# Harmony in HR: Exploring the Synergy of Artificial Intelligence and Green Practices for Sustainable Workplaces"

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**Abstract:** This study investigates the pivotal role of Artificial Intelligence (AI) in the implementation and enhancement of Green Human Resource Management (GHRM) practices within contemporary organizations. Recognizing the imperative for businesses to align with sustainable principles, the research explores how AI technologies contribute to the adoption and optimization of eco-friendly initiatives in the realm of human resource management. The study delves into specific AI applications, such as predictive analytics, machine learning algorithms, and data-driven decision-making, to elucidate how these technologies can assist in identifying, recruiting, and nurturing environmentally conscious talent. Furthermore, the research investigates the potential of AI to streamline HR processes, reduce resource wastage, and foster a corporate culture committed to environmental sustainability. Through a comprehensive analysis of case studies and empirical evidence, this study aims to elucidate the practical implications, benefits, and challenges associated with integrating AI into GHRM practices. Saving the environment should be a top priority for every company. The majority of companies, however, do not prioritize eco-friendly policies and procedures these days. Making a profit and competing are their only concerns. Because of this, abandoning the organization's dedication to sustainable development and environmental protection becomes its biggest drawback. However, there are groups who make it their mission to encourage eco-friendliness and green activities. In this research, we look at how green HRM is affected by several eco-friendly strategies.

**Key words**:*Green HRM Practices, Workplace HarmonySustainable WorkplacesAI-driven HR Strategies*

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## 1 Introduction:

The goal of artificial intelligence (AI) in meeting Industry 4.0 standards is to turn conventional businesses into "smart factories" that maximize efficiency by reducing the need for human workers and making better use of their skills (Kshetri, 2021).

But there are internal and external challenges that developing economy corporate enterprises face. While businesses must adapt to the requirements of Industry 4.0 by becoming smart factories, they must also keep up with the ever-evolving demands of consumers and the environment. Green human resource management (green HRM) is becoming more important as firms strive to reduce their environmental impact, increase efficiency, and adopt cleaner production methods (Pham et al., 2019). Artificial intelligence is being relied upon by enterprises to fulfill their objectives and appease internal and external stakeholders (Garg et al., 2018). AI helps businesses with cutting-edge digital tools, data storage and cloud computing, applications for making decisions, and intelligent analytical software (Kshetri, 2021). In this chapter, we'll look at how artificial intelligence may help with green HRM initiatives. We will go over the research on green HRM and AI in the next section. This chapter will cover the most recent industry examples and scenarios.

Gathering information, categorizing it, and evaluating it for use in the service and manufacturing sectors. One kind of artificial intelligence is natural language processing, which allows people to communicate with computers in order to complete tasks; examples of this include call center agents and the virtual assistant Alexa (Amazon Echo).

Figure 1.1 depicts the current state of artificial intelligence as described here.

Organizations adopt and implement several AI dimensions to enhance their operations and services, as shown in Figure 1.1. These artificial intelligence technologies are creating new ways to put human abilities to use while also altering the way people work. Organizations in many types of industries are increasingly turning to AI to boost their productivity and efficiency. Recruiting, development and training, performance evaluation, career advancement, and talent retention are just a few of the administrative and HRM tasks that companies are utilizing AI technologies and approaches for.

