

# A Study on The Role of Artificial Intelligence in Recruitment and Selection at Infosys, Nagpur

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**Abstract**—The tremendous growth and development of the Artificial Intelligence (AI) has largely altered the way things are done in organizations, especially Human Resource Management (HRM). The introduction of intelligent technologies has created a paradigm shift in the recruitment and selection HR functions among others. This paper seeks to analyze how and why AI is relevant to the modernization of recruitment and selection procedures of Infosys, and more specifically, in Nagpur setting.

The study is descriptive and theoretical in nature and it uses secondary sources of data, including academic books, industry publications and corporate knowledge. The paper discusses the application of AI-based solutions to recruitment automation and improve numerous recruitment processes, such as machine learning algorithms, Applicant Tracking Systems (ATS), natural language processing (NLP), and AI-based chatbots. These processes comprise job description development, screening of the resumes, short listing of the candidates, scheduling of interviews and anticipatory assessment of the suitability of the candidates. The outcomes of the research indicate that AI helps a lot in enhancing the efficiency of the recruitment process as it saves the time-to-hire, reduces manual handling, and allows making decisions based on data. AI systems increase the precision of matching between the candidates and the job, through analyzing a vast amount of structured and unstructured data, and thus enhances the quality of hires. Moreover, real-time communication and individual interactions make AI enable a more interesting and responsive candidate experience. Also, the research points out that AI can be used to minimize human bias during recruitment by harmonizing the assessment criteria and focusing on objective data. The latter is, however, also aware that AI systems cannot remain totally unbiased, since they rely on the quality and diversity of training data extensively. The other issues that have been noted are related to data privacy, a lack of transparency in making decisions out of algorithms, and the possibility

that human touch will be diminished when hiring. The study concludes that AI is a potent facilitator in changing the recruitment and selection practice of Infosys, and make it more efficient, scalable and strategic. Nevertheless, to be implemented sustainably and ethically, the organizations should provide a balanced approach to AI technologies and human judgment, monitor AI systems constantly, and meet the ethical standards. It can also be proposed based on the study that other developments in AI that will see further enhancement of AI in the future will include generative AI and predictive analytics, which will further shape talent acquisition strategies in the years to come.

**Index Terms**—Artificial Intelligence, Recruitment, and Selection, Infosys, HR Analytics, Machine Learning, Natural Language Processing, Talent Acquisition, Predictive Analytics.

## I. INTRODUCTION

The modern business world is a place where organizations are actively using modern technologies to improve the efficiency of their operations and achieve a competitive edge. Artificial Intelligence (AI) is one of the most disruptive technologies of the past several years that have profoundly changed the scope of many functional fields, such as finance, marketing, operations, and in the specific case of the Human Resource Management (HRM). Recruitment and selection are one of the fundamental HR functions that have evolved significantly because of the usage of AI-driven tools and systems.

Conventionally, the recruitment and selection system were a tedious and time-consuming affair that entailed tedious resume screening, shortlisting and conducting of numerous interviews. Such ways could easily be inefficient, subjective and fallible in decision making.

Nonetheless, due to the introduction of AI technologies, including machine learning, natural language processing (NLP), and predictive analytics, automation and optimization of the processes are now possible in any organization, leading to the quickness and accuracy of hiring decisions.

Firms such as Infosys have been on the frontline to embrace AI in their HR practices. Infosys being a global technology service and consulting leader has adopted AI-first philosophy in order to change its talent acquisition practices. The company deployed AI-based Applicant Tracking Systems (ATS), smart chatbots, and data analytics systems to optimize the recruitment process, increase the experience of the candidates and the quality of hires. The AIs use is especially pertinent in the city of Nagpur, where the rate of qualified specialists in the IT and services field remains high.

AI in hiring will allow the companies to effectively process high numbers of job applications by screening resumes, finding the right skills, and ranking prospective employees according to predetermined criteria. Moreover, AI-based systems are able to perform initial screening, interviewee behavior, and forecast job performance and retention. This data-driven hiring, as opposed to the employment of intuition, increases the effectiveness and openness of the recruitment process.

Although AI incorporation in recruitment has many benefits, it also has its own challenges. Such issues as algorithm bias, data privacy, and the unimportance of transparency in AI decision-making processes are important ethical concerns. In addition, excessive automation can also decrease the human factor during the hiring process, which is essential to assess the soft skills and cultural fit.

