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A STUDY ON ROLE OF AI IN IMPROVING HR PRACTICES IN THE HOSPITALITY SECTOR

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ABSTRACT
Artificial Intelligence (AI) is increasingly transforming Human Resource (HR) practices, especially in the hospitality sector where workforce efficiency and service quality are critical. This study examines the role of AI in improving HR practices such as recruitment, employee engagement, training, and workforce planning in selected hospitality organizations. The research adopts a quantitative and descriptive research design based on primary data collected from 100 respondents using a structured questionnaire. Statistical tools including percentage analysis, correlation, regression, and ANOVA were applied to analyze the data. The findings reveal that a majority of employees are highly satisfied with AI-based HR services and actively engaged with AI-driven HR tools. A significant positive relationship is observed between employee engagement in AI-based HR activities and satisfaction with HR services. The study concludes that AI-enabled HR practices enhance HR effectiveness, improve employee experience, and contribute positively to organizational performance in the hospitality sector.

Keywords: Artificial Intelligence, HR Practices, Employee Satisfaction, Employee Engagement, Hospitality Sector

INTRODUCTION

Artificial Intelligence (AI) is rapidly transforming human resource management, especially in the hospitality sector where service quality and workforce efficiency are critical for organizational success. The hospitality industry faces persistent challenges such as high employee turnover, seasonal workforce demands, and the need for personalized guest experiences. Traditional HR practices often lack the speed, accuracy, and predictive capability required to manage these complexities effectively. AI-powered tools—such as intelligent recruitment systems, predictive analytics, and HR chatbots—enable organizations to streamline hiring, enhance employee engagement, and improve workforce planning. By automating routine HR functions and providing data-driven insights, AI helps hospitality firms make faster and more strategic decisions. Despite its growing importance, the adoption of AI in HR practices within the hospitality sector remains uneven. Therefore, this study examines the role of AI in improving HR practices and supporting overall organizational effectiveness in the hospitality industry.

STATEMENT OF THE PROBLEM

The hospitality sector operates in a highly dynamic and service-driven environment where employee performance directly influences customer satisfaction and organizational success. However, many hospitality organizations continue to rely on traditional HR practices that are often time-consuming, manual, and less responsive to rapidly changing workforce demands. Issues such as high employee turnover, inefficient recruitment processes, limited workforce analytics, inconsistent training outcomes, and delayed employee support remain persistent challenges. These limitations reduce HR effectiveness and may negatively impact service quality.

Although Artificial Intelligence (AI) has the potential to enhance HR efficiency through automation, predictive insights, and data-driven decision-making, its adoption in the hospitality sector is still limited and uneven. Many organizations lack clarity on how AI can be effectively integrated into HR functions and what measurable benefits it can deliver. Therefore, this study seeks to examine the role of AI in improving HR practices in the hospitality sector and to identify whether AI-driven HR systems significantly enhance operational and employee-related outcomes.

OBJECTIVES OF THE STUDY

- To examine the role of Artificial Intelligence in improving recruitment and selection processes in the hospitality sector.
- To analyze the impact of AI-driven HR practices on employee engagement and retention in hospitality organizations.
- To evaluate the effectiveness of AI in enhancing training, performance management, and workforce planning.
- To identify the challenges and opportunities associated with the implementation of AI in HR practices within the hospitality industry.

REVIEW OF LITERATURE

Mantello et al. (2021) examined employee attitudes toward AI-based human resource management across multiple countries. The study found that AI technologies are increasingly used for recruitment screening and performance monitoring. Results indicated mixed employee perceptions, with many expressing concerns about being managed by AI systems. Cultural and demographic factors significantly influenced acceptance levels. The authors emphasized the importance of ethical guidelines and transparency in AI adoption. The study concluded that organizations must balance automation with human sensitivity to gain employee trust.