Green environmental challenges are receiving increased attention in modern theories of management, such as management by objective (MBO) and management by exception (MBE) (Chan & Chan, 2004; Chan et al., 2014; Mařík&Lažanský, 2007). Thus, in addition to the problem of remaining competitive, organizations must also ensure that their HRM procedures and operations are environmentally friendly. According to Sekhri and Cheema (2019), AI can assist firms in achieving green HRM functions and practices through its smart and innovative implementations. Artificial intelligence (AI) is playing an increasingly important role in the digital transformation of enterprises that is taking place in the age of Industry 4.0. Businesses benefit greatly from AI because of its intelligent and technologically advanced applications. In order to undertake green HRM procedures and practices. Organizations have used a variety of artificial intelligence (AI) applications to enhance HRM procedures and tasks, including chat boats, digital attendance, automation, job intelligence maestros, distant assistants, and e-pass systems. Similarly, businesses implement green HRM (GHRM) practices and procedures by means of AI tools and applications, according to the scenario. The primary GHRM activities carried out by businesses will be covered in the section that follows.
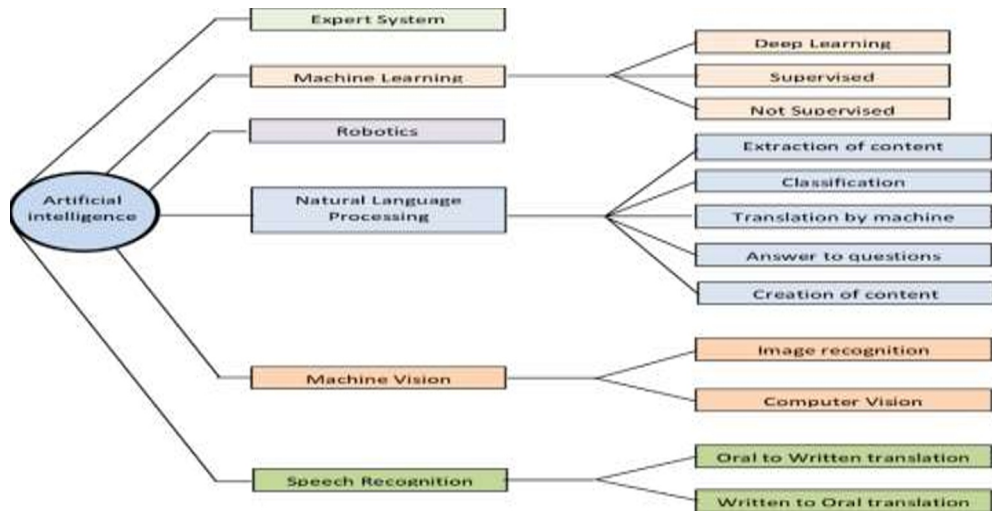
**Fig. 1**.1functioning of artificail intellegence.

## 1.1 Green Human Resource Management

Organizations are compelled to adopt GHRM policies due to the mounting demands from environmentalists for a pollution-free environment (Jabbour, 2013; Pham et al., 2019). Organizational policies aimed at preserving a sustainable and environmentally friendly workplace are becoming more important to both customers and job seekers (Teixeira et al., 2012). Effective human resource management strategies are the key to retaining talented individuals, and organizations cannot gain a competitive advantage in the long run unless they use their employees' talents. Hence, following the work of a small group of researchers, GHRM has garnered attention from numerous scholars, researchers, academics, and policymakers (Jabbour& Santos, 2008; Tomer& Rana, 2020; Jackson et al., 2011; Pham et al., 2019; Renwick et al., 2016; Yong et al., 2019a, 2019b). Ahmad (2015) and Yong et al. (2019a) found that GHRM practices helped firms reduce waste in manufacturing units, go paperless, and limit carbon emissions. According to Sawang and Kivits (2014), GHRM is seen as a long-term solution for enterprises.

## 1.2 Green HRM Practices:

The goal of green HRM is to reduce pollution in the workplace by implementing policies and practices that promote responsible human resource management (GHRM) (Renwick et al., 2008; Renwick et al., 2013). According to Gholami et al. (2016), GHRM practices are a mix of innovative HRM strategies and traditional HRM practices that help businesses maintain a sustainable green environment. Development of green capability, motivation of green employees, and facilitation of green opportunity are the three pillars upon which GHRM practices rest (Renwick et al., 2013). Training and development, talent retention, performance management, compensation and reward management, and recruiting and selection are the primary HRM functions that these practices and measures center on. Human resource management (HRM) tasks aid businesses in taking environmental action by helping to establish green objectives (Cohen, 2012). Human resource management (HRM) is an integral aspect of developing sustainable business practices and creating environmental-based corporate values. Therefore, the antecedents of GHRM practices

further split HRM functions. The HRM functions are organized in Table 1.1 according to the factors of GHRM practices.

Research on these GHRM functions has increased since 2016 (Cabral &Dhar, 2019; Chaudhary, 2018, 2019a, 2019b; Dumont et al., 2017; Guerci et al., 2016; Jabbour& Renwick, 2018; Pham et al., 2019; Shah, 2019; Srivastava et al., 2020; Yong et al., 2019a; Yusliza et al., 2017). The GHRM framework, its concepts, and models are detailed in these publications.

