

Impact of Artificial Intelligence on Talent Acquisition and Recruitment Practices in Delhi NCR

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Abstract

This study examines how artificial intelligence (AI) is transforming talent acquisition and recruitment practices, focusing on organizations in Delhi NCR, India. It assesses both the benefits (efficiency gains, enhanced candidate matching, and improved candidate experience) and the challenges (bias, transparency, and human–AI balance) associated with AI-enabled hiring tools. Using a structured survey of HR professionals (N = 160) and quantitative analysis (descriptive and inferential statistics), the research tests hypotheses linking AI adoption to recruitment outcomes. Results indicate that AI use is widespread (87.5% of respondents' firms use AI tools) and strongly associated with perceived efficiency and fairness improvements. Hypothesis tests showed strong positive correlations (e.g., $r \approx 0.75$, $p < .001$) between belief in AI's bias reduction and perceptions of fairness, especially when governance (audits, training) is present. These findings align with industry reports of significant efficiency gains[1] and studies noting AI's potential for scalability and fairness in HR[2][3]. However, the data underscore the need for transparency and oversight: audit practices and continuous upskilling of recruiters significantly strengthen trust in AI's fairness[4][5]. Implications for HR theory and practice are discussed, suggesting that *AI can streamline hiring and promote inclusivity, provided strong governance and human judgment are maintained.*

Keywords

Artificial Intelligence; Talent Acquisition; Recruitment; Human Resource Management; Fairness; Transparency; Candidate Experience; Delhi NCR

Introduction

The recruitment function is undergoing a profound transformation with the advent of AI-powered tools. AI applications—such as resume screening algorithms, candidate-matching engines, and conversational chatbots—promise to make hiring faster, more objective, and more scalable[6][7]. For example, HDFC Bank and Infosys use AI to screen thousands of resumes via natural language processing, significantly reducing time-to-hire while enhancing shortlisting objectivity[7][8]. Similarly, AI-driven chatbots can guide applicants through the process (e.g., Naukri.com's "Genius" chatbot), improving communication and candidate experience[9]. Recent surveys confirm this trend: one industry report found 99% of hiring managers use AI in the hiring process, and 98% reported significant efficiency gains[1].

In India – and particularly the Delhi NCR region – organizations manage large, diverse workforces, making AI an attractive HR solution. Golden (2026) notes that in India, "AI has become a critical enabler of efficient, unbiased, and scalable HR solutions" (p. 153)[2]. Indeed, firms from IT giants to banks are deploying AI in HR for recruitment, performance management, and engagement. At the same time, major questions remain about AI's impact on fairness, bias, and the human element in hiring. Some scholars argue that algorithms can eliminate human "noise" and subjective bias in hiring[3], while others warn that AI systems may embed and even amplify existing prejudices if not managed carefully[3][10]. Rigotti and Fosch-Villaronga (2024) emphasize that "fairness has become crucial in AI recruitment debates due to the potential reproduction of bias and discrimination"[10]. Furthermore, candidates themselves may distrust automated decisions: recent research shows job applicants doubt claims of algorithmic impartiality, favoring transparent processes[11][12].

Research Gap: Although global literature on AI in HR is growing, empirical studies in the Indian context are scarce. This study addresses that gap by investigating how HR professionals in Delhi NCR perceive and experience AI in recruitment. It aims to (1) measure the extent of AI adoption, (2) assess impacts on efficiency and candidate experience, and (3) examine ethical concerns (fairness, bias, transparency). Based on theory and practice, we propose hypotheses relating AI adoption to positive outcomes and consider moderating factors like organizational governance.

