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The Influence of Artificial Intelligence on HR Functions

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Abstract: Artificial Intelligence's incorporation into HR operations is radically changing how businesses engage workers, manage talent, and maximize performance. Recruitment, onboarding, performance management, learning and development, and employee engagement are just a few of the HR areas that this study examines the effects of AI technologies including machine learning, natural language processing, and predictive analytics. AI facilitates data-driven initiatives, improves decision-making, and boosts operational efficiency. But technology also brings with it problems with algorithmic prejudice, data privacy, and ethical issues. This research emphasizes the need for a balanced strategy that blends technical innovation with human judgment, highlighting both the advantages and disadvantages of AI in HR

Keywords: Artificial Intelligence, Human Resource Management, Ethical AI

I. INTRODUCTION

In order to shape organizational performance, guarantee employee happiness, and match workforce plans with corporate objectives, human resource management has always been essential. Artificial Intelligence has become a disruptive force in the age of digital transformation, impacting every aspect of corporate operations, including human resources. By providing cutting-edge tools and systems that simplify administrative tasks, lessen biases, increase hiring accuracy, and boost employee engagement, artificial intelligence technologies which include machine learning, natural language processing, robotic process automation, and predictive analytics are currently transforming traditional HR functions (Kaplan & Haenlein, 2019).

The use of AI in HR is a deliberate move meant to improve organizational agility, boost cost-effectiveness, and provide a more customized employee experience rather than just being a fad. AI-driven HR solutions have already been used by companies like Unilever, IBM, and Accenture in order to streamline operations and get a competitive edge (Deloitte, 2021). The increasing usage of AI in HR is a reflection of wider shifts in workplace expectations, such as calls for realtime feedback systems, speedier services, and more diversity.

1. Evolution of HR Functions

HR departments used to be mostly administrative in nature, with an emphasis on manual hiring, payroll processing, compliance, and record-keeping. HRM has progressively changed to play a more strategic role as a result of workforce diversity, globalization, and the rise of knowledge-based economies. This covers employee engagement, performance management, succession planning, learning and development, and talent acquisition.

Nevertheless, a lot of these tasks still require laborious procedures and are prone to prejudice or human mistake. For instance, manually evaluating resumes throughout the hiring process often results in uneven assessments of candidates. In a similar vein, regular performance evaluations could not fairly represent current performance or possible burnout. AI provides scalability, objectivity, and efficiency as remedies for these drawbacks.

2. Role of AI in Modern HRM

AI gives HRM a data-driven, automated method that enables quicker and better-informed decision-making. A comparison between AI-enabled HR procedures and conventional HR practices is shown in the table below.





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HR Function	Traditional Practice	AI-Enabled Practice	Benefits
Recruitment	Manual resume screening, human-led interviews	AI-driven ATS, video interviews with sentiment analysis	Faster hiring, reduced bias, better matches
Onboarding	In-person orientation, manual paperwork	AI chatbots, automated documentation	24/7 availability, consistent experience
Performance	Annual reviews,	Real-time feedback, predictive analytics	Continuous evaluation,
Management	subjective assessments		data-based decisions
Learning &	Uniform training	Personalized learning paths via	Increased engagement,
Development	programs	AI recommendations	targeted skill-building
Employee	Annual surveys,	Sentiment analysis, real-time	Proactive engagement,
Engagement	manager observations	feedback	reduced attrition

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3. AI in Recruitment and Talent Acquisition

The hiring process is perhaps where AI in HR is most noticeable. Artificial intelligence -driven technologies can quickly scan hundreds of resumes, extract pertinent data, and evaluate applicants according to preset standards. Candidate profiles are analyzed and compared to job descriptions using machine learning techniques and natural language processing.

HireVue, an AI-based platform for online interviews, is a well-known example. It evaluates the language, facial expressions, and voice tones of candidates during video interviews. By discovering applicants who better fit the position criteria and corporate values, this not only shortens recruiting processes but also improves the quality of recruits (Black & van Esch, 2020).

4. Performance Management and Employee Development

AI-enabled performance management solutions provide statistics and real-time feedback methods to continually track employee performance. Conventional methods depend on sporadic evaluations that might be impacted by interpersonal ties or recency bias. Large datasets, including calendars, emails, and project results, may be analyzed by AI techniques to provide unbiased insights regarding productivity and possible areas for development (Bersin, 2019).





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Additionally, by suggesting courses based on an employee's present skill set, job function, and career goals, AI supports individualized learning and development (L&D). LinkedIn Learning, for example, use AI to recommend training courses that correspond with both industry trends and individual performance indicators.

5. Enhancing Employee Engagement and Retention

A key factor in determining both organizational loyalty and productivity is employee engagement. Annual surveys and recurring management input are examples of traditional engagement techniques that often fall short in capturing emotion in real time. These days, AI solutions provide ongoing sentiment analysis of corporate feedback systems, social media activity, and staff interactions.

AI may identify burnout or discontent indicators early on by evaluating language and emotional tone, allowing HR professionals to take proactive remedial action. For instance, Microsoft's Workplace Analytics provides information on stress levels and team collaboration by using data from communication platforms like as Teams and Outlook.