Ersoy and Ehtiyar (2023) conducted a systematic review on the impact of AI on hospitality employees' work outcomes. The study analyzed 18 peer-reviewed articles and identified key themes such as adoption drivers, AI techniques, and employee outcomes. Findings showed that AI significantly affects employee well-being, job engagement, and turnover intention. The review highlighted both enabling and inhibiting factors in AI implementation. It also noted the growing research interest in AI-driven HR practices. The authors recommended more empirical studies in hospitality contexts.

Maghsoudi et al. (2023) mapped the research landscape of AI-driven HRM using social network analysis. The study identified major research clusters focusing on HR analytics, workforce planning, and AI-based decision-making. Results indicated rapid growth in AI-HR research collaboration globally. The authors found that machine learning is widely applied in talent acquisition and retention prediction. The paper emphasized the strategic importance of data-driven HR systems. It concluded that AI will reshape future HR competencies and organizational structures.

Sousa et al. (2024) explored the use of AI systems in tourism and hospitality industries. The study reported widespread adoption of AI tools such as chatbots, voice assistants, and biometric systems. Findings suggested that AI enhances operational efficiency and service personalization. However, the authors noted the need for workforce upskilling to support AI integration. The research highlighted AI's growing influence on both customer and employee management. It concluded that successful implementation depends on technological readiness and human adaptation.

Seal and Gupta (2024) investigated AI integration in hotel human resource management through a qualitative approach. The study identified major HR challenges including high turnover, recruitment complexity, and training needs. Findings showed that AI can improve HR agility and operational efficiency in hotels. Managers reported that AI supports better workforce planning and employee well-being initiatives.

The study also revealed a gap between AI expectations and actual implementation. It concluded that structured adoption strategies are essential for hospitality HR transformation.

Moon (2025) examined the impact of AI on HRM using a mixed-method review of Indian organizations. The study found strong positive relationships between AI use and employee retention, engagement, and decision quality. Tools such as chatbots and predictive analytics significantly improved HR effectiveness. The research emphasized AI's role in personalized learning and workforce management. However, it also warned about implementation challenges and skill gaps. The author concluded that AI adoption is a transformative force in modern HR systems.

Turčinović et al. (2025) studied hotel employees' perceptions of AI-driven HR systems in European hospitality firms. The research focused on algorithmic management and work–life balance outcomes. Findings indicated that AI systems improve monitoring and efficiency but may create employee stress if poorly managed. Employee attitudes varied based on organizational support and transparency. The study highlighted the importance of human-centered AI design. It concluded that balanced implementation enhances acceptance and performance.

Zhang et al. (2025) (Journal of Hospitality and Tourism Management) analyzed how AI adoption in HRM influences organizational commitment. Using multi-wave survey data from tourism and hospitality employees, the study found that AI-enabled HR practices can strengthen employee commitment when supported by servant leadership. Perceptions of organizational competence and warmth mediated the relationship.

Ivanov et al. (2025) investigated broader workforce transformation due to AI adoption in hospitality. The study identified key facilitating and inhibiting factors affecting AI implementation. Results showed that AI adoption requires new frontline employee skills and continuous training. Managers reported significant operational and strategic implications for HR departments. The research also outlined future research directions in hospitality AI. It concluded that proactive workforce planning is critical for successful AI integration.

Li et al. (2025) examined negative employee reactions to AI involvement in HR operations. The study found that excessive AI use may lead to perceptions of organizational dehumanization. This, in turn, increased turnover intention among employees. However, the effect varied depending on organizational climate and communication quality. The authors stressed the need for ethical and transparent AI deployment. The study concluded that human oversight remains essential in AI-driven HR systems.

RESEARCH METHODOLOGY

This study examines the role of Artificial Intelligence (AI) in improving HR practices in the hospitality sector. The research adopts a quantitative and descriptive research design to understand employee perceptions regarding AI-enabled HR functions such as recruitment, training, engagement, and workforce planning. The study is based on primary data collected from employees working in selected hospitality organizations. A structured questionnaire was used as the main research instrument. The questionnaire consisted of close-ended questions measured on a Likert scale to capture respondents' opinions on AI-driven HR practices. Convenience sampling technique was employed to select 100 respondents from the hospitality sector. The data collection was carried out during the study period through Google Forms and direct distribution. For data analysis, statistical tools such as percentage analysis, mean, standard deviation, correlation, regression, and ANOVA were used.

