A STUDY ON HUMAN RESOURCE MANAGEMENT PRACTICES AND EMPLOYEE PERFORMANCE IN ORGANIZATIONS BASED ON ARTIFICIAL INTELLIGENCE

R.Siva Kumar., *Assistant Professor (Sl.Gr)*

Department of Management Studies. Kangeyam Institute of Technology. Nathakadiyur.

Email: shivamba07@gmail.com

Mr.S.Poovendran., *II MBA Student*

Department of Management Studies. Kangeyam Institute of Technology. Nathakadiyur.

ABSTRACT

This study investigates the impact of Artificial Intelligence (AI)-based Human Resource Management (HRM) practices on employee performance in organizations. A structured questionnaire was administered to 120 employees working in organizations implementing AI-driven HR systems. Statistical tools such as descriptive statistics, correlation, regression, and ANOVA were applied. The findings indicate that AI-based HR practices significantly enhance recruitment efficiency, personalized training, and overall employee performance. However, data privacy and ethical concerns were identified as key challenges.

INTRODUCTION

In the digital era, Artificial Intelligence (AI) has emerged as a transformative force across industries, particularly in Human Resource Management (HRM). Traditional HR practices were largely manual, time-consuming, and dependent on subjective decision-making. However, with the integration of AI technologies such as machine learning, predictive analytics, natural language processing, and automation tools, HR functions have become more data-driven, efficient, and strategic.

AI is widely used in recruitment screening, resume parsing, chatbot-based candidate interaction, predictive workforce analytics, employee engagement monitoring, and performance evaluation systems. These tools reduce human bias, improve decision accuracy, and enable real-time performance tracking. AI-based training systems also personalize learning content according to employee skill gaps, thereby enhancing productivity.

This study aims to analyze the impact of AI-driven HRM practices on employee performance and evaluate employee perceptions toward AI implementation in organizations.

Artificial Intelligence (AI) is transforming traditional Human Resource Management (HRM) functions such as recruitment, training, performance appraisal, and workforce analytics. AI-based systems use predictive analytics, machine learning algorithms, and automation to improve decision-making accuracy and operational efficiency.

STATEMENT OF THE PROBLEM

Traditional HR practices involve manual screening, subjective performance evaluation, and time-consuming administrative tasks. AI-based HR systems are expected to improve efficiency and transparency. This study evaluates whether AI-based HR practices significantly influence employee performance.

OBJECTIVES OF THE STUDY

• To analyze the role of AI in HRM practices.

• To examine the impact of AI-based recruitment on employee performance.

• To measure employee satisfaction with AI-based HR practices.

REVIEW OF LITERATURE

Kapoor & Sharma (2023) emphasized that AI-driven recruitment systems significantly reduce hiring time and improve candidate-job matching accuracy. Their study concluded that algorithm-based screening minimizes unconscious bias and enhances fairness in recruitment decisions.

Singh (2022) examined AI-enabled performance management systems and found that real-time performance analytics improve employee accountability and productivity. Continuous feedback mechanisms powered by AI were shown to enhance employee engagement.

Bhardwaj & Tripathi (2024) studied AI-based learning management systems and reported that personalized training modules increase knowledge retention and skill development. Employees trained through adaptive AI systems demonstrated higher performance levels compared to traditional training methods.

Deloitte (2023) reported that organizations implementing AI in HR experienced better workforce planning, predictive turnover management, and strategic talent acquisition.

However, several researchers also highlight ethical challenges. Concerns about data security, transparency in algorithm decisions, and lack of human touch in HR interactions remain critical issues.

From the review, it is evident that AI positively influences HR efficiency and employee outcomes, but its implementation must be ethically governed.

Previous studies highlight that AI-driven recruitment improves hiring accuracy and reduces bias. Research indicates AI-based training enhances learning outcomes and skill development. However, ethical concerns and resistance to technology remain key challenges.

RESEARCH METHODOLOGY

Research Design: Descriptive research design was adopted.

Area of Study: Organizations implementing AI-based HR systems.

