

An Analytical Study on the Impact of Artificial Intelligence in Enhancing Human Resource Management Practices in the IT Sector of Thiruvananthapuram District.

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KEYWORDS

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Abstract

Artificial Intelligence (AI) is increasingly redefining organizational functions particularly Human Resource Management (HRM). In the IT sector, where efficiency, innovation, and talent management are crucial, AI-based applications are transforming recruitment, training, performance appraisal, and employee engagement. This study examines the role of AI in HRM within IT companies in Thiruvanthapuram District. Using a mixed-methods approach, data was collected from HR professionals and employees through structured questionnaires and interviews. Findings indicate that AI has significantly improved recruitment accuracy, performance monitoring, and employee engagement practices, though challenges such as cost, resistance to change, and ethical concerns remain. The paper concludes with recommendations for effective adoption of AI in HRM practices.

INTRODUCTION

Artificial Intelligence (AI) has emerged as a disruptive force across industries. In Human Resource Management (HRM), AI technologies such as machine learning, natural language processing, and predictive analytics are transforming traditional HR practices into strategic business enable .Globally, IT

organization (Kerala), firms are experimenting with AI-based HR solutions to enhance efficiency, decision-making, and employee experiences. This study investigates how AI is transforming HRM practices in IT companies in Thiruvananthapuram District and identifies opportunities and challenges associated with implementation.

REVIEW OF LITREATURE

AI in Recruitment: AI-driven tools automate CV screening, candidate shortlisting, and predictive hiring (Upadhyay & Khandelwal, 2018).

Performance Appraisal: AI enables continuous performance tracking using productivity metrics (Jarrahi, 2019).

Training & Development: Personalized learning through AI-driven platforms enhances employee skill development (Sharma, 2020).

Employee Engagement: Chatbot sand virtual assistant fost erreal-time communication and engagement (Meijerink et al., 2021).

Challenges: High implementation cost, data privacy issues ethical concerns and employee resistance to AI integration.

OBJECTIVES OF THE STUDY

- To study the awareness and adoption of AI tools in HRM among IT companies in Thiruvananthapuram District.
- To analyze the impact of AI on recruitment, training ,performance appraisal and employee engagement.
- Toevaluatethechallengesfaced byHRprofessionalsinimpleme ntingAI-basedHR solutions.
- To provide suggestions for effective integration of AI in HR practices.

RESEARCH METHODOLOGY

Research Design: Descriptive and analytical.

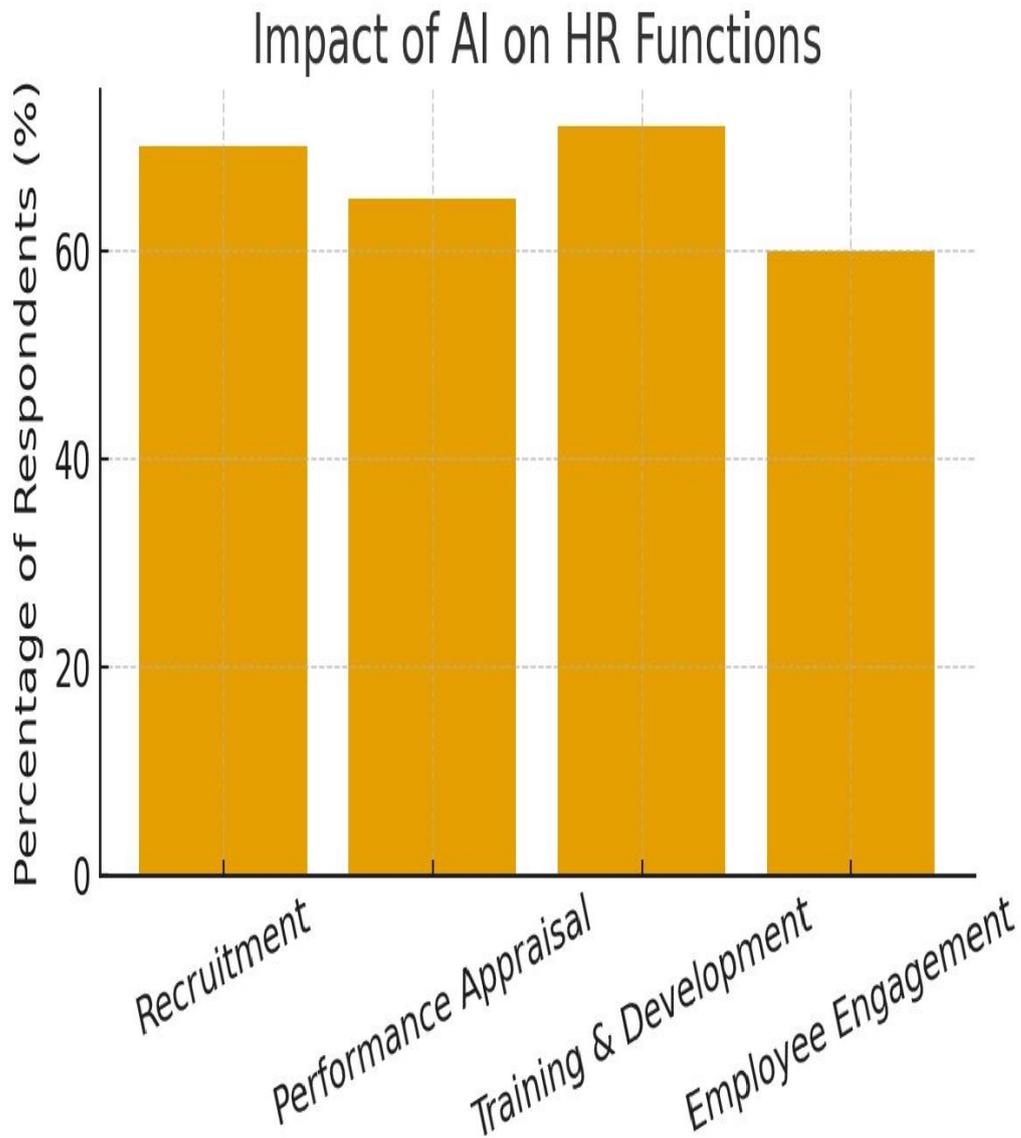
Data Collection: Primary data through a structured questionnaire (Likert scale) administered to 60 HR professionals and employees in IT companies secondary data from journals, reports, and industry publications.

