



# Human VS. Machine: The Balance of AI and Human Judgment in HR Decisions

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**Abstract** – The rapid integration of Artificial Intelligence (AI) into Human Resource (HR) decision-making has truly transformed how we approach recruitment, performance reviews, and employee engagement. With AI-driven tools, organizations can boost their efficiency by automating tasks, minimizing biases, and making more informed decisions based on data. However, there are still valid concerns about the ethical implications of AI, its lack of emotional intelligence, and the potential for reinforcing biases in hiring and promotion processes. This paper delves into the complex relationship between AI and human judgment in HR, examining how AI can enhance decision-making while ensuring that human oversight maintains fairness, ethical standards, and contextual understanding. By using a mixed-method approach, the study gathers insights from HR professionals on the integration of AI, focusing on key issues like transparency, accountability, and trust in AI-assisted decisions. The findings reveal that while AI significantly boosts efficiency and accuracy in HR tasks, human judgment remains essential for subjective assessments, such as cultural fit, employee well-being, and resolving conflicts. The research proposes a hybrid model that combines AI's analytical strengths with human insight as the best approach for HR decision-making. This study contributes to the ongoing conversation about AI's role in HR, offering recommendations for organizations to implement AI responsibly while maintaining ethical practices. It emphasizes the importance of establishing AI governance frameworks, highlighting that AI should complement, not replace, human HR professionals.

**Keywords** – Artificial Intelligence, Human Judgment, HR Decision-Making, AI Ethics, Employee Engagement, Algorithmic Bias, HR Analytics, Workforce Management, AI Governance.

## I. INTRODUCTION

The application of Artificial Intelligence (AI) in Human Resource (HR) management has revolutionized how companies recruit, select, and manage their employees. AI systems are increasingly used to automate repetitive tasks, sift through resumes, and even perform initial screening (Upadhyay & Khandelwal, 2018). Yet, although AI has advantages such as speed and accuracy, concerns regarding its absence of human understanding, empathy, and contextual knowledge in HR decisions exist (van Esch et al., 2019). Getting the proper balance between machine-driven decisions and human judgment is essential to maintain fairness, transparency, and ethical outcomes in HR practices.

The rapid development of Artificial Intelligence (AI) has revolutionized numerous domains, with Human Resources (HR) being among the most affected functions. From resume screening to leveraging data to forecast employee retention, AI can enhance decision-making timeliness, accuracy, and justice (Sharma, 2021). But HR decisions also entail intricate human emotions, moral considerations, and societal relationships that even the best AI technology may not be able to totally comprehend (Lassnigg, 2020). This raises significant questions regarding balancing human input and AI-driven approaches. While machines can process vast amounts of data with speed and accuracy, human judgment provides empathy, ethical considerations, and situational awareness (Köchling & Wehner, 2020). Balancing these two is crucial for making ethical, effective, and equitable HR decisions.

The convergence of human decision-making and artificial intelligence (AI) in HR decision-making is shaping the future of work ever more. Businesses are more and more leveraging AI-driven systems to enhance recruitment, enhance talent management, and inform employee engagement strategies (Sharma, 2021). The appeal of AI is that it can scan vast data sets, identify patterns, and provide unbiased recommendations quicker than humans can. These skills are also important in today's competitive work environment where swift, data-informed decisions have to be made (Tambe et al., 2019). Yet, whereas AI brings speed and accuracy, it doesn't have emotional intelligence, cultural sensitivity, or ethical thinking such as human decision-makers do (Lassnigg, 2020).

Applying AI to HR choices presents new difficulties. AI systems, as potentially fair as they are, are only as fair as their learned data (Bogen & Rieke, 2018). This means that without close observation, AI tools can inadvertently reinforce current biases and disparities. Furthermore, HR decisions tend to have nuances, like considering a candidate's compatibility within the firm culture or knowing workplace dynamics, which AI algorithms might struggle to interpret (Köchling & Wehner, 2020). This reinforces the necessity for human intervention in bringing context, empathy, and moral understanding unattainable for algorithms.

