Here, human workers have been replaced by AI systems, and all of the department's tasks, including hiring, performance management, and candidate screening, are now carried out.

AI is used in many goods and services, such as robotic automation, which can carry out repetitive tasks that people frequently perform. Similar to this, machine learning enables computers to carry out tasks without the need for programming.

KEYWORDS

Artificial Intelligence, Automation, Performance measurement, Machine language, Human resource management

RESEARCH OBJECTIVE

1. To recognize the artificial intelligence technologies employed in the management of human resources.
2. To construct a theoretical framework for the implementation of AI in HRM.
3. To examine the advantages of artificial intelligence in the management of human resources.

ARTIFICIAL INTELLIGENCE

The phrase artificial intelligence (AI) refers to the development of computer programs that can perform tasks traditionally associated with human intelligence, including perception, learning, reasoning, and decision-making. To find patterns, anticipate outcomes, and act on the data, these systems combine algorithms, mathematical models, and vast volumes of data. Artificial intelligence (AI), a swiftly advancing technology, holds the potential to revolutionize various domains of human activities, including human resource management (HRM). AI can bring about profound changes by automating repetitive tasks, analyzing extensive datasets, and generating predictions and recommendations derived from such data.

Applications of AI in HRM

A variety of HRM procedures, including hiring, talent management, onboarding, performance evaluation, and employee engagement, can be aided by AI. AI in recruitment can automate the selection process, pinpoint the best prospects, and even carry out preliminary interviews. This can expedite the hiring process and minimise bias. AI can be applied to talent management to find high-potential workers, design individualised development plans, and even foretell which individuals are most likely to leave the company. Using data on a new hire's job function, abilities, and preferences, AI may develop personalised onboarding plans for them. AI is capable of analysing employee performance data in performance management and offering managers insights and suggestions. Based on elements like communication patterns and feedback, AI can assess employee engagement levels and sentiment, assisting HR personnel in seeing future problems and taking preventative action to resolve them.

ARTIFICIAL INTELLIGENCE IN RECRUITMENT

For businesses that are vying for talent on the global market, attracting and recruiting people is one of their top priorities. To go through all the applications and choose the best applicants, HR managers now face a difficult task as each available position draws hundreds of applications. The screening of applicants from the applicant pool is rated as the most difficult step in the hiring process. However, the hiring process might become more successful and efficient if you can automate the screening stage as well as other monotonous chores. In order to free up recruiters' time from tedious screening activities and allow them to concentrate on finding the finest applicants, artificial intelligence (AI) in recruitment and HR management is introduced into the picture. In addition to enhancing the working environment, automation and wise decision-making may enable businesses to save thousands of dollars annually per person. It is not unexpected that many HR departments and service providers are working to take advantage of AI's benefits. Recruiters can follow a candidate-first strategy by using AI-assisted automated recruiting. By analysing vast amounts of labour market data and regularly communicating with candidates, they can make better recruiting decisions.

USE OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE (Automobile Sector)

To remain competitive in today's fiercely digitalized landscape, organizations must ensure that their workforce is well-equipped with the latest skills to effectively carry out their duties. It is imperative that employees possess the necessary skills and expertise to perform their diverse tasks within the company. Human resource (HR) professionals can use AI to aid staff members in identifying training requirements, providing suitable training in a timely manner, and identifying the best career path for each employee. This supports the sustainable development of talent within the organization. By leveraging advancements in e-learning platforms, companies can offer personalized training based on employee profiles and their desired or necessary skills, with some flexibility in terms of timing, location, etc.

LITERATURE REVIEW:

1.A Study of Artificial Intelligence and its role in Human Resource Management

February 2019

Authors: Vivek V. Yawalkar

Collecting reliable data and analysing 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 recognised 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 goal was to investigate the function of artificial intelligence in the human resources department and recognise the difficulties facing the HR department. According to the research study's findings, AI plays a bigger position in the human resources department's numerous tasks than previously thought. Robotics firms can handle tasks like hiring, evaluating data, collecting data, lowering workplace workload, and enhancing workplace efficiency.

