**OPEN ACCESS**

Volume: 12

Special Issue: 1

Month: February

Year: 2025

P-ISSN: 2321-788X

E-ISSN: 2582-0397

Received: 23.12.2024

Accepted: 14.01.2025

Published: 28.2.2025

Citation:
P. Manikandan, and Krupasree. "The Role of AI In Performance Management : Automation Vs. Human Judgment." *Shanlax Inernational Journal of Arts, Science and Humanities,* vol. 12, no. S1, 2025, pp. 364-69.

DOI:
https://doi.org/10.34293/sijash.v12iS1-Feb.9614.

# The Role of AI In Performance Management : Automation Vs. Human Judgment

**P. Manikandan & Krupasree**
*I MBA, Schol of Management*
*Dwaraka Doss Govardhan Doss Vaishnav College, Chennai, Tamilnadu*

**Abstract**

*The integration of Artificial Intelligence (AI) into performance management systems has revolutionized how organizations assess and enhance employee productivity. AI-driven tools, such as data analytics, machine learning, and predictive modeling, have the potential to automate routine tasks such as performance tracking, feedback generation, and even decision-making. This automation allows for real-time insights, standardized evaluations, and improved accuracy in performance assessments, potentially reducing human bias and increasing efficiency. However, the reliance on AI for performance management raises significant questions about the role of human judgment in evaluating employees. This paper explores the balance between automation and human judgment in performance management. It investigates the strengths and limitations of AI in making objective and data-driven assessments, as well as the irreplaceable qualities of human judgment, such as empathy, contextual understanding, and ethical considerations. While AI systems can efficiently process large amounts of data and identify patterns that might be overlooked by human evaluators, they often lack the nuanced understanding required to account for individual circumstances and subjective factors that influence employee performance. The paper also examines the potential risks of over-relying on AI in performance management, including issues related to transparency, accountability, and fairness. In particular, the possibility of algorithmic biases influencing employee evaluations is a concern. Ultimately, this research highlights the need for a hybrid approach where AI and human judgment complement each other to optimize performance management processes.*

**Keywords: The Role of AI in Performance Management : Automation vs Human Judgment**

## Introduction

As businesses undergo transformation, many are now utilizing Artificial Intelligence (AI) to optimize processes, improve outcomes, and elevate employee productivity. Particularly with regard to performance management, which is one of the most important organizational processes that shapes how businesses identify, develop, and retain talent, AI is making a discernable difference. Historically, performance management has been people driven—dependent on the evaluation, feedback, and decisions made by supervisors and managers—in regard to staff worth appraisal, aiding, compensating, and career progression on a myriad of predetermined yardsticks. The possibility of AI automating and enhancing such

processes is a relatively recent development. With the continual advancement of AI tools, there is a promise of transformative shifts in the way organizations evaluate and manage performance, which poses fundamental issues about the degree of automation versus human contribution in this sensitive and essential area.

The scope of AI applications in performance management spans from automated, real-time feedback systems to the application of sophisticated algorithms that predict employee performance outcomes and trend identifiers. The most important advantage of AI in this regard is the speed as well as precision with which information can be processed. By assessing the performance metrics, their social interactions, work outputs, and even the sentiment expressed in communications,

**Review of Literature**

In their research, Huang and Rust (2021) focus on how AI provides the crucial function of automating feedback and performance monitoring. They note that AI's capability of processing enormous amounts of employee data enables real-time evaluation of performance by organizations. AI technologies like machine learning algorithms are capable of analyzing vast amounts of data associated with job performance, detecting trends, and even predicting future outcomes. This enhances the ability of an organization to proactively manage its workforce and minimizes the dangers of human evaluations arousing errors due to misinterpretation of performance trends.

Angrave et al. (2016) also look at the ways in which AI systems are capable of automating data-driven analytics for the performance management, AI focused on productivity, attendance, and other relevant metrics makes evaluations free from the subjective biases impossible to eliminate from human appraisal. The authors defend their statements by focusing on an objectivity provided by AI as an advantage over human evaluation which is marred with emotion. AI has the ability to learn from historical data and further refine its algorithms, thus enabling unending improvement in the methods and approaches used in corporate performance evaluation.