In addition, the transition towards AI-facilitated HR operations inspires concerns regarding visibility and accountability. Employees and applicant workers might protest against being screened by opaque algorithms,



which will give rise to issues of mistrust and subjectivity (van Esch et al., 2019). This stresses the need for maintaining a balance where AI becomes a support instead of a substitute for human decision-making. The concept of "human-in-the-loop" decision-making—where AI supports but does not dominate—is being weighed as a likely solution (Jarrahi, 2018).

With AI continuing to evolve and becoming part of HR responsibilities, the requirement to understand its correct role is becoming increasingly imperative. A means of achieving a balance between the equity of machines and human compassion and moral judgment is key to developing HR practices that are successful and humane and fair. The purpose of this study is to examine that balance and contribute to the contemporary debate regarding whether and how firms should responsibly combine AI with human judgment in significant HR decisions.

In addition to making things better run, businesses are increasingly employing AI to forecast turnover among employees, assess performance, and design training and development programs (Sharma, 2021). Despite these developments, experts argue that over-reliance on algorithms can undermine the human aspect of HR management, such as recognizing individual motivations, career aspirations, and social interactions that data may not be able to capture (Leicht-Deobald et al., 2019). In addition, the ethical issues surrounding AI decision-making—such as uncertainty, potential bias, and responsibility issues—must be addressed carefully that involves human oversight (Köchling & Wehner, 2020). While HR is transforming into a more tech-focused function, the objective is to utilize AI not as a substitute but as an invaluable partner for enhancing human decision-making. This research aims to delve into that delicate balance and provide solutions on how to integrate AI in HR procedures without sacrificing human judgment, empathy, and ethical considerations.

## II. REVIEW OF LITERATURE

A study by Upadhyay and Khandelwal (2018) revealed that the application of AI in HR can enhance efficiency and reduce human opinion-driven biases. Likewise, Chamorro-Premuzic et al. (2019) reported that AI can render talent evaluations more precise. Yet, van Esch et al. (2019) caution that algorithmic biases can reflect and even exacerbate human biases if not carefully managed. In addition, Jarrahi (2018) emphasizes the need for a human-in-the-loop approach, where AI assists but does not substitute human ability. Recent research has also expressed concerns regarding relying too heavily on algorithms, which can result in ethical dilemmas and a lack of personal touch in HR messages (Tambe et al., 2019).

The literature reveals both the potential alterations and the challenges of AI in HR decision-making. According to

Sharma (2021), AI tools greatly speed up and improve recruitment accuracy by automating repetitive jobs and allowing for predictive hiring. Bogen and Rieke (2018) highlight that AI can lower unconscious bias in hiring by using consistent criteria. Still, research by Köchling and Wehner (2020) cautions that AI systems could continue algorithmic bias if trained on unfair data, posing risks of discrimination.

Lassnigg (2020) identifies the distinct significance of human intuition in HR decisions, particularly where human insight and experience are important, such as in the resolution of conflicts, motivating employees, and assessing leadership. There is also research by Leicht-Deobald et al. (2019), which indicates that firms employing AI for HR decision-making should have ethical evaluation systems to avoid abuse or excessive reliance on algorithms. The concept of "human-in-the-loop" (Jarrahi, 2018) is frequently proposed in which AI systems assist but do not replace human judgment, with the possibility of joint decision-making.

Additionally, Tambe et al. (2019) observe organizational challenges in finding equilibrium between human and AI roles, including distrust of algorithms and employees concerned about job loss. There also comes an increased debate on how explainable AI models are, with HR practitioners requiring more explanation on how the algorithms come to decisions (van Esch et al., 2019).

## III. RESEARCH GAP

Whereas existing research has extensively examined the advantages and risks of AI in HR, not much is known about how organizations can successfully integrate AI-driven decision-making with human judgment. Most literature is either on the technological capabilities of AI or the ethical concerns in isolation. There is a gap in research that investigates frameworks or models to enable HR practitioners to utilize AI tools without sacrificing human judgment and insight in key decisions.