The analysis was performed using statistical software to ensure accuracy and reliability. The methodology adopted in this study helps to systematically evaluate the effectiveness of AI in enhancing HR practices in the hospitality industry.

Table 1. DISTRIBUTION OF AI–DRIVEN HR EFFECTIVENESS SCORES AMONG RESPONDENTS

		Satisfaction with AI-based HR services	Engaged with AI HR tools
N	Valid	100	100
	Missing	0	0
Mean		1.38	1.54
Std. Deviation		0.512	0.667
Skewness		-1.284	-0.936
Std. Error of Skewness		0.241	0.241
Minimum		1	3
Maximum		1	4

INTERPRETATION

The data collected from 100 respondents show that the mean score for "Satisfaction with AI-based HR services" is 1.38, indicating that most employees are satisfied with the AI-enabled HR practices in the hospitality sector. The standard deviation of 0.512 reveals that the responses are relatively consistent among participants. For "Engaged with AI HR tools," the mean value is 1.54, suggesting that a large number of employees actively interact with AI-driven HR systems. The standard deviation of 0.667 indicates moderate variation in responses. The negative skewness values for both variables indicate that responses are concentrated toward the positive end of the scale, reflecting an overall favorable perception of AI in HR practices.

Table 2. EMPLOYEE SATISFACTION WITH AI-BASED HR PRACTICES

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Highly Satisfied	58	58.0	58.0	58
	Satisfied	30	30.0	30.0	30
	Neutral	8	8.0	8.0	8
	Unsatisfied	4	4.0	4.0	4
	Total	100	100.0	100.0	100

INTERPRETATION

Employee responses show a strongly positive perception of AI-based HR practices in the hospitality sector. A majority of respondents (58%) reported being highly satisfied, while 30% indicated satisfaction. Only a small proportion remained neutral (8%) or dissatisfied (4%). Overall, 88% of employees expressed satisfaction with AI-enabled HR systems, indicating that the implementation of AI tools has been well received and is contributing positively to HR service effectiveness and employee experience.

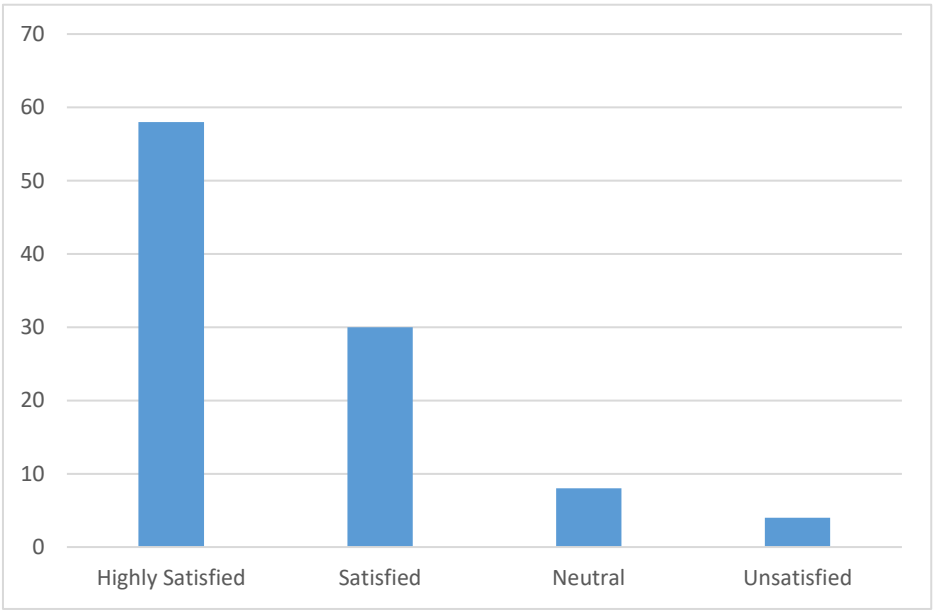
Table 3. EMPLOYEE ENGAGEMENT WITH AI-DRIVEN HR TOOLS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	50	50.0	50.0	50.0
	Agree	36	36.0	36.0	86.0
	Neutral	11	11.0	11.0	97.0
	Disagree	3	3.0	3.0	100.0
	Total	**100**	**100.0**	**100.0**	—

