

Content available at: <https://www.ipinnovative.com/open-access-journals>

Journal of Management Research and Analysis

Journal homepage: <https://jmra.in/>

Original Research Article

Artificial intelligence in recruitment: A conceptual study of its impact on the Bangalore IT industry

Nayana S¹, Niranchana Shri Viswanathan^{1*}, Siva Shanmugam¹¹Dept. of School of Management Studies, Sapthagiri NPS University, Bengaluru, Karnataka, India

Abstract

This study provides a reflection of the increasing Artificial intelligence intervention in recruitment practices in the Bangalore high-tech industry. AI resume screening, candidate sourcing, and initial assessments are gaining popularity with several companies as well as established startups, such as Goldman Sachs, Infosys, Wipro, and TCS. Based on a review of literature, industry white papers, and conceptual models such as research advertisements, this paper explicates how AI is gaining momentum and aiding faster recruitment cycles, that is, reducing time-to-hire and minimizing human bias, thus ensuring a better experience of the candidate. Through the lens of a theoretical basis, this also deals with some crucial dilemmas, such as ethical questions, data privacy, and the possible overreliance on technology in hiring. We propose a strategic recruitment model that fuses AI-driven automation and human judgment to optimize decision-making quality. This study adds to the ongoing debate concerning AI in HRM by providing implications for HR policymakers and practitioners in Bangalore's IT sector. The report calls for responsible AI to balance fairness, transparency, and accountability in talent acquisition. The results of this analysis will be used to help guide our future HR strategies and assist us in adopting the right balance of technology-enabled tools in recruitment, making the human factor a core part of what drives recruitment.

Keywords: Artificial intelligence, AI application, Recruitment, Innovation.

Received: 28-06-2025; **Accepted:** 10-09-2025; **Available Online:** 2025

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprint@ipinnovative.com

1. Introduction

1.1. Recruitment

Advancement- through technology and its near access have transformed human resources into the way it is today. The chief among them is Artificial Intelligence (AI), particularly in the domain of hiring. ” Bangalore, the Silicon Valley of India, is home to several IT companies, many of which are early adopters of AI in HR functions. This study analyzes a phenomenon that introduces AI in the role of recruitment, particularly the conceptual schema of AI-informed recruitment in Bangalore's IT industry. AI can enhance recruitment decisions as a task of searching, screening, and selecting potential qualified candidates for a particular job. The goal is to find the right person for the right job at the right time. It is both internal (recruitment from within the

organization) and external (recruitment from outside the organization). Recruitment is a subset of the human HRM process. It centers around creating a large pool of candidates that are good enough an organization can then select one. Recruitment, as a process, has evolved substantially over the years, largely influenced by technology, globalization and the needs of organizations.

*Corresponding author: Niranchana Shri Viswanathan
Email: niranchanaphd@gmail.com



Figure 1: ERA

1.2. The old order (Pre-1980s)

Indenting manually: Advertisements in newspapers or Notice Boards and Internal referrals. Word-of-mouth and personal relationships were the most significant paths to hire. Walk-in Candidates walked into an establishment to apply. Binns et al. (2018) suggested that algorithmic recruitment might reduce candidates to mere data points.

1.3. The age of computerization (1980s~1990s)

Simple computerized databases to record applications (submission by email) 25. Just the very first evidence of job boards started to sprout up. Email Resumes: Applications began transitioning from paper to email.

1.4. E-recruitment & internet age (2000s)

Online Job Portals, Sites like Naukri.com Monster Indeed, has become more popular. Company website Organizations established from scratch “Careers” pages. Recruitment: Job Agencies & Niche firms soon offered mass recruitment solutions.

1.5. Digitization & AI-powered age (2010s–Present)

There are also words you should use when discussing the recruitment process: Social Media Recruitment, LinkedIn, Facebook, etc., using these sites to find candidates and advertise jobs Applicant Tracking Systems (ATS) – Software use to sort and manage applications. Automated resume screening, AI (Artificial Intelligence), chatbots, candidate analyses. Hiring Data, Predictive analytics to measure candidate potential



Figure 2: AI in recruitment

From the time of manual and paper-based process recruitment, it has reached the level when it is now

automated and an AI-based process. Now, it is not about filling positions, but about extracting the most strategic talent to support the goals of the company.

