



To cite this article: Saviri Gowtham, Velaga Deepika, Kandula Nagalaxmi, Papa Rao Maddala and Ranga Ngendra Babu (2026). REVOLUTIONIZING TALENT ACQUISITION: THE ROLE OF ARTIFICIAL INTELLIGENCE IN RECRUITMENT STRATEGIES, International Journal of Research in Commerce and Management Studies (IJRCMS) 8 (5): 70-79 Article No. 863 Sub Id 1428

REVOLUTIONIZING TALENT ACQUISITION: THE ROLE OF ARTIFICIAL INTELLIGENCE IN RECRUITMENT STRATEGIES

Saviri Gowtham¹, Velaga Deepika², Kandula Nagalaxmi³, Papa Rao Maddala⁴ and Ranga Ngendra Babu⁵

¹25MG1E0039, PG Scholar- Sree Vahini Institute of Science and Technology (Autonomous) Tiruvuru. AP -521235.

²5MG1E0053, PG Scholar - Sree Vahini Institute of Science and Technology (Autonomous) Tiruvuru. AP -521235.

³Assistant Professor Department of MBA, Sree Vahini Institute of Science and Technology (Autonomous), Tiruvuru. AP -521235.

⁴Professors and HoD of Department of MBA, Sree Vahini Institute of Science and Technology (Autonomous), Tiruvuru. AP -521235.

⁵Principal Sree Vahini Institute of Science and Technology (Autonomous), Tiruvuru. Andhra Pradesh (AP) – 521235

DOI: <https://doi.org/10.38193/IJRCMS.2026.8505>

ABSTRACT

A number of different industries are undergoing transformations as a result of the fast breakthroughs in artificial intelligence (AI), as well as talent acquisition is not an exception. Artificial intelligence technologies, together with as machine learning, usual language processing, along with predictive analytics, have become indispensable in the process of expediting processes such as screening resumes, matching candidates, and arranging interviews. This has resulted in a considerable lessening in the total of time essential to utilize candidates as well as an enhancement in the candidate experience. In this research, a comprehensive investigation of the incorporation of artificial intelligence (AI) into talent acquisition, as well as the advantages, obstacles, and ethical issues associated with AI, is conducted.

Key results indicate that artificial intelligence may save the amount of time needed to hire candidates by as much as fifty percent, improve applicant engagement via automation, and enable more informed recruiting choices. In spite of its promise, companies need to carefully handle the ethical problems that artificial intelligence brings in order to guarantee that their recruiting procedures are fair and transparent. The conclusion is that artificial intelligence has the probable to modernize talent acquisition; nevertheless, the success of this endeavor is contingent on careful deployment and ongoing assessment in order to minimize risks along with take full advantage of benefits.

KEYWORDS: Artificial Intelligence, Recruitment, Sourcing, Matching

INTRODUCTION AND BACKGROUND OF THE STUDY

The replication of human intellectual progression by machines, especially computer systems, is what

is meant by the expression "Artificial Intelligence or Artificial intellectual (AI). Learning, which involves obtaining knowledge along with rules for applying it, analysis, which involves employing rules to arrive at ballpark or unambiguous conclusions, as well as self-correction, is all activities that fall beneath this kind. Over the course of the last several decades, artificial intelligence technologies have undergone fast development and have begun to permeate many facets of daily life.

The acquisition of talent, which is an essential component of human resource supervision, has always been at the core of the accomplishment achievement of a business. When it comes to the process of developing a company's workforce, recruitment, which is the process of locating, attracting, and employing applicants who are fit for the position, plays a crucial part. Manual operations, such as publishing job adverts, screening applicants, and conducting interviews, were traditionally the primary means by which recruiting activities were carried out. These labor-intensive procedures, although successful, are long recruiting cycles, and lost chances in finding the optimal personnel. Despite their effectiveness, these methods are labor-intensive.

During the recruiting process, artificial intelligence may assist in automating and optimizing processes such as screening resumes, evaluating skills, and even performing early conversations with candidates. In particular, artificial intelligence is assisting firms in resolving critical difficulties in the areas of talent acquisition and recruiting. By their very nature, traditional techniques of recruiting are sometimes laborious, time-consuming, and subjective. The use of artificial intelligence enables human resource professionals to automate processes that are repetitive, evaluate large volumes of data, and make judgments that are better informed. For instance, recruiting software that is driven by artificial intelligence may filter through thousands of resumes in a matter of minutes, finding individuals who meet the criteria of the position based on their abilities, experience, and credentials.

Candidates may interact with chatbots powered by artificial intelligence in real time, providing answers to their inquiries and directing them through the application process. The time it takes to hire new employees is cut down, human bias is reduced, and a more data-driven and proficient recruiting progression is ensured thanks to these advancements.

REVIEW OF LITERATURE

Sharma (2018) is the year. The Applicant Tracking System (ATS) is a system that is powered by artificial intelligence that evaluates curriculum vitae. As a result of this technology, it is possible that the top candidates will be matched with the best vacancies. Within the realm of human resources, there is also a rising trend toward the use of chatbots that are powered by artificial intelligence. The purpose of these chatbots is to handle a variety of activities, including answering inquiries, providing support around the clock, and communicating with potential workers via various channels such as text

messaging, electronic mail, societal media, along with added channels.

