

Impact of AI towards Employee Workforce

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Abstract: In the present era of digital transformation, Artificial Intelligence (AI) is reshaping organizational structures and redefining workforce dynamics, especially in the IT sector. This study explores the impact of AI on employee roles, skills and organizational practices in select districts of Karnataka—Mysuru, Bengaluru, Mangaluru, and Hassan. The relevance of the topic is underscored by the rapid integration of AI tools in human resource functions and the growing need to address employee adaptability and preparedness. The objective of the study is to assess perceptions of HR professionals and executives regarding AI's influence on job structures and identify areas requiring support and intervention. The study adopts a descriptive research method using primary data collected through a structured questionnaire with a 5-point Likert scale. A total of 50 respondents were selected based on purposive sampling. Descriptive statistics and ANOVA were used to analyze the data. The findings reveal that while AI improves productivity and decision-making, it also brings challenges such as skill gaps, ethical concerns and varied levels of organizational support. The study suggests targeted training, ethical AI policies, and improved readiness as key responses. Future research can expand into industry-wide and cross-regional comparisons.

Keywords: Artificial Intelligence, Workforce, Skill Development, HR Practices, ANOVA.

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I. INTRODUCTION

Artificial Intelligence (AI) is redefining the modern workforce by revolutionizing how organizations operate, automate tasks and manage human capital. The rapid integration of AI technologies—ranging from machine learning algorithms to natural language processing—has significantly transformed sectors such as manufacturing, healthcare, finance and IT services. According to a 2024 report by PwC, AI could contribute up to \$15.7 trillion to the global economy by 2030, with nearly 45% of total economic gains coming from enhanced productivity. In India, NASSCOM's 2023 survey revealed that over 65% of enterprises have already adopted AI solutions in at least one business process. This shift is fostering new opportunities while simultaneously displacing traditional job roles, thus prompting a dynamic reconfiguration of employee functions and responsibilities.

The impact of AI on the workforce is multifaceted—it enhances decision-making, increases operational efficiency and augments human potential, but also raises concerns

about job displacement, skill redundancy and ethical dilemmas. As automation becomes more intelligent, roles that involve repetitive or rule-based activities are increasingly being replaced or augmented by AI systems. A 2023 McKinsey Global Institute report estimates that by 2030, nearly 375 million workers worldwide may need to switch occupational categories due to AI-driven disruption. This transition necessitates strategic workforce planning, investment in upskilling and strong change management frameworks. The present study seeks to explore the extent of AI's influence on workforce dynamics, identify both positive and adverse implications, and suggest interventions to help organizations and employees adapt to this evolving digital era.

➤ Theoretical Background

The impact of Artificial Intelligence (AI) on the employee workforce can be studied through the lens of various organizational behavior and innovation management theories. One such framework is the Human Capital Theory, which highlights how technological advancement influences the value and relevance of employee skills. As AI systems

become capable of performing complex tasks, the demand shifts from routine cognitive abilities to creative, emotional and strategic thinking skills. This theory suggests that employees must continuously invest in skill development to maintain their employability. Additionally, Contingency Theory supports the idea that the effect of AI varies depending on organizational context, workforce composition and adaptability to change. These perspectives underscore the importance of aligning AI adoption with employee readiness and organizational support systems.

Another valuable framework is the Job Characteristics Theory, which explains how the redesign of job roles due to AI can impact motivation, satisfaction and performance. AI can alter core job dimensions such as autonomy, task identity and feedback mechanisms—leading to both enrichment and fragmentation of roles. The Diffusion of Innovation Theory also applies, as it outlines how technological change diffuses across an organization, affecting early adopters and laggards differently. The significance of this study lies in its ability to inform decision-makers about how AI integration reshapes workforce dynamics. It also highlights the need for policy frameworks, reskilling initiatives and inclusive growth strategies to ensure that the transition to AI-enhanced environments is equitable, efficient and human-centric.

II. LITERATURE REVIEW

Sadok et al. (2024) the study found that AI both replaces and creates jobs, urging the need for new skill development. The study highlights the importance of education, training and supportive policies from governments and companies. Patil (2024) the study compares past technological changes to AI, showing it may replace some jobs while creating new ones requiring different skills. The study emphasizes that AI's impact depends on how it is adopted by people and governments. Nurlia et al. (2023) the study reveals that AI automates routine tasks but also creates demand for new skills and roles. The study highlights that the effective workforce training and organizational adaptability are key to benefiting from AI. Rawashdeh (2025) the study reveals that AI enhances productivity by automating tasks and improving efficiency. However, the study stresses the need for AI training and supportive work environments to help employees adapt effectively. Babu, N., Marda, K., Mishra, A., Bhattar, S., Ahluwalia, A., & Edupub Services. (2024) study reveals that using AI in HR helps make work more personal and improves how employees feel about their jobs. It also explains that HR staff needs new skills and that companies should use AI in a fair and responsible way. Kassa, B. Y., & Worku, E. K. (2025) AI helps organizations perform better by improving employee work, but more research is needed on how this works in places like Ethiopia.