**Table 1.** Dimensions of GHRM available in Literature

| S.N. | Variables / Factors | Author |
|---|---|---|
| 1. | Green Human Resource Planning (GHRP) | Liu and Xie (2013), Arulrajah et al., (2015), Siyambalapitiya et al., (2018) |
| 2. | Green Job design and Analysis | Jabbour et al., (2010), Jabbour (2011), Masri and Jaaron (2017), Shah (2019). |
| 3. | Green Recruitment and Selection | Renwick et al., (2008), Jabbour et al., (2010), Jabbour (2011), Mandip (2012), Arulrajah et al., (2015), Gholami et al., (2016), Gureci et al., (2016), Longoni et al.,( 2016), Masri and Jaaron (2017), , Nejati et al., (2017), Gupta (2018),Saeed et al.,(2018), Shah (2019), Siyambalapitiya et al., (2018), Tang et al., (2018), Zaid et. al.,(2018), Chuadhary (2019), Islam (2019), Mukherjee et al., (2020) |
| 4. | Green Induction | Mandip (2012), Arulrajah et al., (2015), Al-Romeedy (2019). |
| 5. | Green Training and development | Renwick et al., (2008), Jabbour et al., (2010), Jabbour (2011), Mandip (2012), Arulrajah et al., (2015), Gholami et al., (2016), Gureci et al., (2016), Longoni et al.,( 2016), Bangwal et al., (2017), Dumont (2017), Nejati et al., (2017), Masri and Jaaron (2017), Gupta (2018), Siyambalapitiya et al., (2018), Tang et al., (2018), Saeed et al.,(2018), Shah (2019), Islam (2019), Chuadhary (2019), Yu et al., (2020), Mukherjee et al., (2020). |
| 6. | Green Performance Management | Jabbour et al., (2010), Jabbour (2011), Mandip (2012), Gholami et al., (2016),Gureci et al., (2016), Longoni et al.,( 2016), Dumont (2017), Masri and Jaaron (2017), Nejati et al. (2017), Gupta (2018), Saeed et al. (2018), Tang et al., (2018), Shah (2019), Islam (2019), Chuadhary (2019), Mukherjee et al., (2020). |
| 7. | Green Pay and Rewards | Renwick et al., (2008), Jabbour et al., (2010), Jabbour (2011), Mandip (2012), Arulrajah et al., (2015), Gholami et al., (2016), Nejati et al., (2017), Dumont (2017), Masri and Jaaron (2017), Saeed et al. (2018),Tang et. al (2018), Siyambalapitiya et al., (2018), Gupta (2018), Islam (2019), Chuadhary (2019), Mukherjee, et al. (2020), |
| 8. | Green Employee Relations | Renwick et al., (2008 & 2013), Arulrajah et al., (2015), Siyambalapitiya et al., (2018), Shah (2019). |

## 1.3 Determinants of Green HRM:

to GHRM, factors that influence its acceptance, and the results of that adoption (on both an individual and a company level). The reason behind narrowing down on the determinants and results of GHRM adoption is because this study aims to discover the function of artificial intelligence in this process.

Green HRM initiatives can help organizations reduce production waste and promote environmental sustainability in response to rising consumer, stakeholder, and environmental awareness (Guerci et al., 2016; Yong & Mohd-Yusoff, 2016). Human resource management strategies are also impacted by the intellectual capital of employees (Kong & Thomson, 2009). Green human capital and green relational capital considerably impact the organization's incentive to execute green HRM practices, according to an empirical study that used intellectual capital-based view theory and involved 112 Malaysian manufacturing firms (Yong et al., 2019b). Employees' green human capital includes their environmental knowledge, expertise, attitude, creativity, and dedication (Chen, 2008; Li & Chang, 2010; Chahal & Bakshi, 2014). Green HRM practices are straightforward to implement for organizations with such human capital. A company's ability to make money and gain an edge in the market is directly correlated to the quality of its relationships with its customers, suppliers, network members, and partners in the areas of green innovation and corporate environmental management (Chen, 2008). When it comes to implementing

green HRM services, the primary stakeholders—customers, suppliers, employees, and partners—have a comparatively larger impact.