2.Trends and Opportunities of Artificial Intelligence In Human Resource Management: Aspirations For Public Sector In Bahrain

January 2020

Authors: Saeed Aldulaimi

Understanding the phenomenon of artificial intelligence (AI) use in human resources, particularly in the Kingdom of Bahrain, is the aim of the study. This research project offers a prospective view of the use of AI to more fully comprehend the attitudes and viewpoints of HR practitioners within various frameworks. The study found that the public sector in the Kingdom of Bahrain will have a tremendous opportunity to keep up with the digital transformation as a result of the implementation of its vision (2030 vision). As a result, the workforce's makeup within business organisations has changed. It allows men and women to compete for numerous occupations, and as a result of the demand for gender equality, this will place further pressure on human resources management. Also, it enables a strong incorporation of the feminist component. It is advised that modern artificial intelligence (AI) applications are a crucial strategy for firms that operate in unpredictable environments.

3.Integration of Artificial Intelligence in Human Resource

December 2019

Authors : Ginu George, Mary Rani Thomas

Throughout the past few decades, technological advances have affected practically everyone and almost every facet of life. Artificial intelligence is one such technical advancement that has the potential to revolutionise the world. It is the one that is most frequently mentioned, discussed, and used in many different disciplines. Software that is capable of intelligent thought, much like an intelligent human is, is known as artificial intelligence (AI). according to a few research AI is divided into four categories: systems that act like humans (Kurzweil, 1990; Rich and Knight, 1991); act rationally (Charnaik and McDermott, 1985; Winston, 1992); and think like humans (Haugeland, 1985; Bellman, 1978). (Schalkoff, 1990; Luger and Stubblefield, 1993). According to Bersin (2018), AI is now present in the majority of software and has been integrated into numerous business processes. HR, which includes numerous HR operations like the hiring process, onboarding, and training, to name a few, is one of these business functions where AI integration is progressing more quickly. Incorporating AI into HR does not imply that HR managers will be fully replaced by AI; rather, it will enable HR managers to concentrate more on strategic work and less on menial, low-value jobs. So, there is unquestionably a more complex picture of how AI could help to streamline and reconfigure the HR processes for greater efficiency and agility. This article emphasises qualitative research and seeks to show how AI has been incorporated into various HR tasks and its effects on businesses, workers, and HRs.

4. Design and interactive performance of human resource management system based on artificial intelligence

January 28, 2022

Authors : Yangda Gong , Min Zhao, Qin Wang, Zhihan Lv

The goal is to improve Human Resources Management (HRM) by employing Artificial Intelligence (AI) technology to manage information. Initially, it is analysed how the applicant's resume was chosen throughout the hiring process and how the contract salary was determined. The resume data is then extracted and transformed into a data-type format. Additionally, the Back Propagation Neural Network (BPNN) is used to

develop the salary forecast model in the HRM system (HRMS), and its network topology, parameter initialization, and activation function are chosen and optimised. The experimental findings reveal that, after 187 iterations, the algorithm refined by the Nadm has enhanced convergence time and forecast effect. Also, the developed technique produces the best test results when compared to existing regression algorithms. The aforementioned findings can serve as a guide for creating an AI-based HRMS.

5. Artificial Intelligence Techniques in Human Resource Management—A Conceptual Exploration

January 2015

Authors : Stefan Strohmeier & Franca Piazza

Since their introduction, a variety of recommendations on how to use Artificial Intelligence and Computational Intelligence in Human Resource Management have accumulated. Artificial Intelligence Techniques and its subset, Computational Intelligence Techniques, are not new to the field of human resource management. Although such contributions provide in-depth insights into certain application possibilities, a broad picture of the potential is lacking. The general potential of artificial intelligence techniques in human resource management is therefore briefly explored in this chapter. In order to do this, a concise foundation is provided that explains the fundamental capabilities of artificial intelligence techniques and the fundamental needs of human resource management using the task-technology fit methodology. In six specific scenarios (turnover prediction with artificial neural networks, candidate search with knowledge-based search engines, staff rostering with genetic algorithms, HR sentiment analysis with text mining, résumé data acquisition with information extraction, and employee self-service with interactive voice response), the potential of artificial intelligence in human resource management is examined as a result. Discussion and a summary of the conclusions drawn from the investigation and foundation are provided.