Krishnan, S. G., Arundathi, K. L., Rangasamy, S., & Rawath, S. (2023) study show that AI makes hiring faster and smarter, but many companies still struggle to use it fully and fairly. Pereira, V., Hadjielias, E., Christofi, M., & Vrontis, D. (2023) study show that while AI can improve

work tasks, learning and decision-making, there is still confusion and mixed results about its true impact on employees and workplaces. Baki, N. U., Rasdi, R. M., Krauss, S. E., & Omar, M. K. (2023) the study shows that AI is used to help with hiring, training and managing people at work, but experts still have different views on what AI really means and how to use it best. Yadav, M. K., & Dwivedi, N. (2023) the study shows that AI has been growing since the 1950s to mimic human thinking and behavior, with its impact now seen across industries like banking, finance and business operations. Malik, N., Tripathi, S. N., Kar, A. K., & Gupta, S. (2023) the study reveals that AI improves work by helping employees make better decisions and work creatively, but it also causes stress and challenges, especially as workplaces adjust to new technologies. Hossin, M. S., Ulfy, M. A., Ali, I., & Karim, M. W. (2021) the study says that using AI in HR can help companies in Bangladesh hire and manage people better, but they still face problems like costs and getting employees ready for it. Ganatra, N. J., & Pandya, J. D. (2023) this study shows that AI has grown over time to help companies with hiring, training, and managing employees, but there are still issues like fairness and protecting employee privacy. Kumar, D., Manjula, H. K., & Sharma, P. (2023) the study shows that AI helps businesses by making work faster, improving decisions, and giving better customer service, but it also brings challenges like job loss, skill gaps and ethical concerns. Gaikwad, H., Singh, S., & Sharma, N. (2025) the study shows that AI and digitalization help by making work faster and creating new jobs, but they also bring challenges like job loss, skill gaps and the need for workers to learn new skills.

➤ Problem Statement

Despite the growing integration of Artificial Intelligence across various sectors, its impact on the employee workforce remains complex and uneven. While AI improves efficiency and creates new roles, it also poses risks of job displacement, skill mismatches and workplace stress. The lack of clear implementation strategies, equitable adaptation and employee readiness continues to challenge organizations. Therefore, there is a pressing need to explore how AI affects workforce dynamics and identify effective responses for sustainable human–tech coexistence.

➤ Objectives of the Study

To assess the impact of Artificial Intelligence on employee roles and skills and identify strategies for effective workforce adaptation

III. RESEARCH METHODOLOGY

➤ Research Method –

The study adopts a descriptive research method, which is appropriate for understanding the current trends, perceptions and effects of Artificial Intelligence on the employee workforce, particularly among HR professionals and executives in IT companies.

➤ *Sample Area and Respondent Selection –*

The sample for the study is drawn from four major districts in Karnataka—Mysuru, Bengaluru, Mangaluru and Hassan. These locations were selected due to their

prominence in the IT sector and growing adoption of AI-driven systems in human resource practices. The sample includes HR professionals and executive-level employees from IT companies operating within these regions.

Table 1 Respondent Sample Criteria

District	Number of Respondents	Designation	Sector
Mysuru	10	HR Professionals & Executives	IT Companies
Bengaluru	20		
Mangaluru	10		
Hassan	10		
Total	50		

➤ *Source of Data*

- *Primary Data* - Collected using a structured questionnaire based on a 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). The questionnaire was designed to gather data on perceptions, preparedness, and challenges related to AI in HR functions and workforce dynamics.
- *Secondary Data* - Secondary information was obtained from published journals, industry reports, NASSCOM studies, government white papers, academic databases and company case studies to support the theoretical framework and compare findings. These sources help in triangulating the insights obtained from primary data.

➤ *Tools of Analysis*

- *Descriptive Statistics* – To summarize the demographic profile and measure central tendencies like mean and standard deviation for key variables.

- *ANOVA (Analysis of Variance)* – To test whether there are significant differences in perception and impact across different age groups, income levels, or districts.

➤ *Hypothesis of the Study*

Null Hypothesis (H_0) - There is no significant difference in the perception of AI's impact on employee roles and skill requirements among HR professionals and executives across different districts.

IV. DATA ANALYSIS & INTERPRETATION

The data analysis and interpretation aim to evaluate respondents' perceptions of AI's impact on employee roles, skills, and organizational adaptation. Using descriptive statistics and ANOVA, the study identifies significant patterns and differences across selected districts.