While recent literature does mention both the possibilities and dangers of AI in HR, there are not enough thorough studies that investigate how organizations can actually strike a balance between AI and human judgment beyond the confines of theoretical discourse. Few papers provide pragmatic frameworks that HR divisions can utilize to guarantee ethical and efficient decision-making without sacrificing human insight and background. Moreover, there is not much evidence on how HR practitioners perceive and are prepared to collaborate with AI in practice.

### Objectives

The primary objectives of the current research are:

- To investigate the contribution of AI to the HR decision-making process.



- To assess the advantages and limitations of AI-supported decisions in HR.
- To explore how human judgment can collaborate with AI in order to augment the quality of decisions.
- To propose a framework for achieving a balance between AI and human involvement in HR decisions.

#### IV. RESEARCH METHODOLOGY

##### Research Design

The research employs a descriptive and exploratory research design, seeking to know the extent to which AI is applied in HR decision-making and how HR practitioners perceive the balance between machine intelligence and human judgment. The descriptive component assists in measuring existing practices, while the exploratory component attempts to discover attitudes, challenges, and opportunities in the use of AI in HR activities.

##### Population and Sample

The target population for this study includes HR managers, talent acquisition professionals, HR consultants, and organizational leaders from different industries. A sample of 100 respondents was chosen using purposive sampling, focusing on individuals who have direct experience with AI-based HR tools or digital decision-making systems.

##### Data Collection Method

The research collected primary data via a pre-coded online survey with both closed and Likert scale questions. The survey contained sections:

- Demographics (occupation, industry, years of experience)
- AI use in HR functions to what extent
- Advantages of AI for HR decision-making
- Challenges and concerns for the use of AI
- Most favored areas of maintaining human judgment over automation

Besides, secondary data were collected using peer-reviewed journals, articles, and reports to inform the literature review and contextualize.

##### Research Instrument

A formal questionnaire was developed and validated by HR experts. It comprised:

- Demographic items to classify respondents
- Multiple-choice items on the use of AI
- Likert scale items to quantify perceptions (Strongly Agree to Strongly Disagree)
- Open-ended questions for qualitative observations on the future equilibrium between human and machine decision-making in HR
- Data Analysis Techniques

The data collected were analyzed quantitatively and qualitatively:

- Descriptive statistics (means, percentages) were employed to demonstrate the frequency of AI use and perception trends.
- Cross-tabulation was employed to identify relationships between demographic variables and AI uptake.
- Qualitative themes on concerns, expectations, and future perspectives were captured through content analysis of open-ended responses.
- Data was displayed in tables and charts for clarity.

##### Scope of the Study

This study aims to learn about the current application of AI in HR decisions, perceptions regarding its effectiveness, and the difficulty of balancing human and machine judgment. The study identifies organizational-level HR activities such as recruitment, performance appraisal, training, and employee engagement across industries.

##### Limitations of the Study

- The sample size is restricted to 100 respondents, which may not be representative of all industries.
- Responses are self-reporting and are subject to personal bias.
- The speed of AI change might change over time, and results capture the existing level of adoption.

##### Ethical Considerations

- Survey participation was voluntary, and informed consent was ensured for all participants.
- Anonymity and confidentiality were maintained at all stages of the research.
- Data were used for scholarly and research purposes only.

#### V. DATA ANALYSIS & INTERPRETATION

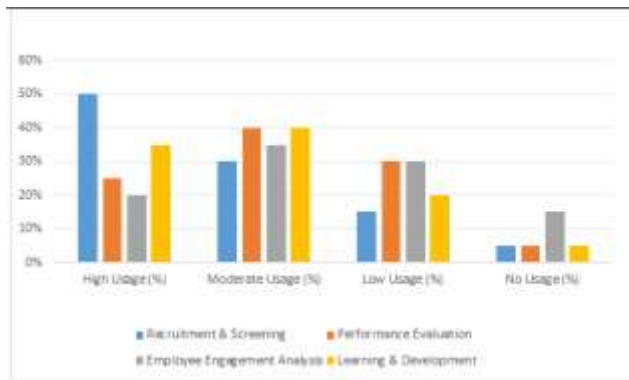
##### Demographic Profile of Respondents