1.6. Artificial intelligence (AI)

AI adoption in hiring presents both opportunities and challenges for AI applications vs. AI technology; differences in practical aspects of AI applications include the application of artificial intelligence, such as decision making, learning, and perception, to solve problems such as speech and pattern recognition (Hosain et al., 2025). Artificial intelligence applications use processes that reflect human cognition; however, they are not necessarily like human cognition. Deloitte (2023) emphasized the growing role of AI in HR transformation. Artificial intelligence is increasingly being used to automate screening processes and reduce hiring time Upadhyay & Khandelwal, (2018). These problems take forms such as learning from data (machine learning), understanding and processing natural language, identifying images and patterns, making decisions, and tasking with human beings. AI systems are intended to enhance the efficiency, speed, and accuracy of a range of tasks by reproducing cognitive functions, including reasoning, problem solving, and learning from new data. The integration of human judgment with AI algorithms is essential to avoid overreliance on automated systems Chamorro-Premuzic et al., (2017).

AI tools can enhance objectivity in recruitment, although concerns regarding fairness and bias remain (Binns et al., 2018; Jeske & Shultz, 2015). AI is used in everyday life and industries in various fields. In business, for example, According to Tambe et al., (2019), AI can create a paradox in which efficiency is gained, but human values are lost. AI underlies chatbots that provide customer services, fraud detection systems, and data-driven decision-making tools. In medicine, it helps diagnose diseases, identify new drugs, and maintain patient records. In finance, AI is used for credit scoring, fraud detection, and automated trading. Education benefits from AI through personalized learning platforms and smart tutoring systems, retail businesses through product recommendations, and inventory forecasting. In addition, in human resources, AI is gaining recognition, notably in the recruitment process where it automates the resume review, evaluates the candidates, and even the video call texting. As noted by Kshetri (2021), ethical considerations must guide the adoption of AI in HRM.

In other words, AI apps are transforming the way in which industries function by increasing efficiency and decreasing the requirement of manual labor. With further deepening of data and technology, the range and effect of AI applications in each field will grow further.

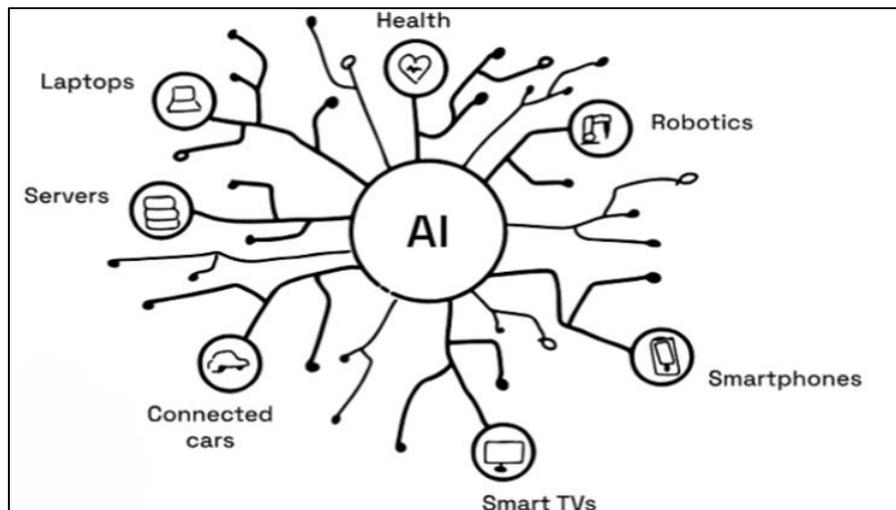


Figure 3: Framework author's work

TAM, introduced by Davis in 1989, is a popular model for explaining technology acceptance among users. It conceptualizes two main antecedents of an individual's intention to use new technology: the Perceived Usefulness (PU) and the Perceived Ease of Use (PEOU). Perceived Usefulness is defined as the degree to which an individual believes that using a system will improve his or her job performance, whereas Perceived Ease of Use refers to the degree to which an individual believes that using a particular system will be free of effort. If AI is adopted, especially in a place like Bengaluru's IT industry, HR people will lean more towards acceptance of an AI tool if they perceive there to be a benefit from AI to manage the recruitment process or cut down on the time it takes to hire. In addition, if these tools are easy to learn and plug into current HR systems, they will be put into use skyrockets. Accordingly, TAM offers a relevant theoretical framework to explain how HR decision makers perceive and integrate AI technologies within the process of recruitment.

2. Objectives of the Study

1. To know how AI is used in the Recruitment Processes in IT.
2. To examine the pros and cons of using AI in hiring.
3. To investigate the ethical and practical implications of adopting AI for recruitment.
4. To introduce a theoretical model for responsible adoption of AI technology in recruitment.

