International Journal of Advance and Innovative Research
Volume 13, Issue 1 (II): January - March 2026
ISSN 2394 - 7780

ADOPTION OF ARTIFICIAL INTELLIGENCE IN HRM: A CASE-BASED ANALYSIS OF VALUE CREATION AND RISK

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ABSTRACT:
Artificial Intelligence (AI) is being applied in Human Resource Management (HRM) in organizations because there are more people expected to be hired, the complexity of workforce management, and unstable employee demands. The research provides multinational case studies of Unilever, IBM, Schneider Electric, Amazon, and Salesforce as explanations of the application of AI in Human Resource (HR) functions. The objectives of the research are aimed at locating the way AI optimizes recruitment, forecasts employee turnover, optimizes the use of performances appraisal system and presents ethical risks. The study is also aimed at determining the best practices that will reduce bias and discrimination based on the use of AI in HR. The results indicate that AI lowers the time and cost of recruitment, enhances diversity and accuracy in the prediction of turnover, and constant development of employees based on the case studies of Unilever, IBM, Schneider Electric, and Salesforce. Nevertheless, it can be seen through the case study of Amazon that biased data is hazardous. The paper suggests "Responsible-by-Design" AI frameworks, human-in-the-loop governance, and explainable AI systems to ensure sustainable and ethical HR transformations.

Keywords: *Ethical AI, Human Resource Management, Recruitment Analytics, Predictive HR Analytics, Algorithmic Bias*

1. INTRODUCTION

he high-volume recruitment process, complexity of workforce management, and the dynamic expectations of employees are making organisations adopt Artificial Intelligence (AI) in Human Resource Management (HRM). AI is currently being employed by many organisations to screen resumes, evaluate candidates, determine turnover, and internal talent mobility. Other companies have managed to exploit AI to improve efficiency and diversity. Nevertheless, certain companies are confronted with ethical losses because of the absence of control and prejudiced training statistics. Therefore, it is necessary to examine the value creation as well as the ethical consequences of AI in Human Resources (HR) because of these conflicting experiences. This paper provides a critical examination of adoption of AI in HR based on real-life cases of a corporation in terms of operational result, ethical risk, and governance processes of implementing AI in a responsible way.

2. LITERATURE REVIEW

According to Resource-Based View (RBV) there are rare, valuable, and inimitable resources which provide firms with a competitive advantage (Barney, 1991). HR analytics is a strategic tool because it improves the quality of human capital, which is powered by AI. The investment in skills and development of employees is mentioned in the Human Capital Theory (Becker, 1964). AI-based learning and an internal marketplace enable employee development to meet organisational needs. The predictive HR Analytics identify turnover risk. This assists in the proactive retention strategies (Bassi & McMurrer, 2016). The outcome of the historical biases of AI training data is discriminatory (Barocas and Selbst, 2016). Explainable AI enhances trust, accountability, and transparency of AI-related decision systems (Gunning et al., 2019). Recent research states that AI-based HR systems decrease subjectiveness in hiring, appraising and promotions (Kaur and Arora, 2020). Mangers can however excessively use algorithmic recommendations and this can cause automation bias (Skitka, Mosier, & Burdick, 1999). Nonetheless, the current literature has emphasized the human control, responsibility, and constant monitoring in ensuring responsible HRM implementation in HRM (Stahl et al., 2022).

3. RESEARCH GAP

With regards to the literature review, it was established that there was a paucity of evidence in the form of cases allied to the adoption of AI across various HR functions and this has been overcome with the use of this study. Moreover, the current research highlights the benefits in terms of efficiency and underestimated ethical dangers, which are considered with the help of this study.

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4. SCOPE AND SIGNIFICANCE OF THE STUDY

The research implies multinational case studies to determine the use of AI in recruitment, engagement of employees and talent development. The value of the research lies in the facts that it offers practical implications to HR managers, policymakers, and technology developers in reference to AI application in HR. It helps the organisations to match AI with diversity and fairness.