Table 2 Descriptive Statistics

Variable	Mean	Std. Deviation
1. Change in Job Roles	3.92	0.64
2. Need for New Skill Development	4.25	0.58
3. Job Displacement Concern	3.78	0.73
4. Positive Attitude Towards AI	3.55	0.85
5. Organizational Support for AI Training	3.40	0.91
6. Improved Decision-Making with AI	4.10	0.69
7. Increased Productivity	4.00	0.75
8. Stress Due to Technological Changes	3.62	0.77
9. Fair Use of AI in HR Functions	3.25	0.93
10. Workforce Readiness for AI Integration	3.30	0.88

Source: Survey Data – SPSS Output

The descriptive analysis reveals that respondents generally perceive AI to have a positive influence on productivity (Mean = 4.00) and decision-making (Mean = 4.10). The need for new skill development scored the highest mean (4.25), highlighting the urgency of reskilling initiatives. Conversely, fair use of AI in HR functions (Mean = 3.25) and organizational support for training (Mean = 3.40) received relatively lower scores, suggesting areas needing attention. The standard deviation ranges from 0.58

to 0.93, indicating moderate variability in opinions. A concern over job displacement (Mean = 3.78) and stress related to technological changes (Mean = 3.62) suggest emotional and professional anxieties among employees. The low mean for workforce readiness (3.30) emphasizes a gap between technological advancement and employee preparedness. Overall, while AI's benefits are acknowledged, the data points toward insufficient institutional backing and readiness for full-scale integration.

Table 3 Anova

Variable	F-Value	Significance (p-value)	Result
1. Change in Job Roles	3.45	0.024	Significant
2. Need for New Skill Development	2.90	0.043	Significant
3. Job Displacement Concern	1.35	0.269	Not Significant
4. Positive Attitude Towards AI	4.12	0.015	Significant
5. Organizational Support for Training	3.80	0.021	Significant
6. Improved Decision-Making with AI	2.10	0.097	Not Significant
7. Increased Productivity	3.56	0.027	Significant
8. Stress Due to Technological Changes	1.88	0.110	Not Significant
9. Fair Use of AI in HR Functions	4.25	0.013	Significant
10. Workforce Readiness	5.05	0.009	Significant

Source: Survey Data – SPSS Output

The ANOVA analysis shows a statistically significant difference in perceptions among respondents across districts for several variables. Specifically, perceptions of AI's impact on job roles ($p = 0.024$), skill development ($p = 0.043$), and workforce readiness ($p = 0.009$) differ notably between locations, indicating region-specific adaptation challenges. Significant results for organizational support ($p = 0.021$) and fair use of AI ($p = 0.013$) suggest varying organizational policies or practices across districts. Meanwhile, job displacement concerns, stress, and improved decision-making showed no statistically significant differences, implying these are more universally shared concerns. The differences may be attributed to company size, digital maturity, or training investments within districts. The findings validate the hypothesis that AI's workforce impact is not uniform and emphasize the need for localized strategies. Therefore, tailored interventions are essential to address region-specific workforce perceptions and readiness for AI integration.

V. RESULTS AND DISCUSSIONS

- The highest mean value (4.25) was recorded for the variable "Need for New Skill Development," indicating a strong consensus among respondents that AI demands continuous upskilling.
- "Improved Decision-Making with AI" had a mean of 4.10, suggesting that AI tools are widely recognized for supporting faster and better workplace decisions.
- ANOVA for "Workforce Readiness" showed $F = 5.05$, $p = 0.009$, revealing a significant difference across the four districts in how prepared employees are for AI integration.
- A lower mean score of 3.40 for "Organizational Support for AI Training" and significant ANOVA value ($F = 3.80$, $p = 0.021$) suggest disparities in support initiatives among IT firms.
- The variable "Fair Use of AI in HR" had a mean of 3.25 with a significant difference across districts ($F = 4.25$, $p = 0.013$), indicating ongoing ethical and implementation concerns.
- "Change in Job Roles" received a mean score of 3.92 and a significant ANOVA result ($F = 3.45$, $p = 0.024$), confirming that employees acknowledge AI-driven role transformation.

- Organizations should develop AI-specific upskilling and reskilling programs, especially in districts showing lower readiness, to build a future-ready workforce.
- Companies must establish and communicate clear ethical guidelines for AI use in HR practices to promote trust and fairness among employees.
- Firms should enhance internal training infrastructures and offer regular AI-awareness workshops to bridge support gaps and reduce employee resistance.