This paper will focus on discussing the applications of AI in the recruitment and selection processes in Infosys and its advantages and disadvantages. The study aims to illuminate on how organizations may approach the use of AI in the hiring process without compromising the ethical standards and human interaction by examining how AI technologies are used in recruitments. The research also helps to grasp the changing environment of HRM in the digital era and emphasizes the necessity of AI in the development of further workforce policies.

## II. LITERATURE REVIEW

The increasing adoption of the Artificial Intelligence (AI) in Human Resource Management has been very instrumental in transforming the way recruitment and selection is done in organizations. As highlighted by the theoretical feelings in the literature, AI-based recruitment adoption is a change in traditional and intuition-driven hiring to informatively-grounded, and algorithmically-driven recruitment decision-making systems.

In the academic literature, AI is noted to make recruiting more efficient, including automating tedious and time-intensive tasks, including resume search, applicant identification, and job interview scheduling. Intelligent automation is an idea that implies that AI systems are capable of handling the data on a large number of applicants faster and more accurately than human recruiters, thus enhancing efficiency in operations. Also, theories that pertain to predictive analytics suggest that AI can predict the success of candidates and their job performance, basing such predictions on the historic data trends.

The other relevant theoretical aspect is the humanization of the recruitment process by using AI to reduce the risk of human bias. Conventional recruitment systems are often prone to subjective decisions but AI ensures that there is a standard evaluation system. The fairness theory of HRM implies that AI will be able to facilitate objective decision-making by concentrating on the quantifiable competencies and qualifications. Nonetheless, the literature also concedes that AI systems have a risk of inheriting any biases, existing in training datasets, which results in algorithmic bias unless appropriately addressed.

Technology Acceptance Model (TAM) is widely used to comprehend the use of AI in recruitment. This model argues that the adoption of AI tools will rely on the perceived usefulness and ease of use by HR people. Although AI has been strongly perceived to enhance efficiency, issues about transparency, trust and absence of human interaction play a part in its acceptance.

Moreover, the idea of collaborative intelligence is also highlighted in the new theoretical discussions, where AI is perceived as an assistant, and not as something that will substitute human decision-making. According to this view, the combination of AI powers

and human thinking ensures the best results in recruitment because of the analytical accuracy and the ability to understand the context.

Altogether, theoretical sources confirm that AI has a transformative effect on recruitment and selection by enhancing efficiency and decision-making and creating scalability. Meanwhile, it also accentuates the necessity of ethical values, transparency and the further role of human intervention in the recruiting process.

### III. RESEARCH METHODOLOGY

In the current research, the research design is descriptive and theoretical in analyzing how Artificial Intelligence is used in the recruitment and selection processes in Infosys. The design of the methodology is designed in such a manner to offer a conceptual knowledge on the use of AI in Human Resource Management without collecting primary data.

The study is founded on the secondary data sources that shall consist of the academic journals, research papers, industry reports, and company publications, as well as online databases. The sources offer all-encompassing information regarding how AI technologies including machine learning, natural language processing, and predictive analytics are applied to the recruitment practices. The secondary data will provide comprehensive views of the subject on the academic and industry level.

The research is conceptual and analytical in nature as it tests and interprets the pre-existing theories, models, and frameworks that are in connection with AI and recruitment. In this way, one can identify the major trends, advantages, and issues that relate to the AI-based recruitment systems. There is also the use of comparative analysis to determine the difference between the traditional recruitment techniques and AI-based techniques in terms of performance, precision and efficiency.

In order to direct the research, the following hypotheses will be developed:

H0(Null Hypothesis): Artificial Intelligence does not play a major role in the recruitment and selection process.

H1(Alternative Hypothesis): Artificial intelligence makes a substantial positive contribution to the process of recruitment and selection.

Such theoretical instruments as HR analytics frameworks, predictive modeling concepts, and technology adoption theories are also used in the study to explain the role of AI in recruitment. The tools assist in the comprehension of the role of AI in decision making, candidate assessment, and optimization of the process.

The research paper is restricted to theoretical analysis of AI in recruitment in the context of Infosys and the organisation in a particular reference to its operations in Nagpur. As the study is conducted not on primary data, the conclusions can be made only on a conceptual level and are based on the existing literature and industry knowledge.

To sum up, the selected research methodology offers an organized and conceptual background to the analysis of the effects of AI on the recruitment and selection process, which is why the importance, advantages, and drawbacks of this new tool can be studied holistically in the context of the organization practice nowadays.

