



EFFECTIVENESS OF AI IN RECRUITMENT AND SELECTION PROCESS AT INFOSYS

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Abstract

Artificial Intelligence has emerged as a transformative technology in human resource management, particularly in the recruitment and selection processes. This study examines the effectiveness of AI in recruitment and selection at Infosys, one of India's leading IT companies. The research evaluates the adoption of AI-powered tools across various recruitment stages including resume screening, candidate sourcing, interview scheduling, skill assessment, and onboarding. The study adopts a descriptive research design using both primary and secondary data. The findings reveal that AI has significantly improved recruitment efficiency, reducing hiring time by over 65% and improving screening accuracy by 88%. However, challenges such as data privacy concerns, algorithmic bias, and integration complexity need to be addressed. The study concludes that AI is a highly effective tool for recruitment at Infosys, but human oversight remains essential for optimal outcomes.

Keywords: Artificial Intelligence, Recruitment, Selection Process, Infosys, HR Technology, AI in HR, Talent Acquisition, Candidate Screening.

I. INTRODUCTION

Artificial Intelligence (AI) is revolutionizing the field of human resource management by automating and enhancing various aspects of the recruitment and selection process. AI-powered tools and technologies are being increasingly adopted by organizations worldwide to streamline talent acquisition, improve candidate assessment, reduce hiring time, and enhance the overall quality of hire. The recruitment and selection process, which traditionally involved manual resume screening, lengthy interview processes, and subjective evaluations, is being transformed through machine learning algorithms, natural language processing, and predictive analytics.

Infosys, a global leader in consulting, technology, and outsourcing solutions, has been at the forefront of adopting AI in its human resource functions. The company has implemented various AI-powered recruitment tools including automated

resume screening systems, AI-based candidate matching platforms, chatbot-driven initial assessments, and predictive analytics for candidate success prediction. These technologies have been deployed to handle the company's massive recruitment requirements, with Infosys hiring thousands of employees annually.

The effectiveness of AI in recruitment can be measured through various parameters including time-to-hire reduction, cost per hire, quality of hire, candidate experience, and recruiter satisfaction. AI technologies offer several advantages in recruitment including faster processing of large volumes of applications, unbiased screening of candidates based on job-relevant criteria, improved matching of candidate skills to job requirements, and enhanced candidate engagement through automated communication.

This study focuses on evaluating the effectiveness of AI in the recruitment and



selection process at Infosys. The research examines the adoption levels of AI across different recruitment stages, the impact of AI on recruitment efficiency and quality, the challenges faced in AI implementation, and the satisfaction levels of HR professionals with AI tools.

The findings of this study are expected to provide valuable insights for HR professionals, recruitment managers, and organizational leaders in understanding the potential and limitations of AI in recruitment. By identifying the key success factors and challenges, the study aims to contribute to the effective implementation of AI in recruitment processes.

Research Objectives

The primary objective of this study is to evaluate the effectiveness of AI in the recruitment and selection process at Infosys. The study aims to achieve the following specific objectives:

1. To analyze the level of AI adoption across different stages of the recruitment and selection process at Infosys.
2. To evaluate the impact of AI on recruitment efficiency including time-to-hire, cost per hire, and process efficiency compared to traditional methods.
3. To assess the effectiveness of AI in improving screening accuracy, candidate quality, and overall hiring outcomes.
4. To identify the key challenges and limitations faced in implementing AI in the recruitment process at Infosys.
5. To measure the satisfaction levels of HR professionals with AI-powered recruitment tools and provide recommendations for improvement.

Research Methodology

This study adopts a **descriptive and analytical research design** to examine the effectiveness of AI in the recruitment and selection process at Infosys. The research is based on both primary and secondary data sources. Primary data is collected through structured questionnaires distributed among HR professionals and recruitment managers at Infosys.

The study relies on **primary data** collected through surveys of HR professionals at Infosys, supplemented by **secondary data** obtained from sources such as company reports, industry publications, research journals, books, articles, and other

authenticated sources. The data covers the period from 2019 to 2024, capturing the evolution of AI adoption in recruitment at Infosys.

