

# Impact of Artificial Intelligence In Recruitment And Selection Process

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**Abstract-** The rapid growth of Artificial Intelligence (AI) is transforming recruitment and selection in Human Resource Management by making hiring faster, more efficient, and data-driven. Traditional methods that relied on manual resume screening and interviews were time-consuming and often biased, whereas AI tools such as machine learning, chatbots, and natural language processing now automate candidate sourcing, screening, and evaluation. Platforms like LinkedIn, HireVue, and Pymetrics help organizations reduce hiring time and improve talent matching. While AI promotes diversity and efficiency, it also raises concerns about bias, privacy, and reduced human interaction, especially in diverse contexts like India. Understanding both the benefits and limitations of AI is essential for ensuring fair and effective hiring practices.

**Keywords:** Artificial Intelligence (AI), Recruitment, Selection, Human Resource Management (HRM), Machine Learning, Chatbots, Natural Language Processing (NLP), Bias, Automation, Talent Acquisition

## I. INTRODUCTION

The fast growth of Artificial Intelligence (AI) has changed how companies find and pick new employees. Recruitment and selection are key steps in Human Resource Management (HRM). They involve spotting talent, checking skills, and choosing the best fit for jobs. In the past, this meant manual work like reading resumes, phone calls, and face-to-face interviews. It was slow, costly, and often unfair due to personal biases.

Today, AI tools like machine learning, chatbots, resume scanners, and video analysis make these steps quicker and smarter. AI can sort thousands of resumes in minutes, match skills to job needs, and even predict who will stay long-term. For example, tools from LinkedIn, HireVue, and Pymetrics use AI to screen candidates and run tests. These cuts hiring time by 30-75% and save money.

AI works at every stage: sourcing candidates from job sites and social media, screening with natural language processing (NLP), engaging via chatbots, and selecting through gamified assessments or video interviews. It helps find diverse talent by hiding

names or photos to stop bias. Companies like Unilever and IBM report more varied hires and faster processes.

But AI is not perfect. It can copy old biases from training data, raise privacy issues with personal data collection, and feel too robotic by missing human touch. In India, with its many languages and job seekers from villages, AI needs local fixes. As AI grows in 2026, understanding its good and bad sides is vital for fair hiring.

## II. REVIEW OF LITERATURE

1. Sameh Abdelhay et.al (2021) The primary goal of the research was to analyze the impact of AI on HR. This study mostly serves as a descriptive study. the researcher relied on secondary data, which included information gained from previously published works. According to the study's findings, AI plays an increasingly important role in human resources, with robotics firms increasingly able to handle tasks like hiring and onboarding new employees, as well as data collection, analysis, and management.
2. Sri R Lakshmi Manthena et.al (2021) The Main Aim of this study is to critically analyze the

impact that Artificial Intelligence (AI) on recruitment. The primary data has been collected through a Google form, Simple Convenient non probability sampling method is used to secondary data also collected from articles. To compare artificial intelligence based on recruitment with performance indicating variables namely reliability, such as time & cost-saving, accuracy, remove partiality, reduced workload, increased productivity, and candidate knowledge.

3. Geetha R and Bhanu Sree Reddy D et.al (2022) To observe how artificial intelligence is used currently in the recruiting process This study is entirely done based upon secondary sources of information like conceptual papers. To conclude the role of AI is the combination of humans and AI that leads to data maintenance, save the cost and time to the organizations with more accuracy and access in total recruitment process.
4. Jiashu Zhang and Lei Zhang et.al (2022) This study investigates the impact of various resume screeners (humans and AI) on applicants' perceptions of procedural and distributive fairness based on the scenario of resume screening. This study intends to test the hypothesis model by designing two scenario experiments in which participants with employment experience play the role of applicants. This study provides a deeper understanding of the meaning of fairness, as well as clarifying earlier contentious studies on AI and fairness.
5. Abhijeet Thakur, Punam Kumar Hinge et.al (2022) The purpose of this paper is to examine the use of artificial intelligence (AI) in recruitment and selection. We have identified theoretical gaps and links with related literature; we have outlined our study question in detail. The research investigates how AI can broaden the pool of candidates. It also improves our knowledge of how AI-based HRM tools might lessen biases in candidate selection, which is very crucial.

### III. OBJECTIVES

- To study the impact of artificial intelligence in recruitment and selection process.
- To study the awareness towards AI recruitment.