In addition, firms can only adopt and implement green HRM practices with the cooperation of top management. According to Obeidat et al. (2020), Sawang and Kivits (2014), and Teixeira et al. (2012), top management is responsible for making organizational changes. Having a green orientation helps top management support green HRM practices. With effective leadership and employee commitment, top management initiates changes to the organizational culture by adopting green HRM practices such as green recruitment and selection, green job descriptions, green training and develop- ment, green performance appraisal system, green safety and health provision, green employee and labor relations, and green grievance handling systems (Ahmad, 2015; Chaudhary, 2019b; Gholami et al., 2016; Guerci et al., 2016; Jabbour, 2013; Jabbour et al., 2010; Jackson et al., 2011; O'Donohue & Torugsa, 2016; Ren et al., 2018; Rana & Sharma, 2019; Renwick et al., 2013; Shah, 2019; Siyambalapitiya et al., 2018; Srivastava et al., 2020; Tang et al., 2017; Zibarras&Coan, 2015). Organizations can achieve their green environmental goals with the help of green HRM practices. These practices influence employee behavior and attitudes to become more environmentally conscious, which in turn helps to build a green workforce (Aboramadan, 2020; Cabral &Dhar, 2019; Chaudhary, 2019b; Dumont et al., 2017; Fawehinmi et al., 2020; Islam et al., 2020; Jackson &Seo, 2010; Kim et al., 2019; Luu, 2017; Luu, 2018; Mishra, 2017; Aboramadan, 2020; Mukherjee & Chandra, 2018; Ojo et al., 2020; Renwick et al., 2013; Rubel et al., 2021).

The majority of millennials want to work for companies that have environmentally conscious HR policies and procedures, therefore green recruiting and selection helps businesses bring in top talent (Chaudhary, 2018). Companies are now marketing themselves as environmentally conscious in an effort to entice top personnel (Ahmed, 2015). Environmental activities are a component of the job descriptions of some European corporations, including Siemens, BASF, Bayer, Mannesmann, and Rover Group (Wehrmeyer, 1996). To determine the connection between the results of applicant attraction and the environmental sustainability of corporations, a meta-analysis of 22 scholarly articles was conducted, which uncovered the roles of selection and recruitment as well as mediators and moderators (Pham &Paillé, 2019).

Organizations are incorporating environmental performance into performance management systems to help turn their staff become environmentally conscious workers (Epstein & Roy, 1997). Green information systems and environmental performance standards help businesses collect actionable data on how well their staff are doing in their roles (Alfred & Adam, 2009). Furthermore, they launch green training and development programs to teach workers how to better manage the environment, reduce waste, save water, reduce energy consumption, and come up with sustainable solutions to save the planet (Zoogah, 2011).

In addition to these, more and more businesses are instituting "green compensation policies" to incentivize and reward employees for going green. More than eight percent of UK businesses provide financial or non-financial incentives to workers who engage in environmentally responsible practices (Phillips, 2007). Businesses often take into account and reward employees for their eco-friendly actions and involvement in environmental activities as a way to show their dedication to environmental management (Forman & Jorgensen, 2001). Additionally, businesses are implementing environmentally friendly safety and health regulations, labor relations, and grievance procedures to keep employee-

employer relations positive. Employees are better able to take part in and have agency over environmental management initiatives as a result of these rules. Wee and Quazi (2005), Kitazawa and Sarkis (2000), Renwick et al. (2008), and Florida and Davison (2001) all discovered that when people are involved and empowered, it leads to less waste and pollution and more efficient use of resources.

Organizational GHRM practice determinants are illustrated in Figure 1.2.
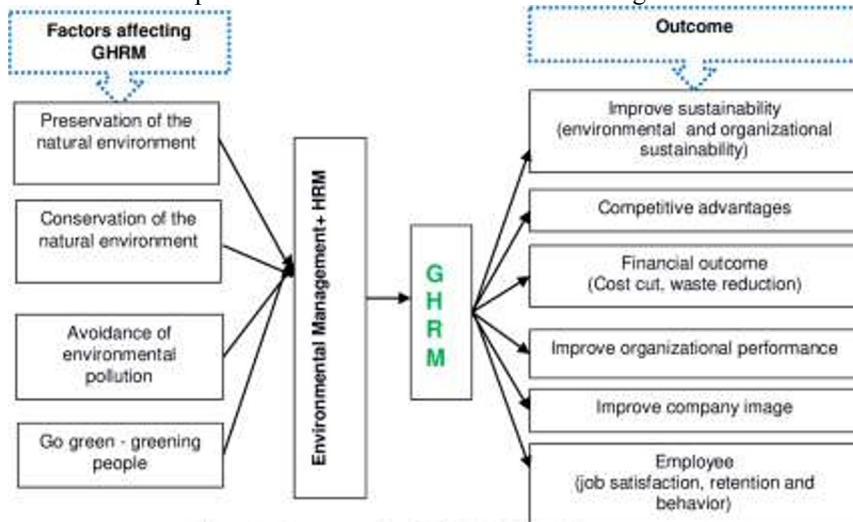