RESEARCH GAP

The research gap we found in the literature review are:

- Ethical considerations are becoming more vital when AI is integrated into HR procedures. Further research is necessary to investigate the ethical ramifications of AI in HR, encompassing issues relating to bias, fairness, and privacy.
- Research shows how AI affects employee experience, but there is still much to learn. Consider how staff members view the application of AI in HR and the effects it has on their level of job satisfaction, engagement, and wellbeing.
- AI implementation in HR can be difficult and complex. Research is required to examine the difficulties organisations encounter when integrating AI in HR and how to overcome them.
- HR specialists' roles could evolve when AI is more fully incorporated into HR practises. Research is required to investigate how HR specialists can adjust to these changes and what abilities they must acquire to operate effectively with AI.
- The application of AI in HR may give rise to legal concerns, including those of discrimination and data privacy. Research is required to examine the legal ramifications of employing AI in HR and how businesses may make sure they are abiding by all applicable rules and laws.

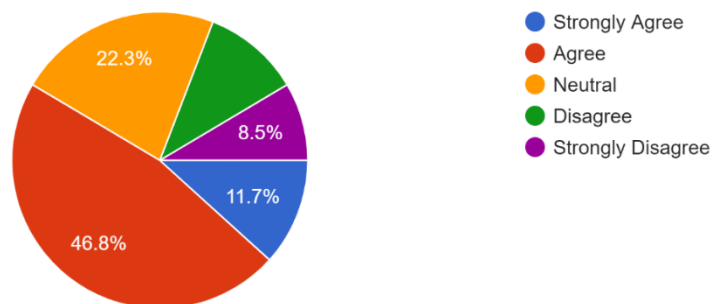
RESEARCH METHODOLOGY

We provide a theoretical framework that demonstrates the interconnection between HRM and AI functions. The study is supported by data from both primary (survey) and secondary (publications, journals) sources. The poll, which was carried out for the Indian population, involved 100 participants of every age, profession, and gender. The secondary data was gathered from research papers, books, websites, blogs about human resources, and survey reports released by various research organisations. This study is a quantitative one that takes into account two key elements: artificial intelligence and adoption intentions.

ANALYSIS AND INTERPRETATION

1. To what extent do you believe that AI can help to reduce bias and discrimination in HR decision-making?

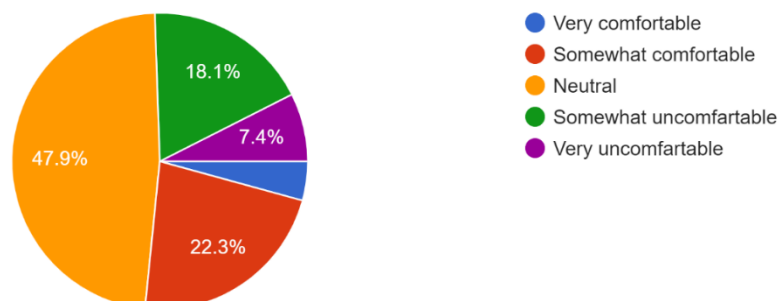
94 responses



The survey findings reveal that 46.8% of the participants concur that AI has the potential to mitigate bias and discrimination in HR decision-making. 22.3% remain neutral on the matter, while 11.7% strongly agree. In contrast, only 8.5% of the respondents strongly disagree with the notion.

2. How comfortable would you be with an AI system making decisions about hiring, promotion, or other HR-related tasks in your workplace?