AI's data processing and analytical capabilities are viewed as a boon, especially in large and complex datasets like in performance management systems. Brynjolfsson and McAfee (2014) claim that automation via AI can streamline repetitive clerical functions in performance management, including employee feedback collection and performance review processing, enabling human managers to dedicate more time to strategic aspects related to employee nurturing and career progression.

While AI can work on extensive datasets, Grote (2018) points out that no AI system can replicate a human's ability to qualitatively assess creativity, teamwork, emotional intelligence, and cultural alignment which is integral to add value to employees performance. He argues that although AI can analyze performance based on quantifiable metrics, it cannot appreciate human behavior and the intricate dynamics of performance.

Moreover, Binns (2018) discusses the ethical and fairness implications of AI in relation to operations concerning employee oversight. Should the bias of sexism, ageism, racism, or any other form exist within the historical data used to train an AI model, there is a very strong chance that this bias will influence the performance evaluations made by such AI systems. Dastin (2018) expands on this concern, explaining how unregulated AI models can reinforce discrimination by employing a 'set it and forget it' approach. For example, using predictive algorithms based on majority-defined metrics to assess an employee's worth and performance is discriminatory, as it places undue bias against marginalized groups. It remains a cause for concern that such biases, particularly those arising from algorithmic opacity, can erode trust in accountability for AI-driven decisions.

Addressing issues in evaluation frameworks and Binns and Taylor (2020) highlighted an equally important aspect, citing the socio-technical challenge of AI algorithms having no clear justification

for biases in decision-making as the reason for lack of AI explainability. Particularly within organizations, the "black-box" phenomenon characterizing AI algorithms hinders employees and managerial personnel from accessing important information pertaining to how evaluations are structured. When employees feel like their evaluations are not based on concrete evidence, it can lead to a loss of trust, undermining the very processes meant to uphold fairness. Not only does this create the potential for damaging employee relations, but it also erodes the effectiveness of performance management systems

Many academics support a hybrid strategy that combines AI and human judgment because of the drawbacks of completely automating performance management. This strategy makes use of both AI's and human managers' advantages. According to Jain et al. (2020), AI can manage repetitive, data-intensive tasks like data collection, performance monitoring, and initial evaluations, while human managers offer the crucial background knowledge, compassion, and moral issues needed for just decision-making. Jain and colleagues claim that a hybrid system enables businesses to take full advantage of AI's advantages, like its capacity to spot patterns and trends in sizable datasets, while still enabling human managers to make more thoughtful, compassionate choices.

Similarly, Müller et al. (2019) suggest that rather than being considered decision-makers, AI systems should be considered decision-support tools. According to their research, when workers believe that human managers are still involved in the decision-making process, they are more likely to accept AI-driven evaluations. Organizations can achieve a balance that promotes fairness and trust in the evaluation process by fusing AI's data-driven insights with human managers' interpretive and moral judgment. This model is especially useful for addressing the qualitative elements of performance that AI might overlook, like interpersonal skills, cultural contribution, and employee motivation.

This hybrid strategy is also supported by Binns and Taylor (2020), who stress that AI can enhance human decision-making without taking its place. According to their research, companies are more likely to develop an equitable and open performance management system when they integrate AI with human oversight. Organizations can handle possible problems like bias, a lack of transparency, and ethical issues by continuing to involve people.

According to Müller et al. (2019), the degree of transparency of the algorithms and the degree to which employees believe the system is fair are key factors in determining their trust in AI-driven evaluations. If workers are aware of how AI operates and have faith that their performance is being fairly and impartially assessed, they are more likely to feel at ease with it.

This implies that in addition to ongoing human oversight, the integration of AI in performance management must involve transparent communication about how AI systems function and how decisions are made.

According to Brynjolfsson and McAfee (2014), AI can automate administrative duties like sending out feedback and documenting performance reviews, freeing up human managers' time for more strategic pursuits like career development and coaching. A more efficient performance management procedure and quicker decision-making may result from this automation.

According to Cascio and Montealegre (2016), by examining past performance data, AI systems are able to spot patterns and forecast employee outcomes. Proactive management is made possible by these insights, which let managers step in early and help staff members who might be having difficulties before their performance worsens even more. AI is a powerful tool for talent management because of its predictive capabilities, which can assist organizations in identifying top talent and high performers as well as employees who may perform poorly.