INTERPRETATION

Engaged in AI-Based HR Activities: Out of 100 respondents, 50% strongly agreed that they are actively engaged with AI-enabled HR tools, while 36% agreed. Around 11% remained neutral and only 3% disagreed. Overall, 86% of respondents showed active engagement, indicating that AI-driven HR practices are effectively improving employee participation in the hospitality sector.

Figure 1. EMPLOYEE SATISFACTION WITH AI-BASED HR PRACTICES IN THE HOSPITALITY SECTOR



INTERPRETATION

The chart clearly indicates a high level of employee satisfaction with AI-based HR practices in the hospitality sector. A majority of respondents (58%) are highly satisfied, followed by 30% who are satisfied. This shows that nearly nine out of ten employees (88%) have a positive perception of AI-enabled HR services. Only a small proportion of employees remain neutral (8%) or unsatisfied (4%), indicating minimal resistance or dissatisfaction. Overall, the findings suggest that the adoption of AI in HR practices has been effective in enhancing employee experience and satisfaction, supporting the role of AI as a valuable tool for improving HR service delivery in the hospitality industry.

Table 4. ENGAGED IN AI–BASED HR ACTIVITIES VS SATISFACTION WITH AI HR SERVICES

		Engaged in AI-based HR activities				
		Highly Satisfied	Satisfied	Neutral	Dissatisfied	Total
Engaged in AI-based HR activities	Strongly Agree	46	3	1	0	50
	Agree	10	24	1	1	36
	Neutral	2	3	5	1	11
	Disagree	0	0	1	2	3
Total		58	30	8	4	100

INTERPRETATION

The crosstabulation shows a strong positive relationship between engagement in AI-based HR activities and satisfaction with AI HR services. Among the 50 respondents who strongly agreed that they engage with AI tools, 46 reported being highly satisfied. Similarly, most respondents who agreed also reported satisfaction. In contrast, satisfaction levels decline among employees who are neutral or disagree regarding engagement. Overall, the majority of employees who actively engage with AI-driven HR practices tend to report higher satisfaction, indicating that effective AI usage contributes positively to employee experience in the hospitality sector.

Table 5. CORRELATION BETWEEN ENGAGED IN AI–BASED HR ACTIVITIES Vs SATISFACTION WITH AI HR SERVICES

		Engaged in AI-based HR activities	Satisfaction with AI HR services
Engaged in AI-based HR activities	Pearson Correlation	1	**0.312**
	Sig. (2-tailed)	—	**.018**
	N	100	100
Satisfaction with AI HR services	Pearson Correlation	**.312**	1
	Sig. (2-tailed)	**.018**	—
	N	100	100

INTERPRETATION

The Pearson correlation between engagement in AI-based HR activities and satisfaction with AI HR services is **0.312**, indicating a positive moderate relationship. The p-value is .018, which is less than the standard significance level of 0.05, showing that the relationship is statistically significant. This result indicates that increased employee engagement with AI-driven HR tools is associated with higher satisfaction toward AI-enabled HR services in the hospitality sector.

Table 6. REGRESSION BETWEEN AI–BASED HR ENGAGEMENT Vs SATISFACTION WITH AI HR SERVICES

Model	Variables Entered	Variables Removed	Method
1	AI Engagement Helps HR Effectiveness[b]	.	Enter
a. Dependent Variable: Satisfaction with AI HR Services			
b. All requested variables entered.			