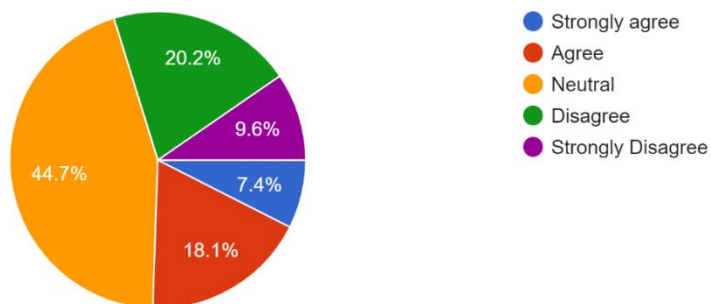
94 responses



47.9 % of the respondent feel Neutral about the topic that they would be comfortable with an AI system making decisions about hiring, promotion, or other HR-related tasks in your workplace 22.3 % are somewhat comfortable, 18.1 % are somewhat uncomfortable only 7.4 % feel highly uncomfortable

3.To what extent do you believe that AI in HR will replace human HR professionals?

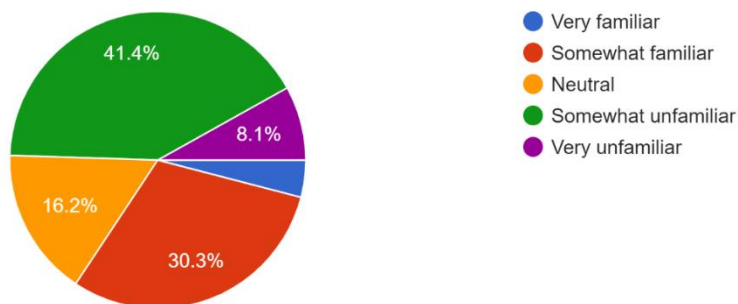
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44.7 % of the respondents feel neutral about AI in HR will replace human HR professionals where as 20.2 % disagree with the thing. 18.1 % agree with the point 9.6 % strongly disagree with AI replacing HR professionals but 7.4 % strongly agree with the topic

4.What is your level of familiarity with the ethical considerations involved in using AI in HR?

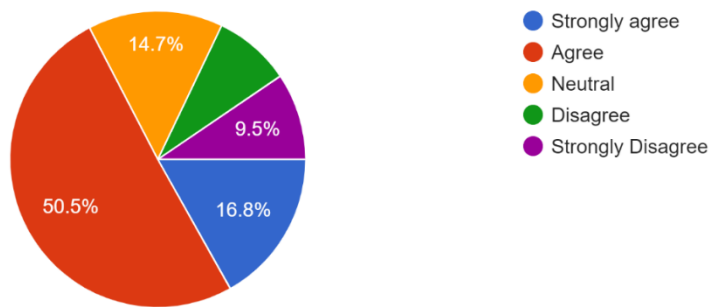
99 responses



41.4 % of the respondent feel somewhat unfamiliar about the topic of familiarity with the ethical considerations involved in using AI in HR, 30.3 % feels somewhat familiar, 16.2 % feel neutral about the topic of familiarity only 8.1 % feel very unfamiliar

5. To what extent do you believe that organizations should communicate with their employees about the use of AI in HR?

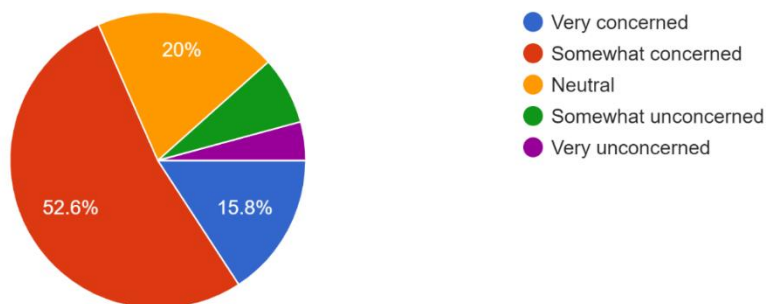
95 responses



Among the respondents 50.5 % agree that organizations should communicate with their employees about the use of AI in HR, 16.8 % felt strongly agree, 14.7 % feels neutral about the topic only 9.5 % feels strongly disagree about organizations communicating with their employees