When assessing intangible traits like creativity, teamwork, leadership, and emotional intelligence, human judgment is crucial, claims Grote (2018). Because they involve subjective opinions and

qualitative inputs, these performance-related factors are frequently challenging to measure with AI. Grote contends that although AI is useful for evaluating measurable indicators, it is unable to evaluate the intricacy of human behavior and performance in changing work settings.

Concerns about the moral ramifications of AI in performance management are discussed by Binns (2018). Algorithmic bias has been identified as a significant risk. Since AI systems are usually trained on historical data, they may unintentionally reinforce biases in performance reviews if the data contains biases (such as those related to gender, race, or age). For instance, an AI system may inadvertently give preference to traits that conform to gender norms or work styles.

According to Dastin (2018), AI-powered recruitment systems have biased hiring algorithms that discriminate against women and minority candidates. This case illustrates the wider ramifications of AI algorithms that may inadvertently discriminate against particular groups, resulting in unfair evaluations, even though it is not specifically related to performance management.

The transparency concerns surrounding AI-powered performance reviews are also examined by Binns and Taylor (2020). According to their research, one of the main issues is that AI systems frequently function as "black boxes," which means that the end user cannot see how decisions are made. Employees may become confused and suspicious of this lack of transparency, particularly if they don't know how the AI system came to its conclusions.

Employee trust in the system may be weakened if they are unaware of the factors affecting their performance review and feel unfairly judged or alienated.

AI systems are getting better at handling complicated data inputs that go beyond conventional performance metrics, claim Avasarala et al. (2022). Managers can gain a deeper understanding of employee performance by using AI tools that use sentiment analysis and natural language processing (NLP) to measure employee sentiment, engagement, and emotional well-being from internal communications like emails or chat messages.

In order to establish a more automated and smooth performance management ecosystem, Zhang and Lee (2022) note that businesses are incorporating AI with HRIS and other enterprise systems. This integration guarantees that performance reviews are based on current data rather than just recurring reviews, permits real-time tracking of employee activities, and offers ongoing feedback. According to the literature, AI can improve employee performance by giving regular, real-time feedback and coordinating team and individual metrics with strategic business goals.

Furthermore, Marr (2021) emphasizes how machine learning algorithms are developing to evaluate the intricacy of human behavior in performance evaluations by gaining knowledge from prior data points and getting better over time. For example, AI-powered systems can now predict potential future employee outcomes, such as turnover likelihood or career progression, based on historical trends and patterns.

## Research Methodology

This study, titled "The Role of AI in Performance Management: Automation vs. Human Judgment," follows a mixed-methods research approach, blending both quantitative and qualitative techniques to offer a holistic understanding of the topic.

To gather quantitative insights, structured surveys were shared with HR professionals, team managers, and employees working in organizations that actively use AI tools in performance evaluations. These surveys aimed to assess perceptions of fairness, accuracy, and objectivity, and explored how AI has influenced key metrics like employee satisfaction and bias reduction. Importantly, participants also shared their thoughts on how much human judgment still matters in decision-making.

For qualitative data, in-depth semi-structured interviews were conducted with individuals who engage directly with AI-driven performance tools. This included HR leaders, team heads, and employees. Through these conversations, the study delved deeper into topics that AI can't quite capture empathy, emotional intelligence, ethical considerations, and context.

In analyzing the data, descriptive statistics were used to break down the survey results, while thematic analysis was employed to identify common patterns and themes from the interviews. Together, these methods allowed the study to draw balanced conclusions about the strengths and shortcomings of AI in performance evaluations.

Throughout the research, ethical integrity remained a priority. All participants provided informed consent, and their confidentiality was strictly maintained. Every effort was made to minimize bias and ensure a respectful, transparent process.

By combining structured data with personal narratives, this research aims to shed light on whether AI is best seen as a tool to assist human judgment or as something that might eventually replace it.

## Data Analysis

### Demographic Summary

The majority of survey participants about 80% are at least somewhat familiar with the AI tools used in performance management in their workplace. Interestingly, 40% consider themselves very familiar, indicating a growing presence of AI in day-to-day operations. However, a smaller portion (20%) admitted they had little to no exposure to these tools, suggesting varying levels of adoption across different roles or departments.