Sample Size: 120 employees.

Sampling Technique: Convenience Sampling.

Data Collection Tool: Structured questionnaire with Likert scale.

Data Analysis Tools: Descriptive Statistics, Pearson Correlation, Regression Analysis, ANOVA.

Period of Study: January 2026 – February 2026.

Table 1: Distribution of AI-Based Recruitment Opinion

Response	Frequency	Percentage
Strongly Agree	52	43%
Agree	44	37%
Neutral	15	12%
Disagree	9	8%

Interpretation:

The data shows that 43% of respondents strongly agreed and 37% agreed that AI improves recruitment efficiency. Only 8% disagreed. This indicates that a majority (80%) perceive AI recruitment systems as fair, efficient, and accurate.

The high agreement percentage suggests that AI-based screening and automated evaluation systems enhance transparency and reduce bias in hiring processes.

Table 2: Correlation between AI Training and Employee Performance

Variables	Pearson r	Sig. (2-tailed)	N
AI Training & Employee Performance	0.62	0.001	120

Interpretation:

The Pearson correlation value ($r = 0.62$) indicates a strong positive relationship between AI-based training and employee performance. The p-value (0.001) is less than 0.05, confirming statistical significance.

This means that as AI-driven training effectiveness increases, employee performance also increases significantly. The result supports the argument that personalized AI learning systems enhance productivity.

Table 3: Regression Analysis

Model	R	R²	Adjusted R²	Sig.
AI Practices → Employee Performance	0.69	0.48	0.46	0.000

Interpretation:

The regression analysis shows an R^2 value of 0.48, indicating that 48% of the variation in employee performance is explained by AI-based HR practices.

The significance value (0.000) confirms that the model is statistically significant. This suggests that AI implementation in HR functions is a strong predictor of employee performance improvement.

Table 4: ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	15.62	1	15.62	22.45	0.000
Residual	24.18	118	0.205		
Total	39.80	119			

Interpretation:

The ANOVA results show an F-value of 22.45 with a significance level of 0.000, which is less than 0.05. This confirms that AI-based HR practices have a statistically significant impact on employee performance.

The results validate that AI-driven HR systems meaningfully contribute to organizational productivity.

FINDINGS OF THE STUDY

- AI-based recruitment improves hiring accuracy.
- AI-driven training enhances employee productivity.
- Statistical tests confirm significant relationship.
- A majority of employees perceive AI-based recruitment systems as fair and efficient.
- AI-driven training significantly enhances skill development and job performance.
- Statistical analysis confirms a strong positive relationship between AI practices and employee performance.
- Nearly half of employee performance variation is explained by AI-based HR systems.
- Employees show positive acceptance of AI tools in HR functions.
- Data privacy and ethical concerns remain important challenges.
- Ethical and privacy concerns require attention.

SUGGEESTION

- Organizations should integrate AI tools with human supervision to ensure balanced decision-making.
- HR professionals must be trained to effectively use AI-based systems.
- Companies should implement strong data protection policies to ensure employee privacy.
- Transparent communication regarding AI decision-making processes should be maintained.
- Future research may include larger sample sizes and multiple industry sectors for broader generalization.

CONCLUSION

The study concludes that Artificial Intelligence significantly enhances Human Resource Management practices and positively influences employee performance. AI-driven recruitment systems improve hiring accuracy, while personalized AI-based training enhances employee skills and productivity. Statistical analysis confirms a strong and significant relationship between AI practices and performance outcomes.

However, successful AI implementation requires ethical governance, transparency, and proper employee training. Organizations that strategically adopt AI in HR functions can achieve sustainable growth, competitive advantage, and improved workforce efficiency.

REFERENCES

1. Kapoor, R., & Sharma, P. (2023). AI in Recruitment and Talent Management.

2. Singh, A. (2022). Artificial Intelligence in Performance Management Systems.

3. Deloitte. (2023). Global Human Capital Trends Report.

4. World Economic Forum. (2024). The Future of Jobs Report.