6. How concerned are you about the potential impact of AI in HR on job seekers and candidates?

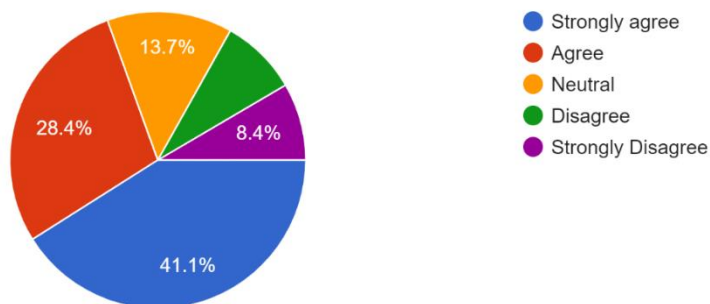
95 responses



Approximately 52.6% of individuals harbor concerns regarding the potential implications of AI on job seekers and candidates. The implementation of AI in HR has the capacity to enhance productivity, decrease operational expenses, and minimize the time dedicated to monotonous and repetitive tasks. Furthermore, it can contribute to higher employee retention rates by enhancing the overall employee experience.

7. To what extent do you believe that AI in HR will become more prevalent in the future?

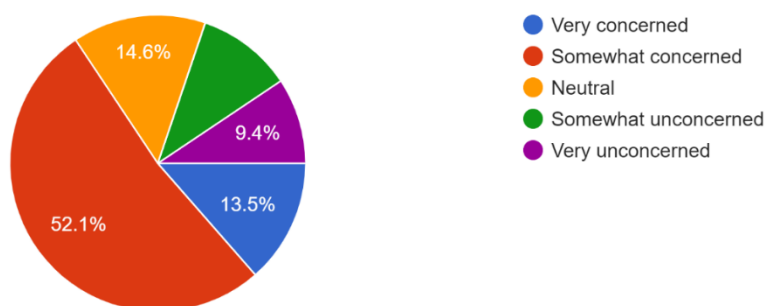
95 responses



41.1% people believe that AI in HR will become more prevalent in future as AI will drive almost all HR decisions. AI technology can be used to conduct surveys, collect feedback, and evaluate diverse business-related data such as productivity levels, employee engagement, performance, and areas for improvement.

8. How concerned are you about the potential for AI to make decisions that may not be fair or impartial?

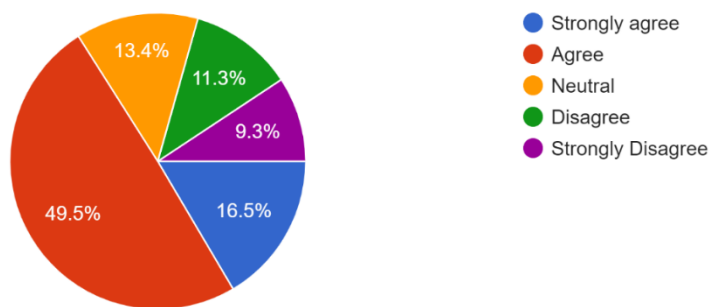
96 responses



Around 52.1% of individuals express a degree of concern regarding the potential limitations of AI in making unbiased decisions. This apprehension stems from the fact that AI algorithms are created by humans, making them susceptible to intentional or unintentional bias introduced during the algorithm development process. If biases are present in the initial algorithm design or if biased data is used for training the algorithms, the outcomes produced by AI algorithms can be skewed

9. To what extent do you believe that organizations should take steps to ensure that AI is used fairly and without bias in HR decision-making?