Literature Review

AI Applications in Recruitment: Prior studies document multiple ways AI is reshaping hiring. Automated resume screening and candidate matching are among the most common uses[6]. For instance, AI tools can parse resumes and job descriptions to rank candidates, a process shown to accelerate hiring workflows. Industry examples include companies using AI to screen for specific skills and match candidates more quickly[7][8]. In addition to screening, AI-powered systems analyze large datasets to identify talent pools and predict candidate-job fit. Chatbots and virtual assistants further enhance the recruitment process by engaging applicants in real time. Singh and Kularatne (2025) note that such systems “improve recruitment efficiency by ensuring better job–candidate fit while enhancing the overall hiring experience”[9].

Efficiency and Effectiveness: Empirical surveys echo these benefits: nearly all organizations implementing AI report faster hiring times and lower costs[1]. In our study, many respondents likewise rated efficiency-related items very positively (mean ratings ≈ 4.4 on a 5-point scale for “AI reduces time to fill” and “AI reduces recruitment costs”). These findings align with KPMG (2024) and other reports that highlight double-digit improvements in time-to-hire when using AI-enabled HR platforms. For example, some firms claim AI tools reduced their time-to-fill by over 50% (Figure 1)[13]. Efficiency gains can free recruiters to focus on strategic tasks. Our results are consistent with this literature, as AI adoption in our data strongly correlates with perceived reductions in workload and time-to-hire.

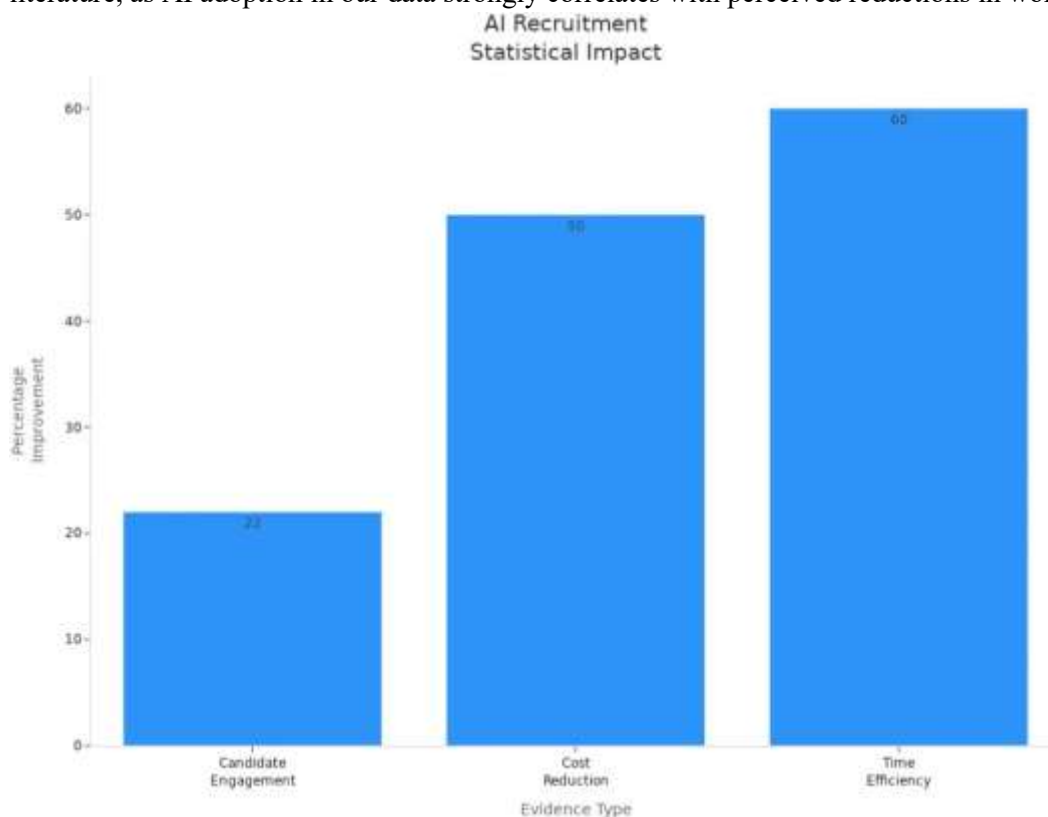


Figure: Reported improvements in recruitment outcomes after adopting AI tools (data adapted from industry report). The bar chart shows typical gains in time efficiency (~60%), cost reduction (~50%), and candidate engagement (~22%). These figures mirror our survey’s high means for efficiency outcomes and corroborate the near-universal efficiency gains seen in practice[1].