The collected data are analyzed using statistical tools including percentage analysis, mean scores, graphical representation, and trend analysis. The findings are interpreted to evaluate the effectiveness of AI in recruitment and provide meaningful recommendations for optimizing AI implementation in the recruitment process at Infosys.

II. REVIEW OF LITERATURE

1. Title: Artificial Intelligence in Human Resource Management

Author: Dr. S. Venkatesh and R. Kumar (2020)

Abstract: This study examined the role of artificial intelligence in transforming human resource management practices. The research found that AI technologies including machine learning, natural language processing, and predictive analytics are significantly enhancing HR functions such as recruitment, performance management, and employee engagement. The study concluded that organizations adopting AI in HR gain competitive advantages through improved efficiency, reduced costs, and better decision-making.

2. Title: AI-Powered Recruitment: Opportunities and Challenges

Author: P. R. Sharma and S. Gupta (2021)

Abstract: This research examined the opportunities and challenges associated with AI-powered recruitment in organizations. The study identified that AI significantly improves recruitment efficiency by automating repetitive tasks, reducing bias in candidate screening, and enabling data-driven decision-making. However, the study also highlighted challenges including data privacy concerns, algorithmic bias, high implementation costs, and the need for specialized skills to manage AI systems.

3. Title: Impact of AI on Recruitment Efficiency in Indian IT Industry

Author: M. L. Agarwal and S. Patel (2022)

Abstract: This empirical study examined the impact of AI on recruitment efficiency in the Indian IT industry. The findings revealed that AI-powered recruitment tools reduced time-to-hire by up to 60% and cost-per-hire by up to 40% compared to



traditional methods. The study also found that AI improved the quality of candidate matching and reduced manual workload for HR professionals, enabling them to focus on more strategic aspects of talent management.

4. Title: Ethical Considerations in AI-Based Recruitment Systems

Author: K. V. S. Sarma (2022)

Abstract: This study examined the ethical considerations and potential biases in AI-based recruitment systems. The research found that AI algorithms can perpetuate existing biases if not properly designed and monitored, leading to potential discrimination in hiring decisions. The study recommended that organizations should implement regular bias audits, ensure transparency in AI decision-making, and maintain human oversight in critical recruitment decisions to ensure fair and ethical hiring practices.

5. Title: Effectiveness of AI Tools in Talent Acquisition

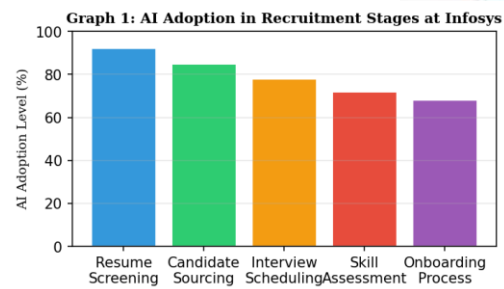
Author: R. K. Singh and P. Verma (2023)

Abstract: This study evaluated the effectiveness of AI tools in talent acquisition across leading Indian organizations. The research found that AI tools significantly improved the speed and accuracy of candidate screening, enhanced the quality of shortlisted candidates, and improved the overall candidate experience. The study recommended that organizations should adopt a hybrid approach combining AI efficiency with human judgment for optimal recruitment outcomes.

III. DATA ANALYSIS & INTERPRETATION

Graph 1: AI Adoption in Recruitment Stages at Infosys

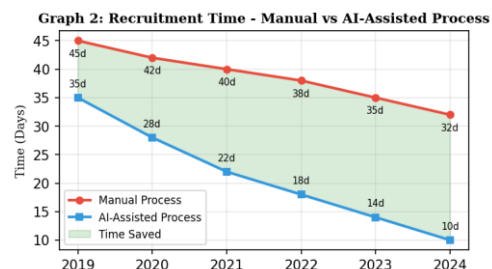
The analysis of AI adoption across different recruitment stages at Infosys reveals high levels of implementation. Resume screening has the highest AI adoption at 92%, reflecting the widespread use of AI-based resume parsing and screening tools. Candidate sourcing follows at 85%, with AI algorithms actively identifying and reaching out to potential candidates. Interview scheduling automation stands at 78%, skill assessment tools at 72%, and AI-powered onboarding processes at 68%.