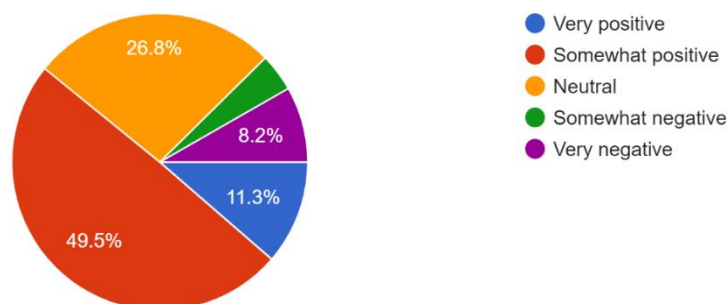
97 responses



49.5% of people believe that organizations should take steps to ensure that AI is used fairly and without biasness in decision making. Regular testing should be incorporated as an integral part of the process to ensure proper functioning. Establishing an algorithm should never be treated as a one-time event. AI systems require ongoing testing and transparency. Reviews should be conducted to identify any potential biases that might have unintentionally influenced the system.

10. What is your overall opinion of the use of AI in HR?

97 responses



Approximately 49.5% of individuals believe that leveraging AI for sourcing purposes can significantly augment an organization's capacity to discover the most suitable talent precisely when needed. AI can assist in identifying the top candidates and uncovering those who possess the best alignment between job requirements and their skills and experience. Effective utilization of artificial intelligence requires appropriate storage and maintenance of data to ensure efficient operation. It collects and analyzes all relevant data, enabling the HR department to make informed decisions based on data-driven insights.

DISCUSSION

In the research article, we explored the utilization of artificial intelligence (AI) in human resource management (HRM), along with the potential advantages, risks, and ethical considerations associated with its implementation. The application of AI in HRM processes holds promise for enhancing their overall effectiveness and efficiency across multiple dimensions. Artificial intelligence (AI) may, for instance, assist with hiring and screening job candidates, providing real-time performance reviews, delivering tailored training and development plans, and advising staff members on how to further their careers.

These benefits could eventually lead to higher worker satisfaction, increased output, and improved corporate outcomes. However, using AI in HRM comes with a variety of difficulties and ethical conundrums. AI systems' propensity for prejudice, which could result in discrimination against specific groups, is one of the largest problems. Additional challenges and ethical ramifications of using AI in HRM include privacy issues, moral quandaries with algorithmic judgement, and the potential to reduce human interaction and personalization.

Finally, the incorporation of AI into HRM has the potential to fundamentally alter how businesses manage their human resources. Nevertheless, it is imperative to strike a balance between the potential risks and ethical considerations and the benefits derived from employing AI in HR. HR professionals should remain cognizant of these risks and proactively implement measures to mitigate them. This includes refining AI algorithms to enhance precision and objectivity, as well as ensuring human oversight is consistently present to safeguard against unintended consequences. More research is needed to examine AI's potential

in other HRM processes and to develop best practises for its application in HRM. The effectiveness of AI in HRM will ultimately depend on how well firms can assess the benefits and cons of implementing this technology.

LIMITATIONS

- The use of qualitative research approaches, such as surveys and questionnaires, is a downside of this study, as is the restricted access to information.
- People and expert interviews might have offered a more complete and in-depth viewpoint.
- A bigger sample size would have given greater opportunity for exposure and understanding.
- Additional limits include deadlines and time restrictions, and the replies were limited to employees based in Bengaluru.

CONCLUSION

In today's competitive landscape, the industrial sector has experienced considerable growth. One of the challenges faced by industries is maintaining ongoing improvement. To increase efficiency and streamline routine tasks, most industries have adopted modern technologies. Many industry experts and researchers recommend that businesses utilize digital and artificial intelligence tools. As a result, numerous businesses have begun incorporating artificial intelligence and machine learning into their human resource departments. AI is instrumental in various aspects of HR, including recruitment, performance analysis, employee data collection, and providing real-time and precise information. While it is evident that AI is taking on various HR-related responsibilities, it is important to dispel the misconception that AI is replacing HR positions entirely, which is untrue. HR professionals are burdened with significant and time-consuming administrative tasks such as job postings, candidate sourcing and screening, scheduling meetings and interviews, managing timesheets, recording expenses, and more. If these tasks can be fully automated through AI, it would greatly benefit HR professionals by relieving them of repetitive duties, enabling them to devote more attention to strategic thinking, creativity, relationship building, emotional intelligence, and enhanced problem-solving abilities.

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