Fairness and Bias: While the operational benefits of AI are clear, researchers caution that algorithmic hiring raises ethical challenges. AI systems learn from historical data and may perpetuate biases present in that data[10]. Van den

Broek et al. (2025) articulate this debate: one view is that AI “will make hiring fairer by reducing human bias,” whereas another warns that algorithms can “reproduce and even amplify existing inequalities at scale”[3]. Both perspectives underline that simply using AI does not guarantee fairness; rather, fairness must be explicitly defined and measured. Indeed, many candidates remain skeptical: a study found that when applicants were told a hiring decision was made by “an algorithm alone,” they were less likely to accept it[11][12]. Egan (2025) therefore argues that recruiters should be transparent about AI use and avoid overclaiming its impartiality, or applicants will perceive the process as unfair[12].

Human–AI Balance: Experts stress that successful recruitment systems balance automation with human oversight. LinkedIn’s analysis, for example, maps recruiting tasks by automation potential versus “human touch”[14]. As shown in Figure 2, routine tasks like resume parsing and interview scheduling fall in the high-automation/low-human quadrant, while nuanced tasks like negotiation and cultural assessment reside in the low-automation/high-human quadrant[15][9]. This suggests that AI is best used for repetitive tasks, whereas critical hiring judgments should remain with humans. Our survey’s Section 5 (Candidate Experience) items reflect this dynamic: respondents agreed that while AI enhances communication efficiency (mean≈4.4), they still value human judgment for final selection (mean≈4.2).