### IV. COMPANY PROFILE

Infosys is a company that offers the infotech solutions, business solutions and consulting to the world, and is one of the top companies. The company was founded in 1981 and over time has become a multinational corporation with a strong presence in different countries and providing innovative solutions to the digital transformation to clients in different sectors including banking, healthcare, manufacturing, retail, and telecommunications.

The organization has a client-based business model, which is geared towards providing high quality of services based on technological innovations and excellence in operation. Infosys has already established itself as a leader in implementing modern technologies, including Artificial Intelligence (AI), cloud computing, data analytics, and automation to improve business performance and customer satisfaction.

In terms of Human Resource Management (HRM), Infosys focuses on talent sourcing, workforce development and optimization. The recruitment and selection follow a systematic process in the company with an aim of identifying well qualified and competent professionals, which are in line with organizational objectives. As the number of job

applications is growing, and the company needs to hire efficiently, Infosys has added AI-oriented tools into the recruitment process.

Applicant Tracking Systems (ATS), machine learning algorithms, and digital assessment tools are some of the AI-based tools that the company utilizes to facilitate the hiring of employees. The systems can be used to screen resumes automatically, shortlist candidates, and predict their performance, which eliminates the need to do this manually and improves the accuracy of decision-making.

Infosys is also a company that values digital-first HR strategy, in which workforce planning and talent management are enhanced through the use of data-driven knowledge. Introducing AI can help the organization have a competitive advantage by guaranteeing a faster recruitment process, enhanced experience of candidates, and a better fit between job responsibilities and ability of the candidates.

At the Nagpur level, Infosys is involved in generating jobs and developing talents within the region by hiring talented professionals in the field of IT and other related fields. The Nagpur operation is a subset of the overall company strategy to enlarge talent base as well as dominate the emergent technology-driven areas.

#### V. THE USE OF ARTIFICIAL INTELLIGENCE IN RECRUITMENT AND SELECTION.

The adoption of Artificial Intelligence (AI) in the recruitment and selection processes is a great change in the conventional methods of hiring to the smart and data-driven processes. In businesses such as Infosys, AI is strategic in driving efficiency, accuracy, and effectiveness of different levels of recruitment.

Examples of tasks that can be automated with the help of AI include resume screening and sourcing candidates. AI systems can examine thousands of applications and propose suitable candidates based on their skills and qualifications that meet the company requirements through machine learning algorithms. This not only saves time taken to shortlist, but also enhances accuracy of the selection of a particular candidate.

Candidate-job matching is another important role played by AI in recruitment. Predictive analytics helps an AI system to analyze candidate profiles and match them against job descriptions with a greater level of accuracy to determine whether the candidate is more

aligned with the needs of the organization. This results in enhancement of quality of hires and better employment output.

Chatbots and virtual assistants are also AI applications that improve the candidate experience. These tools give instant communication, response to candidate questions, and directing the applicants in the recruiting process. This would make the recruitment process more interactive and receptive, something necessary in the acquisition of the best talent.

During the selection stage, AI helps in automation of interviews and evaluation. NLP and facial recognition systems can be used to perform first screening interviews, candidate responses analysis, and assess behavioral characteristics on AI-powered platforms.

These systems offer objective evaluation and limit the role of human elements in decision making.

Moreover, AI is used in predictive decision-making to analyze historical data of recruitment to predict the success, retention and performance of a candidate. This enables organizations to make sound judgment in hiring and eliminating employee turnover.

The theoretical approach also talks about the importance of AI in ensuring equity and fairness in hiring. Through uniformity in assessment, AI reduces subjective evaluation and, therefore, merits have to be used to evaluate the candidates. It should also be mentioned, though, that AI systems will have to be meticulously developed and supervised to avoid the influence of algorithms and maintain ethical standards.

#### VI. DATA ANALYSIS AND RESULTS

The use of Artificial Intelligence in recruitment and selection at Infosys shows the high level of efficiency, precision, and the overall effectiveness of the recruitment process. The next part of data analytics is conceptual and secondary data interpretation, presented in the form of graphical representation.

##### 6.1. AI Implication on Recruitment Effectiveness.

The pie chart above is the general contribution of AI in various areas of recruitment:

Time-to-Hire Reduction (30%) - AI will save much time that would be spent on screening of resumes and shortlisting of candidates since it is automated.

Quality of Hire (25%) - AI enhances the job-candidate fit leading to improved hiring decisions.

Cost Reduction (20%) - Automation will reduce administrative and operational recruitment expenses.  
 Candidate Experience (25%) - AI applications like chatbots improve communication and interaction with the job seekers.