5. RESEARCH OBJECTIVES

i. To find out how AI tools streamline recruitment and improve the quality of hire using the case study of Unilever.

ii. To find out how predictive analytics can enhance employee engagement and predict turnover using the case study of IBM.

iii. To find the influence of AI on performance appraisal systems and personalised employee development using a case study of Schneider Electric.

iv. To find the ethical risks and challenges of AI adoption in Human Resource Management using the case study of Amazon.

v. To find out how good practices and ethical frameworks minimise AI risk in HR using the case study of Salesforce.

vi. To suggest best practices for AI in HR that minimise ethical risk and bias.

6. RESEARCH METHODOLOGY

The research design used in this study is qualitative and descriptive. The researcher has taken secondary information from secondary corporate case studies. The researchers have mapped the case studies of Unilever, IBM, Schneider Electric, Amazon, and Salesforce with the research objectives. Organisational AI-enabled HR practices was the unit of analysis.

7. DISCUSSION OF RESEARCH OBJECTIVES

Research Objective 1: To find out how AI tools streamline recruitment and improve the quality of hire using the case study of Unilever.

The consumer goods giant, Unilever, receives over 1.8 million applications annually. The company implemented an AI-driven "digital funnel" to manage these high-volume applications.

The Process: Step 1: To assess cognitive and emotional traits, the candidates play neuroscience-based games via Pymetrics.

Step 2: To evaluate speech patterns and facial expressions, a video interview via HireVue is conducted, which is analysed using Artificial Intelligence.

Outcome: The recruitment time was reduced by 75% (from 4 months to 2 weeks). The company saved approximately £1 million in annual costs. Furthermore, the quality of hire improved, which was reflected by a 16% increase in workforce diversity. Lastly, there were also higher candidate completion rates due to the implementation of AI-driven assessments.

Research Objective 2: To find out how predictive analytics can enhance employee engagement and predict turnover using the case study of IBM.

For addressing the high costs related to employee attrition, IBM developed a "Proactive Retention" AI tool.

The Process: The AI tool analyses internal data points such as pay parity, time since last promotion, and even sentiment in communication for calculating the "flight risk" score of its employees.

Outcome: The AI tool predicts which employees are likely to leave within the next six months with an accuracy of 95%. Due to such early risk identification, managers at IBM can intervene with personalised retention plans. This AI tool has saved IBM approximately $300 million in turnover and replacement costs.

Research Objective 3: To find the influence of AI on performance appraisal systems and personalised employee development using a case study of Schneider Electric.

Schneider Electric launched the AI-powered internal marketplace called the Open Talent Market (OTM) for breaking the organisational silos.

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The Process: The OTM reviews profiles of employees and performance data to suggest new internal roles, gig work, and mentorship roles that align with the career goals of employees and the needs of the company.

Outcome: The OTM has improved employee engagement. Further, the OTM by matching employee skills (in spare capacity) with internal project demand has unlocked over 200,000 hours of productivity. These hours otherwise would have been lost to administrative delays or external hiring processes. Over 50% of the company's employees who previously mentioned "lack of growth" now find internal opportunities through OTM. Thus, OTM has transformed performance management into a continuous development cycle.

Research Objective 4: To find the ethical risks and challenges of AI adoption in Human Resource Management using the case study of Amazon.

Amazon developed an experimental AI recruiting tool in the year 2014. This AI tool was designed to score job candidates from one to five stars.

The Risk: The AI system was trained using a decade of resumes that were submitted to Amazon. The AI system learned that male candidates were preferred because the majority of technical roles were historically held by men.

Outcome: The AI system started penalising resumes that included the word "women" (example: women's chess club). Further, it downgraded the graduates of two all-women's colleges. This project was ultimately scrapped in the year 2018 by Amazon. Hence, this case study serves as a global cautionary tale on how "dirty data" can result in automated discrimination. Furthermore, it necessitates keeping a human in the loop for oversight.