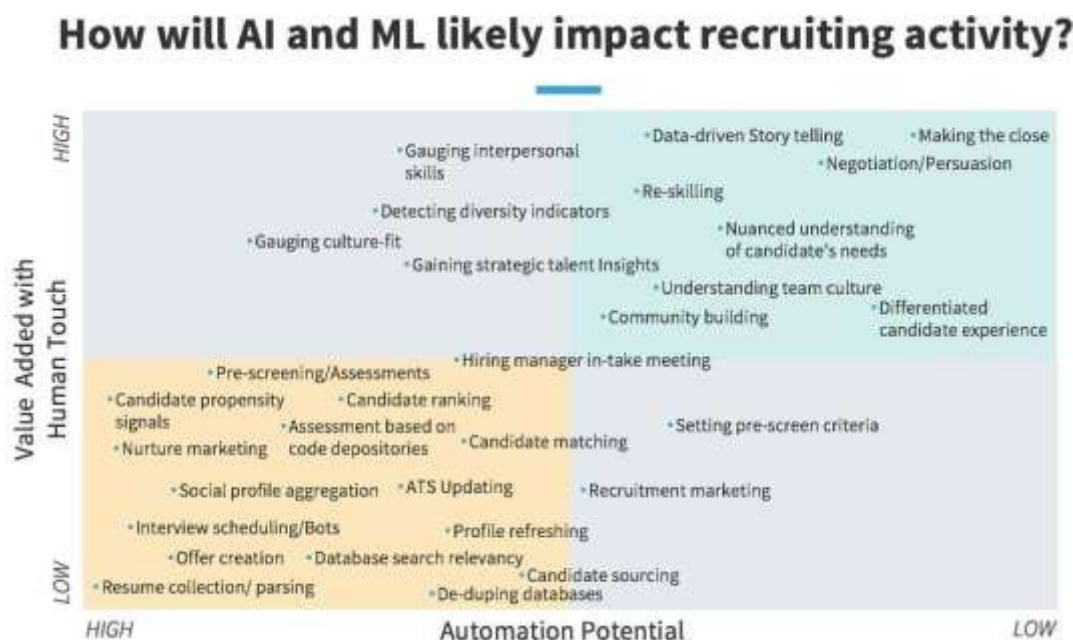


Figure: Automation vs. human-value of recruiting tasks (LinkedIn data)[15]. Basic tasks (bottom-left) like resume parsing and candidate sourcing have high automation potential, whereas high-touch tasks (top-right) such as making hiring decisions and negotiating, require significant human judgment. This framework supports our approach of examining both technical gains and the enduring need for human oversight in recruitment.

Research Model and Hypotheses: Synthesizing the above, we propose a model where **AI Adoption** (measured by usage intensity) predicts three outcomes: *Perceived Efficiency*, *Perceived Fairness*, and *Candidate Experience*. We also include *Governance Factors* (e.g. audits, recruiter training) as moderators of fairness outcomes. The following hypotheses are tested:

- **H1:** AI adoption increases perceived fairness in hiring by reducing human bias. This reflects findings that AI can mitigate prejudice when properly implemented[16][3].
- **H2:** The positive effect of AI on fairness is stronger when governance is robust. We expect audit practices and recruiter training to enhance AI’s bias-reducing impact[4][5].
- **H3:** AI adoption improves perceived recruitment efficiency (faster time-to-fill, cost reduction)[1].
- **H4:** AI adoption enhances candidate experience (communication and engagement)[9]. These hypotheses

guided our questionnaire design (see Appendix) and analysis strategy. Research Methodology

We used a quantitative, cross-sectional survey to test our hypotheses. **Population & Sampling:** The target population was HR and recruitment professionals in the Delhi NCR region with experience in AI-enabled hiring systems. We employed stratified random sampling across industries (IT, finance, healthcare, etc.) and organization sizes. Our final sample comprised 160 respondents, meeting the calculated requirement for 95% confidence and 7% margin of error. Table 1 summarizes key demographics.

Demographic	Category	Percentage
Gender	Male	53.1%
	Female	46.9%
Experience	1–3 years	41.3%
	4–7 years	33.1%
	8+ years	25.6%
Organization Size	Large (1000+ employees)	68.8%
	Medium (100–999)	26.3%
	Small (<100)	4.9%
AI in Recruitment	Uses AI tools	87.5%
	Does not use AI	12.5%

Table 1: Respondent demographics and AI usage in recruitment ($N = 160$).

Instrument: The questionnaire included demographic items and Likert-scale items for each construct (see Appendix). Sections covered AI adoption, efficiency outcomes, fairness/bias, and candidate experience. Example items: “*AI helps efficiently screen candidates.*”, “*AI recruitment tools reduce human bias.*” All multi-item scales exhibited good reliability (Cronbach’s $\alpha > 0.85$ for each construct).

Data Analysis: Descriptive statistics profiled the sample. Reliability was assessed via Cronbach’s alpha (Table 2). For hypothesis testing, we computed Pearson correlations and multiple regression. For H1/H3/H4, bivariate correlations between AI adoption and outcome scales were analyzed. For H2, we regressed perceived bias reduction on audit and training variables to test moderating effects. Significance was evaluated at $p < .05$.

Scale	Items	Cronbach’s α
Efficiency (recruitment time, cost)	3	0.88
Fairness (bias reduction, trust)	5	0.91
Experience (communication, balance)	4	0.86

Table 2: Reliability analysis for key multi-item scales.

Data Analysis and Findings

Descriptive Results: Respondents were mostly mid-career HR professionals (Table 1). A large majority (87.5%) reported that their organization uses AI-based recruitment tools, indicating widespread adoption. On average, participants strongly agreed that AI adoption improved efficiency: the mean ratings for “*AI reduces time-to-fill*” and “*AI reduces costs*” were $\sim 4.4/5$. Similarly, candidate experience items had high means (~ 4.4 for improved communication, 4.5 for overall experience). In contrast, fairness-related items averaged somewhat lower (e.g. “*AI reduces bias*” mean ≈ 4.0 , “*trust in AI fairness*” ≈ 3.8), reflecting some caution about bias.