| Demographic Variable | Category                      | Percentage (%) |
|----------------------|-------------------------------|----------------|
| Designation          | HR Manager                    | 35%            |
|                      | Talent Acquisition Specialist | 30%            |
|                      | HR Consultant                 | 20%            |
| Industry             | Senior Management             | 15%            |
|                      | IT & Tech                     | 40%            |
|                      | Manufacturing                 | 25%            |
| Work Experience      | Banking & Finance             | 20%            |
|                      | Healthcare                    | 15%            |
|                      | Above 10 Years                | 30%            |
|                      | 1-5 Years                     | 25%            |
|                      | 6-10 Years                    | 45%            |



Table 1: AI Usage Across HR Functions

| HR Function                  | High Usage (%) | Moderate Usage (%) | Low Usage (%) | No Usage (%) |
|------------------------------|----------------|--------------------|---------------|--------------|
| Recruitment & Screening      | 50%            | 30%                | 15%           | 5%           |
| Performance Evaluation       | 25%            | 40%                | 30%           | 5%           |
| Employee Engagement Analysis | 20%            | 35%                | 30%           | 15%          |
| Learning & Development       | 35%            | 40%                | 20%           | 5%           |

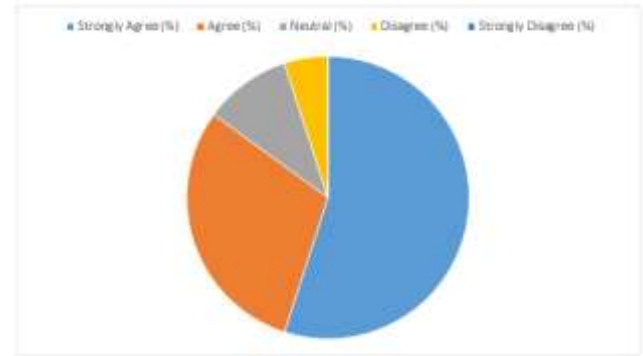


**Interpretation**

Screening and recruitment had the most utilization of AI integration at 50%, followed by learning and development at 35%. Employee engagement analysis had the least usage, with 15% stating no usage.

Table 2: Perceived Benefits of AI in HR Decision-Making

| Benefit                        | Strongly Agree (%) | Agree (%) | Neutral (%) | Disagree (%) | Strongly Disagree (%) |
|--------------------------------|--------------------|-----------|-------------|--------------|-----------------------|
| Faster and efficient decisions | 55%                | 30%       | 10%         | 5%           | 0%                    |
| Objective data-based outcomes  | 50%                | 35%       | 10%         | 5%           | 0%                    |
| Reduced human bias             | 30%                | 40%       | 20%         | 5%           | 5%                    |
| Better candidate-job matching  | 40%                | 35%       | 20%         | 5%           | 0%                    |
| Improved cost-efficiency       | 45%                | 30%       | 20%         | 5%           | 0%                    |

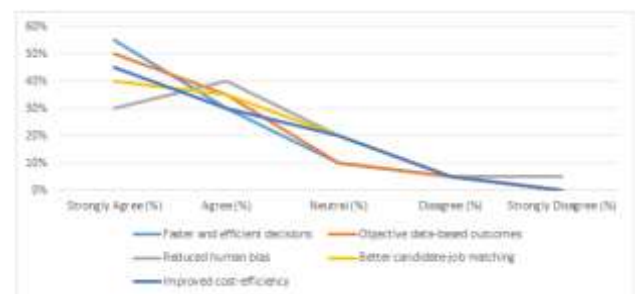


**Interpretation**

Most respondents (85%) concurred that AI speeds up decision-making and makes it more objective. But only 70% were confident that AI minimizes bias, showing that fairness concerns still linger.