Research Objective 5: To find out how good practices and ethical frameworks minimise AI risk in HR using the case study of Salesforce

Salesforce established an Office of Ethical and Humane Use for overseeing all AI developments in their HR and recruitment platforms.

The Process: The firm adopted the practice of "Consequence Scanning", in which cross-functional teams conduct workshops to envision potential unintended harms of new AI features before release. Their recruitment AI specifically checks for potential gender and racial biases from their internal data.

Outcome: Salesforce, by embedding ethics into the development phase, has avoided high-profile bias scandals. Their "Ethics by Design" model has demonstrated that commitment to transparency and proactive risk spotting leads to trustworthy, reliable, and effective AI tools.

Research Objective 6: To suggest best practices for AI in HR that minimise ethical risk and bias.

The Firms should adopt a "Responsibility by Design" practice for ensuring that AI serves as a fair and transparent partner in HR functions. The following best practices can be adopted by companies in their HR functions:

1) **Inclusive Data Curation:** The training datasets should be diverse and represent the global workforce. Historical data that reflect past societal prejudices should be removed so that the algorithms behave objectively.
2) **Algorithmic Auditing and Fairness Monitoring:** There should be continuous bias audits. Organisations could use tools such as IBM's "AI Fairness 360" or Google's "What-If Tool" for detecting and mitigating unintended discrimination. These AI tools help Human Resource professionals to visualise the change in AI's recommendation by changing single variables such as the age of the applicant or the zip code. Thus, hidden biases in the algorithm are exposed.
3) **Explainable AI (XAI) and Transparency:** The decisions given by AI should not be black boxes. AI tools in HR should be able to provide clear reasons for their outputs. For instance, why was an employee flagged for a specific training module or was ranked highly?
4) **Human-in-the-Loop (HITL):** Hiring, firing, or promotion decisions should never be fully autonomous. Human professionals should retain the authority for reviewing and overriding decisions of an AI system based on context and empathy.

8. RECOMMENDATIONS AND SUGGESTIONS

The adoption of AI-based systems by organizations should be done in a responsible and ethical manner. To reduce the differences in results and establish fairness in AI-based decision-making, companies must pay more

ISSN 2394 - 7780

attention to the creation and utilization of inclusive and bias-free training datasets. Algorithms have to be continuously audited since it is the only way to facilitate the detection and mitigation of the unintended biases or performance issues in the long term. Explainable Artificial Intelligence may also provide more clarity to the stakeholders in how an AI system arrives at some decisions. Moreover, a human-in-the-loop framework can be implemented to ensure that the essential decisions are checked and confirmed by human specialists not to rely on the results of automated processes blindly.

The organisations are to establish an AI ethics oversight committee which will keep track of compliance, accountability and adherence to ethical standards in any use of AI. The paper highlights how AI can be effectively utilized in the HR sector to achieve improved quality of hiring, talent matching and workforce planning, as opposed to being fully automated. HR systems that are developed using AI need to provide data-informed managerial decisions but leave the final decision-making to human judgment. Powerful ethical checks should be incorporated into HR analytics to monitor the bias in AI-based recommendations and reduce it on an ongoing basis. Better said, the results of AI that emerge need regular check-ups to make sure that the HR practices are transparent, non-discriminatory, and uniform. All these can help the organisations to take advantage of the benefits of AI in HR and still maintain trust, accountability, and ethical integrity.

9. SUMMARY AND CONCLUSION

According to the study, AI can make HR much more efficient and boost the quality of talent and employee engagement when managed responsibly. The case studies applied in this research demonstrate a decrease in the number of days and money spent on recruitment, enhanced diversity, correct turnover forecasting, and ongoing developing of employees as a result of AI implementation in HR. Nevertheless, the situation with Amazon presented in the case study reveals that biased information can be risky. The paper concludes that ethical governance ought to be factored in during the design phase and AI ought to enhance as opposed to overriding human judgment.

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