3. Literature Review

Artificial Intelligence in hiring has been extensively researched in recent years. AI tools, including automated resume screening and chatbot communication, assist in the first hiring stage, especially in industries with many employees, such as IT. According to (Deloitte 2023), AI decreases hiring time by 40% and increases candidate-job fit by 15%. (Binns et al. 2018) pose questions related to fairness and transparency and call attention to the fact that training

data may carry human biases that an algorithm trained on these data can perpetuate. Underscore the increasing need for humans in the loop in AI to facilitate ethical decision-making. There is also evidence that, although AI improves efficiency and repeatability, no entirely human-free process of cultural fit measurement and final selection will occur because of AI. In general, the literature seems to agree that AI, if applied responsibly, promises to serve as an effective weapon to increase recruitment efficiency in tech-enabled job markets, such as IT in Bangalore.

4. AI use Cases in Recruiting

4.1. Resume screening

AI software can read through and sort thousands of resumes. It scours candidates' video resumes for keywords related to the job, helping the HR team quickly find the best-matched candidates without losing hours manually reviewing each one.

4.2. Chatbots

Employers use A.I. chatbots to respond to candidates' questions, gather basic information, and schedule interviews. This saves applicant time and provides them with fast answers, thus enhancing their experience.

4.3. Predictive analytics

Using its hiring data, AI can determine which candidates are most likely to succeed in a role. This makes it easier for companies to make data-backed hiring decisions; video Interview Analysis Some AI tools can analyze recorded video interviews and detect body language, tone, or facial expressions. This can give recruiters a peek into their personality and confidence.

5. Advantages of AI in IT Recruitment

5.1. Efficiency

AI can reduce the time required to hire people by automating tedious tasks such as sorting resumes and scheduling interviews.

5.2. Cost savings

Because time is saved and much of the process is carried out automatically, a company saves money on its HR staff and hiring platforms.

5.3. Candidate experience

With AI, candidates receive quicker feedback and more constructive feedback; this elevates the overall hiring process even more positively and interestingly.

5.4. Data is king

Instead of relying on gut feelings, AI can enable recruiters to use data to make fair and rational decisions for those who deserve to be hired.

6. Challenges and Ethical Concerns

6.1. Bias in algorithms

When the data used to train A.I. are biased (such as favoring one gender or college), they will make biased choices as well.

6.2. For lack of transparency

AI tools do not frequently explain their reasoning behind a decision, making it difficult to challenge or fix a mistake.

6.3. AI systems are threat to privacy

AI systems mine and record individuals' sensitive data. Without proper handling, this situation may result in a resignation and/or abuse of the data.

6.4. Human touch

Use of AI for recruitment largely makes the system feel cold and lifeless especially in interview or feedback stages.

7. Conceptual Framework

The conceptual framework guiding this study is based on the premise that artificial intelligence can act as both an enabler and disruptor in the recruitment process. The framework integrates three core dimensions.

1. Efficiency gains: speeding up recruitment through automation of resume screening, scheduling, and initial assessments.
2. Bias mitigation – Reducing human subjectivity by relying on data-driven algorithms.
3. Ethical and organizational risks – Addressing concerns about algorithmic bias, data misuse, and accountability.

These dimensions form the basis of the AI–Human Hybrid Model proposed in this study, which emphasizes a balanced approach to recruitment. The model posits that optimal hiring outcomes are achieved when AI technologies are strategically combined with human judgment, ensuring both the effectiveness and ethical integrity of talent acquisition.

8. Methodology

This research paper is an empirical and conceptual exploration of AI in recruitment practices from the high-tech domain of Bangalore. This study is exploratory in nature; therefore, secondary data analysis is the primary research methodology, augmented with a theoretical lens and conceptual model development.

8.1. Data sources

This paper is based on credible secondary data available. These include:

1. The history of AI in HRM: academic literature and the future's horizon.
2. White papers and reports from industry consultancies and HR technology vendors.
3. Corporate announcements and results by companies, such as Goldman Sachs, Infosys, Wipro, and TCS

The following are some official government and policy documents related to digital transformation or employment in India. It operates through three main theoretical constructs: overcoming human bias and a wider scope for hiring inclusivity due to moral, technically challenging trade-offs in data privacy, and black box algorithms, which make it difficult to interpret an over-reliance on imperfect AI systems.

8.2. Analytical framework

The analysis is guided by three core theoretical constructs:

1. Efficiency gains: time-to-hire, cost-effectiveness, and process automation.
2. Bias mitigation – reduction in human subjectivity and potential for inclusive hiring.
3. Ethical and technological dilemmas: data privacy, algorithmic transparency, and overreliance on AI systems.