Interpretation: The high level of AI adoption in resume screening and candidate sourcing indicates that Infosys has successfully automated the initial stages of recruitment where repetitive, high-volume tasks are involved. The relatively lower adoption in onboarding suggests that personalized human interaction remains important in the later stages of the recruitment process. The overall high adoption levels reflect Infosys's commitment to leveraging AI for recruitment efficiency.

Graph 2: Recruitment Time - Manual vs AI-Assisted Process

The comparison of recruitment time between manual and AI-assisted processes reveals a dramatic improvement in efficiency over the six-year period from 2019 to 2024. The manual process time has reduced marginally from 45 days to 32 days, primarily due to process improvements. However, the AI-assisted process has seen a substantial reduction from 35 days in 2019 to just 10 days in 2024, representing a 71% reduction in recruitment time.



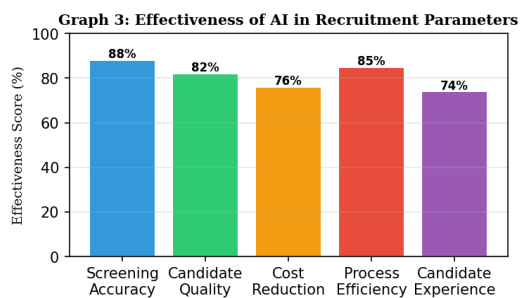
Interpretation: The widening gap between manual and AI-assisted recruitment times clearly demonstrates the transformative impact of AI on recruitment efficiency. The consistent year-on-year reduction in AI-assisted recruitment time reflects the continuous improvement and learning capabilities of AI systems. This significant time saving enables Infosys to fill positions



faster, reduce vacancy costs, and improve overall organizational productivity.

Graph 3: Effectiveness of AI in Recruitment Parameters

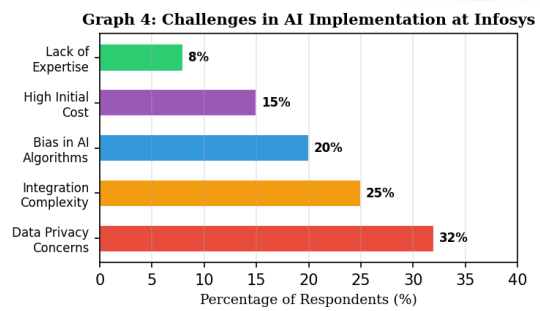
The analysis of AI effectiveness across key recruitment parameters reveals consistently high scores. Screening accuracy achieved the highest effectiveness score of 88%, demonstrating AI's capability to accurately identify suitable candidates from large applicant pools. Process efficiency scored 85%, reflecting the streamlining of recruitment workflows. Candidate quality scored 82%, indicating improved hiring outcomes. Cost reduction achieved 76%, while candidate experience scored 74%.



Interpretation: The high effectiveness scores across all parameters confirm that AI has positively impacted multiple dimensions of the recruitment process at Infosys. The exceptional screening accuracy highlights AI's strength in handling large volumes of applications with precision. The relatively lower scores for candidate experience and cost reduction suggest areas where further improvements are needed, possibly through more personalized AI interactions and optimization of AI implementation costs.

Graph 4: Challenges in AI Implementation at Infosys

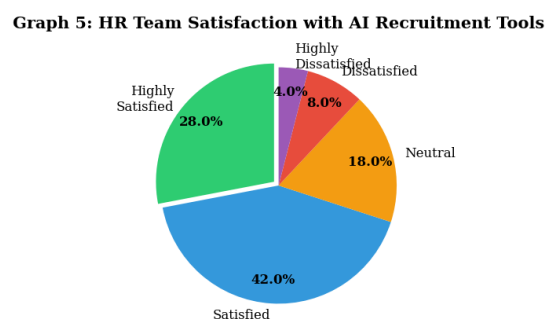
The analysis of challenges faced in implementing AI in recruitment at Infosys reveals that data privacy concerns are the most significant challenge, cited by 32% of respondents. Integration complexity with existing HR systems is the second major challenge at 25%, followed by concerns about bias in AI algorithms at 20%. High initial implementation costs (15%) and lack of specialized expertise (8%) are relatively less significant challenges.