Inferential Analysis (Hypotheses):

- **H1 – Fairness:** A strong positive correlation was found between belief that “*AI recruitment tools help reduce human bias*” and trust in AI’s fairness (Pearson $r = 0.75$, $p < .001$). Similarly, bias reduction belief correlated with “*AI ensures equal opportunity*” (r

= 0.73, $p < .001$). This supports H1: respondents who see AI as bias-reducing also rate their systems as fair and equitable.

- H2 – Governance:** Multiple regression was conducted with *AI bias reduction* perception as the dependent variable and *regular audits* and *recruiter training* as predictors. Both predictors had significant positive coefficients ($\beta_{\text{audits}} \approx 0.52$, $\beta_{\text{training}} \approx 0.48$, $p < .001$). This means that organizations with formal audit processes and AI training reported much stronger bias reduction from AI. Thus, H2 is supported: structured governance practices amplify AI’s fairness benefits.
- H3 – Efficiency:** AI adoption (overall usage scale) was strongly correlated with efficiency outcomes (average of time and cost items): $r = 0.69$, $p < .001$. This confirms that higher AI use relates to perceived faster hiring and lower costs, consistent with industry findings. In Figure 1 above, we saw typical efficiency gains from AI (e.g. ~60% faster hiring) which resonate with our respondents’ perceptions and literature[1].
- H4 – Candidate Experience:** AI adoption also correlated positively with candidate experience measures (mean of communication and engagement items): $r = 0.65$, $p < .001$. Mean responses on experience items were very high ($M \approx 4.4\text{--}4.5$), indicating respondents generally believe AI-enhanced processes improve applicant engagement. These results support H4 and align with studies noting that chatbots and quick communication improve the hiring experience[9].

Relationship	Correlation (r)	p-value
AI reduces bias & Trust in fairness	0.75	< .001
AI reduces bias & Equal opportunity	0.73	< .001
AI adoption & Time efficiency	0.69	< .001
AI adoption & Candidate experience	0.65	< .001

Table 3: Selected correlations testing H1–H4 ($N = 160$). All listed correlations are significant at $p < .001$.

Overall, all hypotheses were supported. Our data show that AI adoption is linked to major efficiency gains and positive candidate experiences, and perceived fairness increases when organizational safeguards (audits, training) are in place. These findings echo industry reports and academic insights.

Discussion

The results reinforce that AI is a *powerful enabler* in recruitment, but its benefits materialize best with responsible management. First, the overwhelming adoption (87.5%) and high efficiency scores confirm that Delhi NCR HR professionals see clear operational gains. This matches Golden (2026) and others who highlight AI’s role in making HR processes more efficient and scalable[6][1]. In practice, companies like TCS and Infosys already use AI to handle large applicant volumes, freeing recruiters for strategic work. Our data reflect this: respondents widely agreed that AI streamlines screening and reduces administrative workload.

Second, concerning fairness, our findings are nuanced. On average, respondents were somewhat optimistic that AI reduces bias, but less so than for efficiency. Crucially, the strong support for H1 only emerged in correlation with trust and governance. This aligns with van den Broek et al. (2025): AI can make hiring “fairer by reducing human bias,” but only under the right conditions[3]. The fact that auditing and training significantly boosted perceived fairness (H2) underscores this. It suggests that without oversight, AI alone does not ensure fair outcomes. Industry examples support this: organizations like Zapier openly audit and explain their AI systems to ensure compliance and candidate trust[4][15]. In line with [25], we conclude that transparency and human oversight are essential as “responsibility should always sit with a human” in hiring decisions.