Figure 1. Conceptual model (GHRM and its outcomes)

Organizations are compelled to embrace GHRM practices due to the different factors shown in Figure 1.2. According to a green HR survey, over half of the companies have integrated green management practices into their internal operations, almost three quarters have used digital innovation to hold meetings virtually, almost eighty percent have advocated for paperless documentation, sixty percent have implemented wellness and fitness programs for their employees, and eighty percent have made use of artificial intelligence (Aggarwal & Sharma, 2015). Smart and AI-powered software makes it easy for enterprises to adopt and implement GHRM services (Garg et al., 2018). For example, PepsiCo has used AI technologies to conduct interviews and make hiring decisions for open positions. The program streamlines the interview process by automatically scanning resumes from many job portals and selecting people with matching profiles. This eliminates the need for interviewers to travel across nations to meet with candidates. With the use of smart meters and a new enterprise resource planning system, Infosys was able to cut their energy usage by 85 percent. A number of companies have also begun using AI in their green health risk management (GHRM) initiatives, including ITC, Lufthansa Group, Hyatt Group of Hotels, Nokia, Gensol Consultants Private Limited, and id8 Media Solutions. The function of AI in implementing GHRM policies and procedures is the subject of the next section.

## 1.4 Role Of Ai In Adoption Of Green Hr Practices:

In order to streamline their operations, many companies, both in developing and developed countries, have embraced new technology. For example, while many companies today use Big Data analytics to study hiring, sales, and production patterns, the use of AI to adopt GHRM principles is still in its early stages. Although AI has become essential for achieving

long-term competitive advantage, only a select few businesses have adopted its intelligent and solution-focused technology. The incompetence of human talent in handling these kinds of applications is a big factor, but people are also afraid of losing their employment to robots. Contrarily, AI increases productivity while decreasing human effort, freeing up more time and energy to focus on environmentally friendly methods. A new software called "AskDexter" was created by an IT company in India. It helps with human resources tasks like answering questions regarding leave and company policy and managing 22,000 employees (Garg et al., 2018). Future job openings and possibilities are also detailed in this app. Finding a job that fits one's skillset is another benefit. When it comes to human resources, AI is a lifesaver.
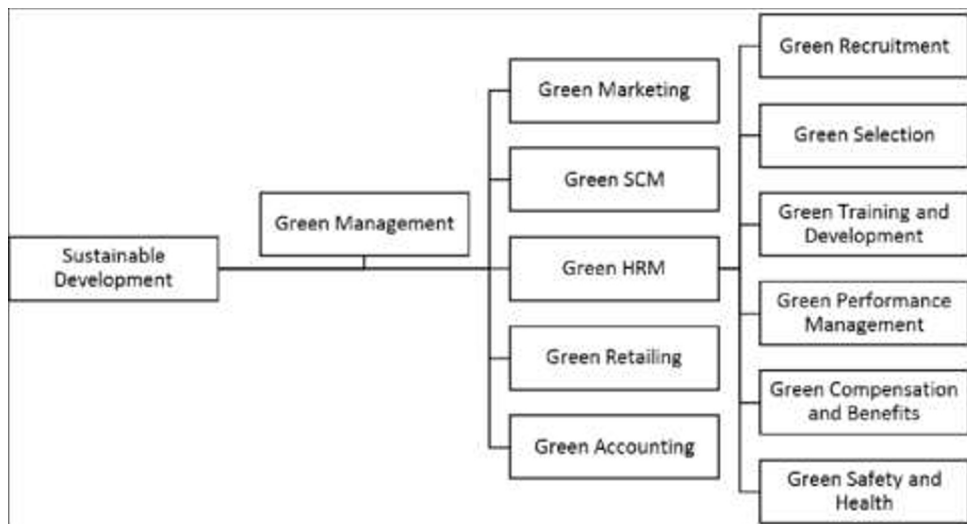


**Fig. 1.3** The function of AI in GHRM procedures

Figure 1.3 shows how AI helps businesses train their staff to be environmentally conscious by supplying tools for hiring, training, and finding people who fit certain job requirements. Artificial intelligence programs sift through resumes in search of candidates who best meet an organization's needs. Artificial intelligence applications have led to a 60% decrease in the need for human recruiters as a result of digitization and automation (Stahl, 2021). Recruiters will soon find themselves out of work to the tune of 80% due to AI-powered HR help desk apps.