### IV. RESEARCH METHODOLOGY

Research methodology is the planned way to collect, analyze, and present data for reliable results. This study uses a mix of descriptive (to describe AI use) and analytical (to check impacts) methods, best for understanding HR views on AI in hiring. Quantitative surveys provide numbers, while qualitative questions add deeper insights.

### V. DATA COLLECTION

- Primary Data: Fresh information from a structured questionnaire (Google Forms) sent to 100 respondents. Questions cover demographics, AI tool use, benefits, risks, and opinions on Likert scales.
- Secondary Data: Books, journals, and websites on AI recruitment trends.

### VI. SAMPLE SIZE AND SAMPLING TECHNIQUE

Convenience sampling is used to collect data who are selected based on easy access. Data has been collected from 100 respondents.

### VII. TOOLS FOR DATA ANALYSIS

- Percentages
- Mean scores

### VIII. AI EVENTUALLY REPLACE HUMAN RECRUITERS

S.NO	PARTICULARS	NO OF RESPONDENTS	PERCENTAGE
1	Yes, within the next 5-10 years	50	50%
2	Yes, but only for entry-level/high-volume roles	36	36%
3	No, recruiters will always be needed for final judgment and negotiation	11	11%
4	No, AI is just a temporary trend	3	3%
	Total	100	100%

#### Interpretation

From the above table, it is interpreted that 50% of respondents choose Yes, within the next 5-10 years, 36% of respondents choose Yes, but only for entry-level/high-volume roles, 11% of respondents choose No, recruiters will always be needed for final judgment and negotiation, and 3% of respondents choose No, AI is just a temporary trend. Hence, 50% of the respondents expect full AI takeover in recruitment within 5-10 years.

### X. AWARENESS TOWARDS AI RECRUITMENT

S.NO	PARTICULARS	TOTAL	MEAN	STANDARD DEVIATION
1	AI-powered resume screening	100	3.2800	.62085
2	Chatbots for candidate screening	100	3.9900	.70345
3	Video interview analysis	100	3.6500	.85723
4	Predictive analytics	100	2.5400	.88671
5	Gamified assessments	100	2.8100	1.13436

#### Interpretation

From the above table, it is interpreted that the mean scores for AI tools in recruitment are as follows: Chatbots for candidate screening (3.99), Video interview analysis (3.65), AI-powered resume screening (3.28), Gamified assessments (2.81), and Predictive analytics (2.54). Hence, chatbots for candidate screening received the highest mean

score of 3.99, indicating the strongest agreement or preference among respondents.

## XI. FINDINGS

- The majority of respondents (50%) believe AI will replace recruiters within 5– 10 years.
- The study reveals that respondents maintain a moderate to high level of caution regarding digital security, specifically concerning cyber threats and network vulnerabilities. With a mean score of 3.46 (SD = 0.80), participants demonstrate a solid awareness of general cyber threats during online transactions, while an even higher mean score of 3.58 (SD = 0.76) indicates a specific and widespread agreement that public Wi-Fi poses a significant risk to transactional safety.

## XII. SUGESSTION

- Organizations should not use AI as a final decision-maker. Instead, implement a "Human-in-the-Loop" model where AI handles the high-volume data (sourcing and screening), but human recruiters lead the final stages of interviewing and cultural fit assessment.
- Companies should adopt "Explainable AI" tools that provide a clear reason why a candidate was ranked high or low.
- Regular Bias Audits should be mandatory. This involves "blind screening" where AI is specifically programmed to ignore demographic markers like names, gender, or age, and focus solely on skills-based keywords.
- Use Conversational AI (Chatbots) for administrative tasks like 24/7 status updates and interview scheduling, but ensure that the transition to a human recruiter is seamless.
- Companies must provide a "Transparency Notice" at the start of the application, informing candidates exactly how their data will be used by AI and offering an "opt- out" for sensitive assessments

## XIII. CONCLUSION

AI changes hiring for the better by cutting time 30-75% and matching people to jobs faster. Student surveys show AI saves work, lowers costs, and finds good fits better than old ways. Problems like bias or privacy can be fixed with rules and checks. In India with many languages and job seekers, use AI plus people together. AI scans resume quick, but humans check team fit and passion. This mix keeps hiring fair for women, rural folks, and all groups. The study proves AI helps HR work less, hire speedier, and keep workers longer. Businesses grow stronger from diverse teams. Follow DPDP Act 2023 rules for safe data use in AI tools like video interviews. Train HR and students on AI resumes. This way, AI fights talent shortages and builds better workforces. People and machines team up best. Rules make it honest and open for India's big job market in 2026.

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