Table 3: Concerns Related to AI in HR Decisions

| Concern                        | Strongly Agree (%) | Agree (%) | Neutral (%) | Disagree (%) | Strongly Disagree (%) |
|--------------------------------|--------------------|-----------|-------------|--------------|-----------------------|
| Faster and efficient decisions | 55%                | 30%       | 10%         | 5%           | 0%                    |
| Objective data-based outcomes  | 50%                | 35%       | 10%         | 5%           | 0%                    |
| Reduced human bias             | 30%                | 40%       | 20%         | 5%           | 5%                    |
| Better candidate-job matching  | 40%                | 35%       | 20%         | 5%           | 0%                    |
| Improved cost-efficiency       | 45%                | 30%       | 20%         | 5%           | 0%                    |



**Interpretation**

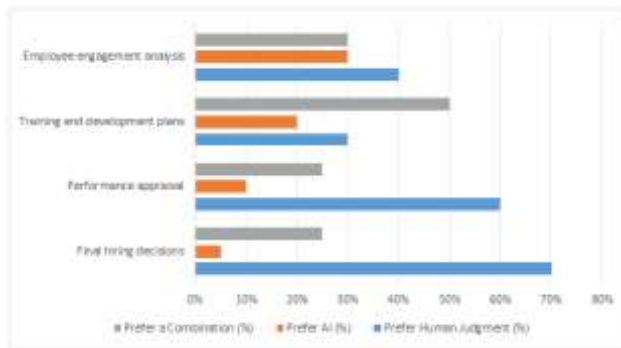
The majority of the respondents (85%) concurred that AI hastens decision-making and makes it more objective. Yet, 70% were certain that AI minimizes bias, which shows that there is still skepticism about fairness.





Table 4: Preference for Human Judgment vs. AI in HR Decisions

| HR Decision Area               | Prefer Human Judgment (%) | Prefer AI (%) | Prefer a Combination (%) |
|--------------------------------|---------------------------|---------------|--------------------------|
| Final hiring decisions         | 70%                       | 5%            | 25%                      |
| Performance appraisal          | 60%                       | 10%           | 25%                      |
| Training and development plans | 30%                       | 20%           | 50%                      |
| Employee engagement analysis   | 40%                       | 30%           | 30%                      |



**Interpretation**

Respondents expressed a high preference for human judgment in key decisions such as hiring (70%) and performance appraisals (65%). For training and development, 50% opted for a combination of AI and human judgment.

**VI. FINDINGS**

The research indicates that the application of AI in making HR decisions is most prevalent in screening and recruitment, as it can handle vast volumes of data and shortlist candidates quickly. Nevertheless, functions such as employee engagement analysis have fewer instances of AI application, indicating room for improvement. HR practitioners all agree on the benefits of AI concerning efficiency, speed, and impartiality, particularly when it comes to data-driven activities. However, there are serious concerns regarding AI's insensitivity, the danger of biased programs, and problems with transparency in decision-making. The findings also show that although AI is being accepted as a tool for analysis and recommendations, human judgment is still essential, especially in ultimate hiring decisions and performance appraisals. The majority of the respondents favored a collaborative approach, combining AI's analytical power with human wisdom and moral considerations. This indicates a definite inclination toward a model where AI assists but does not replace human decision-making in HR activities.

**VII. CONCLUSION**

The research clearly indicates that although artificial intelligence has made significant strides in HR procedures, its role is predominantly perceived as complementary rather than as a substitute for human judgment. HR professionals appreciate the speed, efficiency, and objectivity provided by AI, particularly in areas such as hiring, data analysis, and training recommendations. Nevertheless, important decisions requiring empathy, ethical reasoning, and contextual understanding — such as final hiring and performance appraisals — are still firmly believed to be optimally made by human professionals.

The study further identifies issues on the risks posed by algorithmic bias, secrecy in AI-powered decisions, and concern over depending too heavily on technology. The issues are both technical and ethical, calling for responsible design and application of AI in HR operations. It asserts the need for guaranteeing AI systems are designed to augment and not substitute for human judgment and equity.

Furthermore, the research indicates that the future of HR decision-making will succeed under a blended model in which AI handles data analysis, repetitive tasks, and decision support, while judgment, empathy-driven decisions, and cultural fit remain in the hands of human experts. HR professionals must be educated to critically evaluate AI output, and transparency and accountability of AI applications must be ensured.

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