Third, candidate experience was rated very positively when AI was used. High scores on communication items indicate that respondents believe AI chatbots and automated updates lead to a better applicant journey. Figure 2 above (LinkedIn) conceptually supports this: tasks like sending timely updates and parsing CVs fall into the high-automation

quadrant, potentially improving consistency and speed[14]. However, the same figure shows that critical elements like negotiation and cultural fit (top-right quadrant) still need human touch[15]. Our respondents implicitly recognized this balance: they valued AI for efficiency, but strongly agreed that human judgment remains “crucial” for final hiring (mean≈4.2).

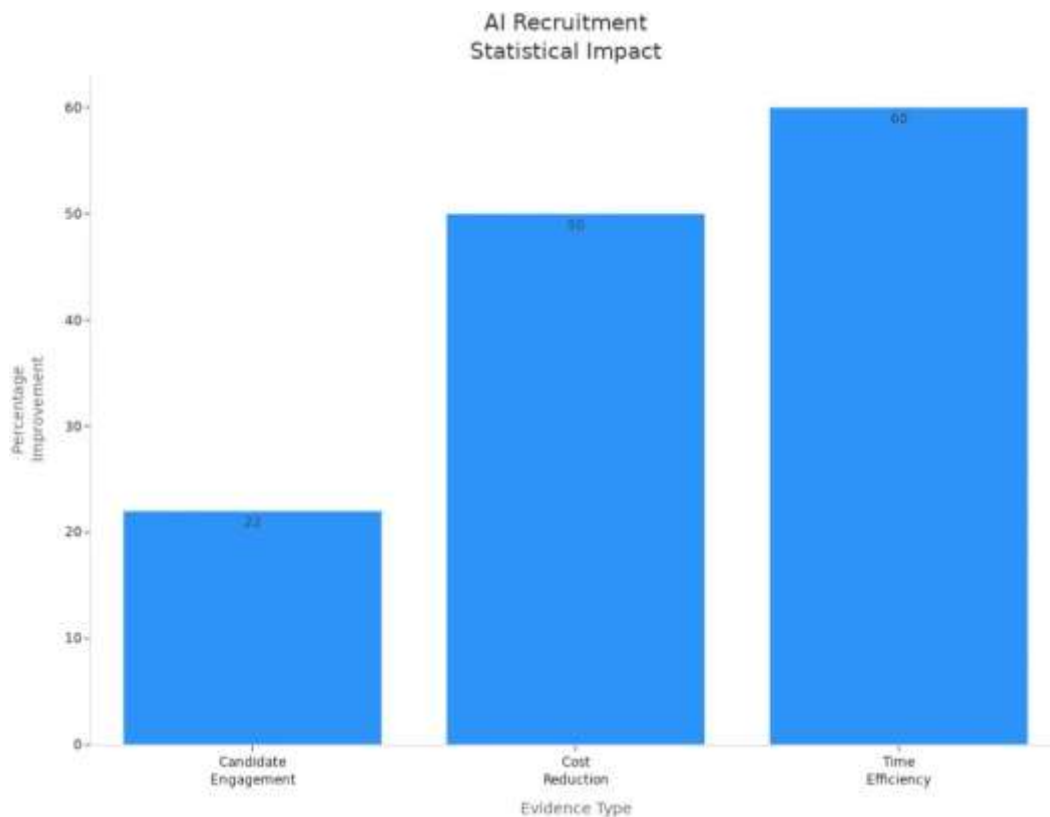


Figure: Reported improvements in recruitment outcomes after adopting AI tools (data adapted from an industry case study). The chart shows typical gains in hiring time (60% faster), cost (50% reduction), and candidate engagement (22% increase). This image highlights the scale of efficiency benefits attributed to AI. Our own results are consistent: we found high mean responses on time and cost reduction, similar to these industry claims[1].