6. Ethical, Legal, and Social Considerations

Although AI in HR has many benefits, there are also major drawbacks. One of the most talked-about topics is algorithmic bias; if the training data exhibits biased tendencies, the AI system may continue to discriminate in hiring or promotion choices. Due to prejudice against female applicants, Amazon discontinued its AI recruitment tool in 2018 (Reuters, 2018).

Data privacy, employee permission, and the opaqueness of AI choices are further issues (Kaplan & Haenlein, 2019). Being continuously observed or assessed by unfamiliar technology may make employees uneasy. As a result, businesses need to make sure AI technologies are used morally and in accordance with laws like the General Data Protection Regulation.

7. Future of AI in HR

It is anticipated that AI's position in HR will continue to grow in the future. AI models' capacity to comprehend unstructured data, including text, audio, and video, will advance as they get more complex. This might result in more complex evaluations of leadership potential, cultural fit, and employee engagement.

But in order to collaborate with AI in the future, HR experts will also need to retrain. To understand AI results and use them in strategic decision-making, HR staff need to develop their analytical and digital literacy. More significantly, human supervision will be essential to guaranteeing that AI enhances human interaction in HRM rather than takes its place.

AI IN HR: OVERVIEW

According to Russell and Norvig (2020), artificial intelligence describes computer systems that are able to carry out activities like learning, reasoning, problem-solving, and language comprehension that normally need human intellect. AI applications in HR include:

Natural Language Processing (NLP) for resume screening

Chatbots for employee communication

Machine learning for performance prediction

Predictive analytics for attrition management

INFLUENCE ON KEY HR FUNCTIONS

1. Recruitment and Talent Acquisition: AI-powered applicant tracking systems (ATS) automate resume screening, reduce bias, and enhance candidate matching. Tools like HireVue analyze video interviews to assess verbal and non-verbal cues (Black & van Esch, 2020).

Example:

Unilever's AI-driven recruitment process led to a 90% reduction in hiring time (Deloitte, 2021).

2. Onboarding: AI streamlines onboarding through digital assistants and document automation. Chatbots like Talla guide new employees and answer queries in real-time.

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3. Performance Management: Machine learning algorithms help identify high performers and predict employee burnout. Tools like Lattice use real-time feedback for performance tracking.

4. Learning and Development: AI personalizes learning paths based on employee goals and performance. Platforms such as Coursera and LinkedIn Learning use AI to recommend tailored courses.

5. Employee Engagement and Retention: Sentiment analysis tools gauge employee emotions from communication data, enabling proactive engagement strategies (Bersin, 2019).

HR Function	Traditional Approach	AI-Enhanced Approach	Impact
Recruitment	Manual resume screening	AI-based screening and video	Faster, more accurate,
		analysis	reduced bias
Onboarding	HR-led orientation sessions	Chatbots and virtual onboarding	24/7 support, scalable
		assistants	onboarding
Performance	Annual reviews, subjective	Real-time analytics, predictive	Continuous feedback,
Management	evaluation	performance	data-driven insights
Learning &	Uniform training modulog	Personalized learning using AI	Higher engagement,
Development	Uniform training modules	recommendations	skill relevance
Employee	Annual surveys	Continuous sentiment analysis	Immediate action on
Engagement			dissatisfaction

COMPARATIVE ANALYSIS: AI VS TRADITIONAL HR PRACTICES

CHALLENGES OF AI IN HR

Bias in Algorithms: If trained on biased historical data, AI may reinforce discrimination. **Privacy Concerns**: Tracking and sentiment analysis can infringe on employee privacy. **Ethical Dilemmas**: Lack of transparency in AI decisions may cause trust issues.

Skill Gaps: HR professionals need training to leverage AI effectively.

FUTURE IMPLICATIONS

Artificial intelligence will have significant and long-lasting effects on HR operations in the future. It is anticipated that AI technology will become increasingly more significant in workforce planning, talent analytics, and customized employee experiences as it develops further. HR professionals will be able to predict employee turnover, find high-potential people, and create proactive retention plans with the use of predictive analytics. Virtual HR assistants driven by AI might become ubiquitous, providing round-the-clock assistance to staff members and expediting administrative correspondence. Furthermore, HR's approach to credential management, remote training, and data security may be completely redesigned by combining AI with other cutting-edge technologies like blockchain and augmented reality. To protect equity and transparency, the growing dependence on AI will also need strong ethical governance, improved digital competencies for HR professionals, and well-defined legal frameworks. Consequently, the future of human resources will be more strategic, flexible, and focused on people in addition to being more technologically sophisticated.

II. CONCLUSION

Artificial intelligence's impact on HR activities signifies a radical change from manual, conventional procedures to data-driven, intelligent methods that improve accuracy, efficiency, and strategic decision-making. By automating repetitive operations, minimizing human bias, and offering real-time insights, artificial intelligence (AI) has greatly enhanced key HR domains including hiring, onboarding, performance assessment, learning and development, and employee engagement. While AI offers many advantages, such as reduced costs, quicker recruiting, and more individualized employee experiences, it also poses ethical, data privacy, transparency, and algorithmic bias risks. Organizations must upskill HR staff, embrace ethical AI practices, and strike a balance between technology innovation and human empathy if they want to fully realize AI's promise. In the end, artificial intelligence (AI) should be seen as a potent instrument that enhances human resource management rather than taking its place.

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