AI Implication on Recruitment Effectiveness

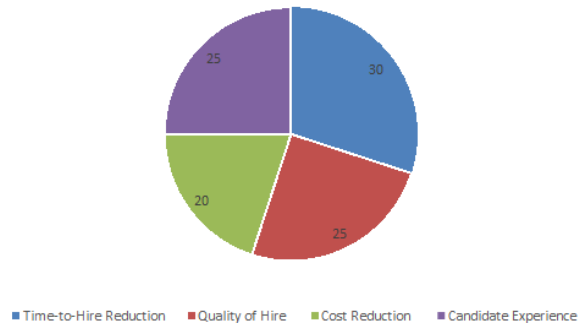


Fig 6.1 AI Implication on Recruitment Effectiveness

**Interpretation:**

As it is evident in the chart, the most significant effect of AI is seen in the minimization of hiring time, then there is the enhancement of the quality of hires and experience of candidates. This indicates that AI does not only accelerate the job seeking process but it also makes the process more effective.

**VII. FINDINGS AND DISCUSSION**

The case study on the application of Artificial Intelligence in the recruitment and selection process at Infosys shows that the use of AI has brought a drastic shift in the current recruitment process.

Results reveal that AI enhances its efficiency during the recruitment process because it eliminates repetitive activities as resume screening, candidate shortlisting, and interview scheduling. It results in a significant decrease in time-to-hire and raises the productivity of the HR department in general. The quality of the hiring decisions made by AI-based tools can also be enhanced as it allows accurately matching the candidates with the job opportunities based on the data analytics and the predictive models.

The other significant conclusion is that the use of AI can be used to decrease human bias in the recruitment process by standardizing evaluation criteria. The discussion, however, demonstrates that AI is not entirely without bias, as it relies on past data, which can also be associated with existing inequalities. Thus, it is necessary to monitor AI systems and constantly

improve them.

The researchers also discover that AI increases the experience of candidates by means of real-time interaction and individual engagement. Regardless of such advantages, the issues of absence of human touch, transparency, and ethical concerns are also a big problem. Therefore, the argument is AI must be implemented as an aid and not the full substitute of human decision-making.

**VIII. FUTURE SCOPE**

The future of AI in recruitment is very bright and will be developed even more in connection with technological progress. Such companies as Infosys will implement more innovative AI systems, such as generative AI and deep learning models to further improve the recruitment.

The AI will be used more in the behavioral and emotional analysis of the candidates and allow conducting a more comprehensive assessment, going beyond the technical competencies. As well, AI-related integration with big data and HR analytics will enable organizations to make better forecasts when it comes to employee performance and retention.

Another aspect of ethical AI practices that will be developed in the future is making ethical AI-based recruitment processes fair, transparent, and accountable. The future of AI technology will keep on transforming the talent acquisition strategy in the sense that it will be smarter, efficient and candidate-centric.

**IX. RECOMMENDATIONS**

According to the research, it is possible to give several recommendations to enhance the efficiency of AI in the recruitment and selection:

To achieve balanced and effective decision-making that does not lead to excessive reliance on artificial intelligence, organizations need to use a hybrid approach that will entail a combination of AI opportunities and the judgment of human resources. Although AI can be used to process data and automate it, people need to assess soft skill and cultural fit.

The auditing of AI systems should be done periodically to detect and remove biases in algorithms. The quality and the diversity of data is the key to the attainment of the unbiased and fair recruitment processes.

Transparency in the decisions taken using AI should also be a priority of the companies, where applicants can gain knowledge of how their applications are being assessed. This will create confidence and enhance the candidate experience.

Maximization of the use of AI tools requires investment in training of HR professionals in the use of AI tools. Moreover, companies are encouraged to put a high priority on privacy and safety of data to avoid exposing sensitive candidate data.

## X. CONCLUSION

The analysis shows that Artificial Intelligence is crucial in changing the recruitment and selection practices at Infosys. AI will help to improve efficiency, accuracy and decision-making as it will automate repetitive work and allow for hiring strategies based on data.

The study confirms the perception that AI is the best way to enhance recruitment outcomes by saving time, cost, and eliminating bias besides enhancing quality of hires and candidate experience. But at the same time, the paper also highlights the fact that AI is not a full-fledged replacement of human intervention and should be utilized in a responsible manner.

To summarize, the effective use of AI in recruitment relies on the possibility to find a balance between technological innovation and human judgments. AI can transform the future of talent acquisition and make organizations successful with appropriate integration, considerations, and constant attention.

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