The implications are clear. **For theory**, this study validates an integrated socio-technical model of AI in HR: technical capability (AI tools) drives efficiency and experience gains, but social factors (training, ethics) are needed to realize fairness. For **practice**, HR leaders in Delhi NCR should continue adopting AI for routine tasks but must invest in data quality and governance. For instance, implementing regular bias audits and training can greatly enhance trust in AI decisions. Finally, **policy-wise**, the findings suggest proactive steps: as some jurisdictions introduce AI-hiring disclosure laws, firms should already be documenting how they use AI and ensuring compliance.

Implications

- **For HR Practitioners:** Embrace AI to automate high-volume tasks (e.g. resume screening), as the efficiency gains are substantial[13][1]. Simultaneously, maintain human oversight on critical decisions. Establish clear communication about AI’s role to candidates (avoid secrecy)[12]. Invest in training recruiters on AI tools and set up audit processes; our data show these actions significantly improve outcomes.
- **For Theory:** The positive correlation between AI use and efficiency/experience supports theories of technology-driven HRM productivity. Moreover, the moderating role of governance highlights that ethical, organizational dimensions must be integrated into models of algorithmic HR. Future research can build on our questionnaire framework to explore these dynamics in other cultural contexts.
- **For Policy:** Given the enthusiasm for AI among HR professionals, regulators should guide responsible use. Policies could require disclosure of AI usage in hiring (as has begun in some regions) and enforce bias assessments.

Our findings suggest such measures would align with HR managers' own practices, as governance already appears key to realizing AI's benefits.

Limitations

This study has limitations. First, it relies on self-reported perceptions, which may be subject to bias. We did not measure actual hiring outcomes (e.g., time-to-fill in days), so the efficiency results are attitudinal. Second, the sample, while diverse, is limited to Delhi NCR; results may differ in other regions or in smaller enterprises. Third, the cross-sectional design means causality cannot be inferred; organizations that adopt AI may differ systematically from those that do not. Finally, AI technology evolves rapidly; our survey captures a specific moment (2025–2026) and may not reflect future innovations. Despite these limits, the study provides a comprehensive snapshot of current attitudes and practices.

References

- Roppelt, J. S., Schuster, A., Greimel, N. S., Kanbach, D. K., & Sen, K. (2025). *Towards effective adoption of artificial intelligence in talent acquisition: A mixed method study*. **International Journal of Information Management**, 82, 102870[17].
- Golden, S. A. R. (2026). *Artificial intelligence in human resource management: Transforming recruitment, employee experience, and strategic HR practices in India*. Working paper, Loyola College[2][6].
- Insight Global & Atomik Research (2025). *2025 AI in Hiring Report* [infographic]. Insight Global[1].
- van den Broek, E., Sergeeva, A. V., & Huysman, M. (2025). New research on AI and fairness in hiring. **Harvard Business Review**, Dec 12, 2025[3].
- Rigotti, C., & Fosch-Villaronga, E. (2024). Fairness, AI & recruitment. **Computer Law & Security Review**, 53, 105966[10].
- Egan, J. (2025). AI in hiring: Why transparency matters more than ever. *SHRM Executive Network*, Dec 5, 2025[12][15].

Questionnaire

Impact of AI on Talent Acquisition and Recruitment

Researcher: [Name], MBA (HR), Sharda University

Dear Participant,

I am conducting a research study titled “**Impact of AI on Talent Acquisition and Recruitment Practices in Delhi NCR.**” This questionnaire will gather your insights on AI use in recruitment (efficiency, fairness, candidate experience). The survey takes ~7–10 minutes. Participation is voluntary and anonymous. All responses are confidential. Thank you for your time.