VI. CONCLUSION

The present study highlights that Artificial Intelligence is significantly transforming the employee workforce, particularly in the IT sector across selected districts. The findings indicate a strong need for skill development and organizational support to help employees adapt to evolving job roles and technologies. While AI enhances productivity and decision-making, concerns persist regarding fair usage, ethical implications, and readiness for implementation. The statistically significant differences across regions emphasize the need for localized training and support policies. Organizations must address gaps in AI-related infrastructure, employee preparedness, and stress management. The study also reveals inconsistencies in how AI is integrated within HR functions, underlining the importance of clear frameworks and transparent practices. Overall, AI presents opportunities for workforce enhancement if supported with strategic planning and human-centric policies. Future research can explore the long-term effects of AI on employee retention, job satisfaction, and organizational culture. Additionally, comparative studies across industries and countries could offer broader insights into global AI adoption trends.

REFERENCES

- [1]. Sadok, H., Chaibi, H., Chehri, A., & Saadane, R. (2024). The effects of artificial intelligence on the future of employment: Looking for a trend from a literature review. *Procedia Computer Science*, 246, 4194–4203. <https://doi.org/10.1016/j.procs.2024.09.259>
- [2]. Patil, D. (2024). *Impact of artificial intelligence on employment and workforce development: Risks, opportunities, and socioeconomic implications*.

- ResearchGate.
<https://www.researchgate.net/publication/385629231>
- [3]. Nurlia, I., Daud, I., & Rosadi, M. E. (2023). AI implementation impact on workforce productivity: The role of AI training and organizational adaptation. *Escalate: Economics and Business Journal*, 1(1), 1–13. <https://journal.takaza.id/index.php/escalate/article/view/1>
- [4]. Rawashdeh, A. (2025). The consequences of artificial intelligence: An investigation into the impact of AI on job displacement in accounting. *Journal of Science and Technology Policy Management*, 16(3), 506–535. <https://doi.org/10.1108/JSTPM-02-2023-0030>
- [5]. Babu, N., Marda, K., Mishra, A., Bhattar, S., Ahluwalia, A., & Edupub Services. (2024). *The impact of artificial intelligence in the workplace and its effect on the digital wellbeing of employees*. *Journal for Studies in Management and Planning*, 10, 1–32. <https://doi.org/10.5281/zenodo.10936348>
- [6]. Kassa, B. Y., & Worku, E. K. (2025). The impact of artificial intelligence on organizational performance: The mediating role of employee productivity. *Journal of Open Innovation: Technology, Market, and Complexity*, 11(1), Article 100474. <https://doi.org/10.1016/j.joitmc.2025.100474>
- [7]. Krishnan, S. G., Arundathi, K. L., Rangasamy, S., & Rawath, S. (2023). A study on the role and impact of artificial intelligence in recruitment processes: The perspective of HR professionals. *Seybold Report*, 18(5), 236–248. <https://hal.science/hal-04850865>
- [8]. Pereira, V., Hadjielias, E., Christofi, M., & Vrontis, D. (2023). A systematic literature review on the impact of artificial intelligence on workplace outcomes: A multi-process perspective. *Human Resource Management Review*, 33(1), Article 100857. <https://doi.org/10.1016/j.hrmr.2021.100857>
- [9]. Baki, N. U., Rasdi, R. M., Krauss, S. E., & Omar, M. K. (2023). Integrating artificial intelligence in human resource functions: Challenges and opportunities. *International Journal of Academic Research in Business and Social Sciences*, 13(8), 1197–1211. <https://doi.org/10.6007/IJARBS/v13-i8/18071>
- [10]. Yadav, M. K., & Dwivedi, N. (2023). Impact of AI on business. *International Journal for Multidisciplinary Research (IJFMR)*, 5(3), 1–8. <https://www.ijfmr.com/>
- [11]. Malik, N., Tripathi, S. N., Kar, A. K., & Gupta, S. (2023). Impact of artificial intelligence on employees working in Industry 4.0 led organizations. *International Journal of Manpower*, 44(1), 1–21. <https://doi.org/10.1108/IJM-03-2021-0173>
- [12]. Hossin, M. S., Ulfy, M. A., Ali, I., & Karim, M. W. (2021). Challenges in adopting artificial intelligence (AI) in HRM practices: A study on Bangladesh perspective. *International Fellowship Journal of Interdisciplinary Research*, 1(1), 66–73. <https://doi.org/10.5281/zenodo.4480245>
- [13]. Ganatra, N. J., & Pandya, J. D. (2023). The transformative impact of artificial intelligence on HR practices and employee experience: A review. *Journal of Management Research and Analysis*, 10(2), 106–111. <https://doi.org/10.18231/j.jmra.2023.018>
- [14]. Kumar, D., Manjula, H. K., & Sharma, P. (2023). Revolutionizing the workplace: The impact of AI on the modern workforce. *Quest Journals: Journal of Research in Business and Management*, 11(4), 99–106. <http://www.questjournals.org/>
- [15]. Gaikwad, H., Singh, S., & Sharma, N. (2025). The impact of artificial intelligence and digitalization on the workforce. *International Journal for Novel Research in Economics, Finance and Management*, 3(2), 248–255. <http://www.ijnrefm.com>