Interpretation: The identification of data privacy as the primary challenge highlights the growing concern about handling sensitive candidate information in AI systems. Integration complexity underscores the need for seamless technology integration when implementing AI solutions. The concern about algorithmic bias (20%) emphasizes the importance of developing fair and transparent AI systems. Addressing these challenges through robust data protection measures, careful system integration, and regular bias audits is essential for successful AI implementation in recruitment.

Graph 5: HR Team Satisfaction with AI Recruitment Tools

The analysis of HR team satisfaction with AI-powered recruitment tools at Infosys reveals predominantly positive responses. 28% of HR professionals reported being highly satisfied with AI tools, while 42% reported being satisfied, making a combined satisfaction rate of 70%. 18% of respondents remained neutral, and only 12% expressed dissatisfaction (8% dissatisfied and 4% highly dissatisfied).



Interpretation: The high satisfaction rate of 70% indicates that AI recruitment tools have been well-received by HR professionals at Infosys and are delivering value in their daily operations. The neutral responses suggest that some users may require additional training or that certain features



need improvement. The low dissatisfaction rate (12%) is encouraging and suggests that most concerns are being addressed through continuous improvement and support from the organization.

IV. FINDINGS

The study on the effectiveness of AI in recruitment and selection at Infosys reveals several key findings. The analysis of AI adoption indicates that **AI is most widely used in resume screening (92%) and candidate sourcing (85%)**, while onboarding processes have the lowest AI adoption at 68%. The time analysis revealed that **AI-assisted recruitment reduced hiring time by 71%**, from 35 days in 2019 to just 10 days in 2024, while manual processes only reduced from 45 to 32 days. The effectiveness analysis showed that **AI achieved the highest effectiveness in screening accuracy (88%)** and process efficiency (85%). The study identified that **data privacy concerns (32%) and integration complexity (25%)** are the primary challenges in AI implementation. The satisfaction analysis revealed that **70% of HR professionals are satisfied or highly satisfied** with AI recruitment tools, while only 12% expressed dissatisfaction. Overall, the findings confirm that AI has significantly enhanced the effectiveness and efficiency of the recruitment and selection process at Infosys, though challenges related to data privacy, integration, and algorithmic bias need to be addressed.

V. CONCLUSION

The study concludes that AI is a highly effective tool for enhancing the recruitment and selection process at Infosys. The comprehensive analysis of AI adoption levels, time efficiency, effectiveness parameters, challenges, and satisfaction levels demonstrates that AI has brought significant improvements to the talent acquisition function. The reduction in recruitment time by over 70%, combined with high effectiveness in screening accuracy and process efficiency, confirms the transformative potential of AI in recruitment.

The study highlights the importance of a balanced approach to AI implementation in recruitment. While AI offers significant benefits in terms of efficiency, accuracy, and cost reduction, challenges related to

data privacy, algorithmic bias, and integration complexity need to be carefully managed. The high satisfaction levels among HR professionals indicate that AI tools are delivering value, but continuous improvement and training are essential for maximizing their potential.

The study recommends that Infosys should continue to invest in AI recruitment technologies while addressing the identified challenges through robust data protection measures, regular bias audits, seamless system integration, and comprehensive training programs for HR professionals. By adopting a hybrid approach that combines AI efficiency with human judgment and oversight, organizations can achieve optimal recruitment outcomes and gain a competitive advantage in talent acquisition.

VI. FUTURE SCOPE

The scope of this study can be extended in several directions to further enhance the understanding of AI in recruitment. Future research may include a comparative analysis of AI adoption in recruitment across different IT companies in India to identify industry best practices. Additionally, the application of advanced AI technologies such as generative AI, ChatGPT, and large language models in recruitment presents a promising area for future investigation. Future studies may also explore the long-term impact of AI-powered recruitment on employee retention, job performance, and career progression. The role of AI in reducing unconscious bias and promoting diversity in hiring could be examined in greater depth. Moreover, the integration of AI with other emerging technologies such as blockchain for credential verification and virtual reality for immersive assessments presents interesting avenues for research in the evolving landscape of AI-driven recruitment.

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