On a daily, quarterly, and annual basis, companies evaluate their employees' performance and offer them feedback to assist them improve their flaws. In addition to assisting with trash reduction, this input also shows workers how to live healthier lives and how to come up with innovative ways to keep the environment green. Using AI applications, companies track their employees' actions and provide incentives to those that engage in environmentally conscious behaviors. Meeting the standards of green performance management and appraisal can be a challenge for organizations due to the many departments and staff units involved. Businesses are attempting to get a handle on these problems and improve their performance evaluation processes by implementing green information systems to oversee green performance management standards. Employees can get their questions regarding organization systems and leave answered by chatbots and other AI applications, freeing up mentors and counselors to focus on other, more fruitful tasks. In addition to being user-friendly, these apps facilitate better employee-employer connections, the resolution of grievances, and the growth of a green corporate culture.

Smart artificial intelligence programs assist businesses manage their operations, including production, inventory, and supply chain management, with less waste, energy, and resources expended. Artificial intelligence (AI) applications and technologies make GHRM procedures easy to implement and decrease the likelihood of error.

Role of AI in HRM Practices:



**Fig 1.4.** HR Trends 2024

## 2 Conclusions:

It is the responsibility of businesses to protect the environment in this ever-changing landscape as they move their focus from maximization of profits to the development of a sustainable competitive edge. In addition to attracting and retaining people, it will make organizations the preferred employer brands among job seekers. That is why it is imperative for businesses to adopt green HRM strategies. Companies need to focus on both acquiring and maintaining talent, but they also need to take care of their current personnel, as resistance to change might arise from any unexpected source (Gupta &Haque, 2015; Gupta &Lenka, 2018). Artificial intelligence (AI) plays a role here by assisting firms in adopting GHRM services through the provision of smart technology and applications that streamline processes and boost employee productivity. Businesses should prioritize AI projects due to the diversified workforce that comprises members of Generations X (born 1961–1980), Y (born 1981–2000), and Z (born 1995–2012) (Naim&Lenka, 2017; Singh, 2014). "Gen Achievement oriented and motivated by growth needs; therefore, their motivation to adopt GHRM practices is different (Wong et al., 2008). A study identified thatGeneration Y employees take care of the planet and

they expect to be rewarded foradapting GHRM practices (Jain &D'lima, 2018). On the contrary, Generation Z istech-savvy, empowered, more realistic and pre-matured; therefore, they canbe motivated by using technology-driven tools and techniques (Singh, 2014; Sharma et al.,2021). So, with diversified workforces, organizations have to use AI tools and techniques to adopt GHRM practices. Previous studies identified training, recruitmentandrewardsastheimportantfactorsforimplementingGHRMpractices (Nobarietal.,2018).Thus,AItoolsandtechniquescanbeusedfortheseprocessestoengageand motivate employees to voluntarily participate in green activities. Adoption ofgreen HRM activities is beneficial for environmental performance and organiza-tionalsustainability (Obeidat etal., 2020).

The present study unravels the role of AI technologies and applications in adopt inggreen HRM practices. The determinants of GHRM practices have been explained indetail,whichhelpsinidentifyingtherelevantAIapplicationsforthesame.Previousstudiesals osuggestedthatforeffectiveimplementationofe-HRMpractices,useof AI, Big Data analytics and people/HR analytics should be taken into consider-ation (Poba-Nzaou et al., 2020; Prakash et al., 2021). However, this study is basedon review of literature only, but can be explored further through case study andempirical research work. Future studies can be conducted to identify the role of AIinadoptingGHRMpracticesandtoexplorethenicheareasofGHRMresearch,and can also be researched through conceptual or empirical work. Future researchwork can also be done to identify the motivating factors at individual, group/teamand organizational levels through which employees can be influenced to voluntarilypursue GHRM practices.

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