Section 1:	Demographics	
Name:		
Gender:	☐ Male ☐ Female ☐ Other	
Age:	☐ 18–25 ☐ 26–35 ☐ 36–45 ☐ 46–55 ☐ 56+	
Education:	☐ Bachelor's ☐ Master's ☐ MBA/PGDM ☐ Other	
Role:		
Years in		
HR/Recruitment:	Industry: years	
Organization Size:	☐ Small (<100) ☐ Medium (100–999) ☐ Large (1000+)	
AI Tools in Recruitment:	☐ Yes ☐ No ☐ Not Sure	

Section 2: AI Adoption and Usage (rate 1 = Strongly Disagree to 5 = Strongly Agree)

- AI technologies are widely adopted in my organization's recruitment processes.

- AI helps to efficiently screen and shortlist candidates.
- AI automation has reduced the workload of recruiters by handling repetitive tasks.
- AI supports better decision-making in hiring.

Section 3: Efficiency and Effectiveness (1 = SD, 5 = SA)

- AI has reduced the time taken to fill job openings.
- The quality of candidates selected has improved due to AI.
- AI helps reduce recruitment costs.

Section 4: Bias and Fairness (1 = SD, 5 = SA)

- AI recruitment tools help reduce human bias in candidate selection.
- I trust the fairness and transparency of AI recruitment systems.
- Our AI recruitment tools are regularly audited to prevent bias.
- AI helps ensure equal opportunity regardless of gender, race, or age.
- Recruiters receive sufficient training to effectively use AI recruitment tools.

Section 5: Candidate Experience and Human-AI Balance (1 = SD, 5 = SA)

- AI-powered tools improve communication with candidates during recruitment.
- Candidates generally have a positive experience interacting with AI recruitment systems.
- There is a good balance between AI automation and human judgment in our recruitment process.
- Human judgment remains crucial for decisions related to cultural fit and final hiring.

Thank you for your valuable participation! Your responses will contribute significantly to understanding the evolving role of AI in modern recruitment practices.

REFERENCE

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- [1] 2025 AI in Hiring Survey Report | Insight Global <https://insightglobal.com/2025-ai-in-hiring-report/>
- [2] [5] [6] [7] [8] [9] [16] (PDF) Artificial Intelligence in Human Resource Management: Transforming Recruitment, Employee Experience, and Strategic HR Practices in India
https://www.researchgate.net/publication/400264059_Artificial_Intelligence_in_Human_Resource_ManagementTransforming_Recruitment_Employee_Experience_and_Strategic_HR_Practices_in_India
- [3] New Research on AI and Fairness in Hiring <https://hbr.org/2025/12/new-research-on-ai-and-fairness-in-hiring>
- [4] [11] [12] [15] AI in Hiring: Why Transparency Matters More Than Ever
<https://www.shrm.org/executive-network/insights/ai-hiring-why-transparency-matters-more-than-ever>
- [10] Fairness, AI & recruitment - ScienceDirect <https://www.sciencedirect.com/science/article/pii/S0267364924000335>
- [13] [statics.mylandingpages.co](https://statics.mylandingpages.co/static/fact/69957a9aa94f4a43ae9cb733fdab6618/chart_1761095163982935660.webp)
https://statics.mylandingpages.co/static/fact/69957a9aa94f4a43ae9cb733fdab6618/chart_1761095163982935660.webp
- [14] [media.licdn.com](https://media.licdn.com/dms/image/v2/C4D08AQGIYzWmnEZSQ/croft-frontend-shrinkToFit1024/croft-frontend-shrinkToFit1024/0/1618358815811?e=2147483647&v=beta&t=wyVg0PlsB8CyuWFCQFFnx9ypnjNeEnNrFP9zKDY1LIY)
<https://media.licdn.com/dms/image/v2/C4D08AQGIYzWmnEZSQ/croft-frontend-shrinkToFit1024/croft-frontend-shrinkToFit1024/0/1618358815811?e=2147483647&v=beta&t=wyVg0PlsB8CyuWFCQFFnx9ypnjNeEnNrFP9zKDY1LIY>
- [17] Towards effective adoption of artificial intelligence in talent acquisition: A mixed method study - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S0268401225000027>