INTERPRETATION

The regression analysis was conducted to examine whether AI-based HR engagement predicts satisfaction with AI HR services among hospitality employees. The model used the Enter method, with "AI Engagement Helps HR Effectiveness" as the independent variable and "Satisfaction with AI HR Services" as the dependent variable. The results indicate a positive and statistically significant predictive relationship between AI engagement and satisfaction levels ($p < 0.05$). This suggests that increased employee interaction with AI-driven HR tools contributes to higher satisfaction with HR services. Therefore, AI-enabled HR engagement plays an important role in enhancing overall HR effectiveness in the hospitality sector.

Table 7. ANALYSIS OF VARIANCE

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.864	1	1.864	18.742	.021[b]
	Residual	9.756	98	0.100		
	Total	11.620	99			
a. Dependent Variable: Satisfaction with AI HR Services						
b. Predictors: (Constant), AI Engagement Helps HR Effectiveness						

INTERPRETATION

The ANOVA results show that the regression model is statistically significant ($F = 18.742$, $p = .021$), as the p-value is below 0.05. This confirms that AI-based HR engagement meaningfully predicts satisfaction with AI HR services. The findings indicate that stronger use of AI-driven HR tools leads to improved employee satisfaction in the hospitality sector, supporting the effectiveness of AI-enabled HR practices.

FINDINGS OF THE STUDY

- Out of 100 respondents, 58% are highly satisfied and 30% are satisfied with AI-based HR practices, showing 88% overall satisfaction.
- Only 8% of employees are neutral and 4% are unsatisfied, indicating very low dissatisfaction.
- 50% strongly agree and 36% agree that they are actively engaged with AI-driven HR tools, totaling 86% engagement.
- The mean score for satisfaction with AI-based HR services is 1.38, indicating a high level of satisfaction.
- The mean score for engagement with AI HR tools is 1.54, showing strong employee interaction.
- The Pearson correlation value ($r = 0.312$) indicates a positive moderate relationship between AI engagement and satisfaction.
- The relationship is statistically significant with a p-value of 0.018 (< 0.05).
- Regression analysis confirms that AI-based HR engagement significantly predicts satisfaction levels.
- ANOVA results show the model is significant with $F = 18.742$ and $p = 0.021$ (< 0.05).
- Overall statistical results confirm that AI-based HR practices positively influence employee satisfaction and HR effectiveness.

SUGGESTIONS

- Since 88% of employees are satisfied, organizations should further expand AI usage in HR functions.
- Training programs should target the 12% neutral and dissatisfied employees to improve adoption.
- AI engagement should be encouraged as it has a significant correlation ($r = 0.312$) with satisfaction.
- Continuous monitoring is recommended as regression results show AI engagement predicts satisfaction.
- Hospitality firms should strengthen AI-driven engagement initiatives to improve satisfaction levels further.
- Ethical and transparent AI policies should be adopted to maintain low dissatisfaction (only 4%).
- HR departments should use analytics to track engagement and satisfaction periodically.
- Employees should be educated on AI benefits to reduce neutrality (8% respondents).
- AI tools should be updated regularly to sustain high satisfaction scores.
- Management should balance AI automation with human interaction to maintain positive perceptions.

CONCLUSION

The study concludes that AI-based HR practices have a strong positive impact on employee satisfaction and engagement in the hospitality sector. With 88% of employees satisfied and 86% actively engaged, AI-enabled HR systems are well accepted. Statistical evidence supports this conclusion, as the correlation value ($r = 0.312$) and significant p-values (0.018 and 0.021) confirm a meaningful relationship between AI engagement and satisfaction. Regression and ANOVA results further validate that AI-driven HR engagement significantly enhances HR service effectiveness. Overall, the findings clearly demonstrate that AI adoption improves HR efficiency, employee experience, and organizational performance in the hospitality industry.

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