These lenses provide a structured framework for interpreting how AI tools impact various stages of the recruitment lifecycle. Building on insights from the literature and industry practices, a hybrid strategic model is proposed that integrates AI capabilities with human judgment. The model aims to balance the automation benefits with critical human oversight, ensuring ethical decision making and positive candidate experience. This model was developed through thematic synthesis and comparison of best practices from industry sources and academic propositions. As this

study is grounded in secondary data, its conclusions are interpretative, rather than empirically validated. Future research could build on this conceptual foundation by conducting primary data collection through interviews, case studies, or surveys with HR professionals.

9. Conclusion

AI is a big gun that can make recruitment faster and smarter, especially in the high-paced IT industry of Bangalore. However, it does not fully substitute for human activity. AI is something that companies need to be careful about: applying the speed of artificial intelligence with human judgment and an ethical approach. A balanced approach to hiring with improved results while ensuring a fair and robust system that is transparent and friendly to candidates. This study highlights the transformative role of AI in reshaping recruitment processes in Bangalore's high-tech industry. Through a conceptual exploration grounded in industry data and theoretical frameworks, it is evident that AI contributes significantly to improving hiring efficiency, reducing bias, and enhancing candidate experience. However, the analysis also reveals critical concerns such as ethical dilemmas, lack of transparency, and potential overdependence on technology.

The proposed hybrid strategic model underscores the importance of integrating human oversight with AI-driven recruitment to ensure fairness and accountability. For HR professionals and policymakers, the implications are clear: AI should be seen not as a replacement for human judgment but as a complementary tool that enhances objectivity while preserving the human element in hiring decisions.

Future research could build on this conceptual foundation by empirically testing the proposed model, exploring employee and recruiter perspectives, and assessing AI adoption outcomes across different sectors and regions. As AI continues to evolve, ensuring responsible and inclusive use in recruitment is critical for maintaining ethical integrity and organizational success.

10. Conflict of Interest

None.

References

- Binns, R., Van Kleek, M., Veale, M., Lyngs, U., Zhao, J., & Shadbolt, N. (2018). "It's reducing a human being to a percentage": Perceptions of justice in algorithmic decisions. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 1–14. <https://doi.org/10.1145/3173574.3173951>
- Kshetri, N. (2021). Evolving uses of artificial intelligence in human resource management in emerging economies in the global South: Some preliminary evidence. *Management Research Review*, 44(7), 970–990. <https://doi.org/10.1108/MRR-03-2020-0168>
- Deloitte. (2023). *AI in HR: The future of recruitment*. Deloitte Insights. <https://www2.deloitte.com/>
- Hosain, M. S., Amin, M. B., Debnath, G. C., & Rahaman, M. A. (2025). The use of Artificial Intelligence (AI) in the hiring process: Job applicants' perceptions of procedural justice. *Computers in Human Behavior Reports*, 19, 100713.
- Chamorro-Premuzic, T., Winsborough, D., Sherman, R. A., & Hogan, R. (2016). New Talent Signals: Shiny New Objects or a Brave New World? *Industrial and Organizational Psychology*, 9(3), 621–640. <https://doi.org/10.1017/iop.2016.6>
- Jeske, D., & Shultz, K. S. (2015). Using social media content for screening in recruitment and selection: Pros and cons. *Work, Employment and Society*, 30(3), 535–546. <https://doi.org/10.1177/0950017015613746>
- Chamorro-Premuzic, T., Akhtar, R., Winsborough, D., & Sherman, R. A. (2017). The datafication of talent: How technology is advancing the science of human potential at work. *Current Opinion in Behavioral Sciences*, 18, 13–16.
- Upadhyay, A. K., & Khandelwal, K. (2018). Artificial intelligence-based recruitment and selection: A review. *International Journal of Advanced Research in Computer Science and Software Engineering*, 8(6), 1–13.
- Tambe, P., Cappelli, P., & Yakubovich, V. (2019). Artificial Intelligence in Human Resources Management: Challenges and a Path Forward. *California Management Review*, 61(4), 15–42. <https://doi.org/10.1177/0008125619867910>

Cite this article: Nayana, S., Viswanathan, N. S., & Shanmugam, S. (2025). Artificial intelligence in recruitment: A conceptual study of its impact on the Bangalore IT industry. *Journal of Management Research and Analysis*, 12(4), 229–233.