When it comes to objectivity, 70% of participants agreed that AI-based evaluations are more impartial than those done purely by humans. About 30% strongly supported this view, while 40% agreed more moderately. Still, a notable 20% expressed concerns, questioning whether AI truly eliminates bias or just introduces new ones.

One key insight stood out: a whopping 80% of respondents believe it's essential for managers to interpret AI-generated feedback before making performance decisions. Not a single respondent felt this interpretation was unimportant. This highlights a widespread belief that while AI can assist, human oversight is crucial to ensure fairness and contextual understanding.

Regarding accuracy, 70% believe AI improves the precision of evaluations either moderately or significantly. They appreciate its ability to handle large volumes of data and minimize human error. That said, 30% of respondents remain cautious, feeling that AI struggles to assess areas like creativity, communication, and emotional intelligence.

A strong 60% of participants feel that human judgment is absolutely necessary, even when AI is part of the evaluation process. Another 30% agreed it's important, but think AI can play a bigger role over time. Only a small minority just 10% believe AI could fully replace human evaluators, indicating a general preference for keeping the human element in performance reviews.

When asked about bias, 60% believe AI helps reduce it to some extent, but 30% worry that AI may inherit or even amplify bias from the data it's trained on. This reinforces the idea that AI is not infallible it must be constantly monitored and fine-tuned to avoid algorithmic bias.

From the qualitative responses, a clear theme emerged: AI is great at handling numbers, but not emotions. Many participants voiced concern that AI can't assess soft skills like empathy, teamwork, leadership, or adaptability areas where human intuition still holds strong value.

When it came to transparency, 60% of respondents said they were somewhat satisfied with how clearly AI evaluations are explained in their organizations. However, 20% were dissatisfied, citing a lack of clarity that could impact employee trust. Interestingly, no one reported being very

dissatisfied, suggesting room for improvement, but no major discontent.

On the topic of continuous feedback, 70% felt that AI could offer real-time insights that help employees improve. Only 10% disagreed, showing broad support for using AI as a tool to track progress and offer actionable advice.

Despite all these benefits, when asked how comfortable they were with AI making performance decisions without human input, most participants weren't fully on board. Only 10% said they were very comfortable. About 50% felt neutral or somewhat uncomfortable, and the rest remained skeptical. This reinforces a common concern: AI lacks the human touch, and that makes full automation a hard sell.

On evaluating intangible qualities, 50% believe AI captures elements like teamwork and creativity only moderately well. Meanwhile, 20% feel it does a poor job. This highlights another blind spot in AI's abilities understanding and evaluating complex human traits.

Looking ahead, 70% of respondents believe AI's role in performance management will continue to grow over the next five years. Only 10% see it decreasing, suggesting strong confidence in AI's future relevance, despite its limitations.

## Conclusion

This research on "The Role of AI in Performance Management: Automation vs. Human Judgment" paints a nuanced picture of where AI fits into modern evaluation systems. The data clearly shows that AI brings a lot to the table: it helps managers process performance data faster, offers consistent assessments, and reduces some forms of bias. It also enables real-time feedback, helping employees improve continuously rather than waiting for annual reviews.

But, and this is key AI isn't a silver bullet.The study reveals that while AI can certainly make performance management more efficient and data-driven, it cannot replace the human element. Participants repeatedly emphasized the value of empathy, emotional intelligence, and context qualities AI still struggles with. A great employee might shine not because of metrics alone, but through team spirit, innovation, or mentorship traits that aren't easily quantifiable.

Another concern voiced by many is transparency. When employees don't understand how they're being evaluated, they lose trust. This calls for clearer communication from organizations about how AI systems work, how data is used, and what decisions are being made based on that data.

The potential for bias in AI also emerged as a serious issue. If AI systems are trained on flawed or biased historical data, they may replicate the very problems they were supposed to eliminate. As such, there's a strong call for ongoing monitoring, audits, and feedback loops to ensure AI systems stay fair and aligned with organizational values.

In terms of continuous feedback, AI shows real promise. Employees appreciate timely suggestions and insights. But they still want and need human managers to interpret and act on that feedback with understanding and care.

AI is a powerful ally, but not a replacement for human judgment. The future of performance management likely lies in collaboration between smart technology and thoughtful leadership where AI handles the data, and people provide the wisdom.