Sampling Technique: Purposive sampling of IT firms in Technopark, Thiruvananthapuram.

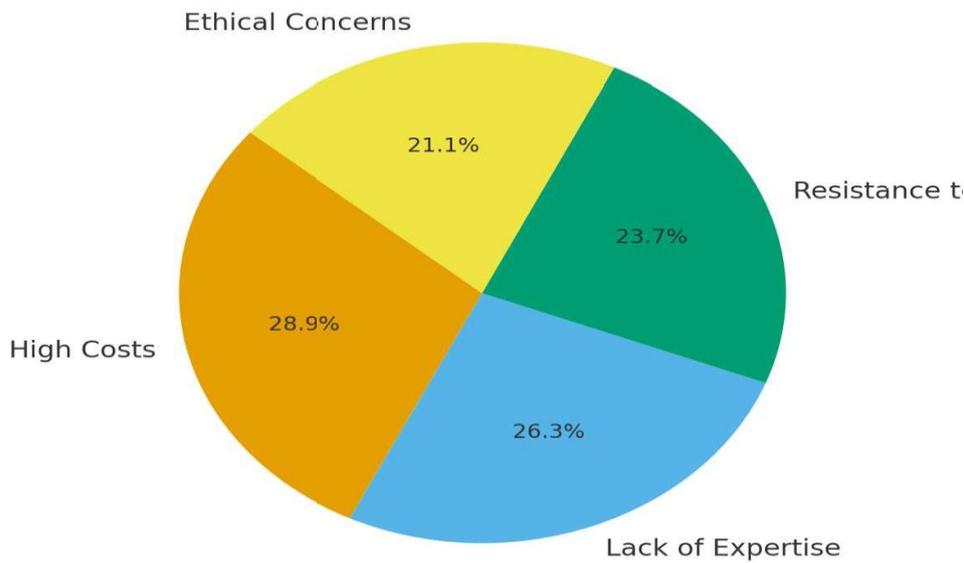
Tools for Analysis: SPSS used for descriptive statistics, weighted averages and factor analysis.

Graphical Representation

The following figures provide graphical representation of the descriptive analysis conducted



Challenges in AI Adoption in HRM



Data Analysis and Findings

Descriptive analysis of the responses from 60 participants shows the following trends:

Recruitment:

70% respondents agreed AI tools reduced bias and improved candidate selection.

Performance

65% reported AI helped in real-time performance tracking and productivity measurement.

Training & Development:

72% respondents indicated AI-driven personalized training modules increased skill efficiency.

Employee

Engagement:

60% highlighted the usefulness of chatbots and AI assistants in improving employee communication.

Challenges identified through descriptive analysis include:

- High costs (55%)
- Lack of expertise (50%)
- Resistance to change (45%)
- Ethical concerns (40%)

Overall descriptive statistics indicate that while AI has strong positive impact on HR functions, its adoption is uneven due to financial and technical constraints.

Discussion

The findings confirm that AI has a transformative role in HRM in IT organizations. Recruitment and training benefit the most from AI applications, while adoption barriers still exist. The results align with global trends but also reflect local challenges such as limited awareness and financial constraints among mid-sized IT firms in Thiruvananthapuram.

Conclusion and Suggestions

AI adoption in HRM offers significant opportunities for IT companies by enhancing efficiency transparency and decision-making. However successful integration requires strategic planning, training HR professionals in AI usage, and addressing ethical and privacy issues.

Recommendations:

- Conduct regular AI-awareness training programs for HR staff.
- Investing cost-effective AI tools suitable for small and mid-sized firms.
- Establish AI ethics guidelines to ensure transparency and fairness.
- Foster collaboration between academia and industry to enhance AI research in HRM.

References

Jarrahi, M.H. (2019). Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making. *Business Horizons*, 62*(2), 185-190. <https://doi.org/10.1016/j.bushor.2018.09.004>

Meijerink, J., Bondarouk, T., & Lepak, D.P. (2021). When HRM meets AI: Exploring the intersection of artificial intelligence and human resource management. *Human Resource Management Review*, 31*(4), 100820. <https://doi.org/10.1016/j.hrmr.2020.100820>

Sharma, A. (2020). AI-driven learning and development in HRM: A new paradigm. *International Journal of Management Studies*, 27*(1), 45-55.

Upadhyay, A.K., & Khandelwal, K. (2018). Applying artificial intelligence: Implications for recruitment. *Strategic HR Review*, 17*(5), 255-258. <https://doi.org/10.1108/SHR-07-2018-0059>