Specifically, Lee et al. (2018) this study sheds light on the enormous expenses that are associated with staff turnover. These costs include direct costs for candidate matching that are driven by artificial intelligence (AI), as well as indirect losses such as decreased AI-driven sourcingivity and team disruption. It contends that effective recruiting procedures are essential to reducing these costs to the greatest extent possible. Organizations have the ability to simplify their recruiting procedures, minimize employee attrition, and eventually reduce the total cost of replacing staff by using artificial intelligence in the recruitment process. AI technologies have the potential to enhance applicant screening and selection, hence lowering the likelihood of making bad hires and the expenses that are associated with them.

According to Kotze (2021), the research emphasizes the capability of artificial intelligence to automate repetitive operations, improve applicant matching, and increase the efficiency of recruiting. The possible downsides, such as the possibility of algorithmic bias as well as the necessitate for continuous scrutinize, are also discussed in this article. The conclusion of this study emphasizes the significance of incorporating artificial intelligence in a strategic manner in order to maximize its advantages while avoiding possible hazards. The authors claim that artificial intelligence (AI) as well as data analytics will participates a momentous part in driving recruiting techniques that are more effective and strategic.

The research conducted by Kims (2022) reveals that artificial intelligence (AI) has considerable benefits in terms of competence, exactness, along with scalability. Additionally, it finds solutions to problems such as the necessitate for precision and the possibility of bias in artificial intelligence systems. According to the findings of the study, merging AI with conventional techniques may provide a balanced strategy, which can enhance recruiting results by harnessing the strengths of both approaches (AI and traditional methods). The study offers new perspectives on how artificial intelligence (AI) might be used to enhance recruiting procedures while simultaneously addressing possible problems. 2022

Scott (2023) Prior to and during the adoption of AI, they examine data about the amount of time it takes to employ, the cost per hiring, and the quality of candidates. AI has a beneficial impact on these measures, according to the findings of the research, which ultimately leads to increased efficiency and decreased expenses. There is statistical data presented by the authors that supports the advantages of artificial intelligence in improving recruiting performance and results. The typical challenges that they highlight include problems with integration, reluctance to change, and worries over the quality of the data.

Patel (2023) investigates the ethical problems that are related with recruiting done by artificial

intelligence. Concerns such as algorithmic bias, data privacy, along with intelligibility are among the topics that they debate. The findings of this research highlight the significance of adopting ethical norms and frameworks to control the utilize of artificial intelligence in the recruiting process. Through the examination of current folder studies, the authors bring to light both the advantages and the possible drawbacks of artificial intelligence (AI). They advocate for liable AI perform in order to reduce risks and guarantee fair as well as equal recruiting results. The study offers empirical data that assists in demonstrating the usefulness of artificial intelligence in improving recruiting efficiency.

White (2023) investigates the influence that artificial intelligence and automation have had on the landscape of recruiting. They research the ways in which artificial intelligence systems automate several phases of the recruiting process, ranging from posting jobs to selecting candidates. The report highlights the advantages of automation, such that it reduces the amount of time needed to fill positions and improves the uniformity of recruiting. However, it also considers the possibility that automation would result in the emergence of new difficulties, such as the need for AI systems to undergo continuous maintenance and enhancements.

Through the use of statistical methodologies, Smith et al. (2024) compare standard recruiting measures with procedures that have been augmented by artificial intelligence. According to the findings of the research, artificial intelligence considerably cuts down on the amount of time needed to recruit new employees and enhances the accuracy of applicant matching. Additionally, the authors examine the role that AI plays in lowering the administrative constraints that are placed on HR staff.

RESEARCH METHODOLOGY

The current research, which was titled "REVOLUTIONIZING TALENT ACQUISITION: THE ROLE OF ARTIFICIAL INTELLIGENCE IN RECRUITMENT STRATEGIES," was structured as a survey with the purpose of determining the most successful recruiting tactics. A descriptive approach was used in the research, and the purpose of the study was to collect material that was descriptive. Within the state of Telangana, the research is carried out in Hyderabad. We chose the samples for the research from among thirty small and medium-sized manufacturing businesses in the area. Two types of data, primary and secondary, are used in the research. These secondary materials are compiled from a wide variety of sources, including records, publications, websites, and journal articles.

Through the use of judgment and a non-probability sampling strategy, primary data were gathered from one hundred human resource experts working in thirty different manufacturing units. The preparation of a structured questionnaire and the testing of scales for reliability and validity were both done prior to the implementation of the questionnaire in the research. A multiple regression analysis was conceded out in order to investigate the impact that AI-driven components have on the viewpoint of recruiting techniques.

H01: *H01: There is positive influence between (AI driven Sourcing, AI driven Resume Screening, AI driven Candidate matching, AI driven Interview scheduling) on recruitment.*

Conceptual Framework of the Study

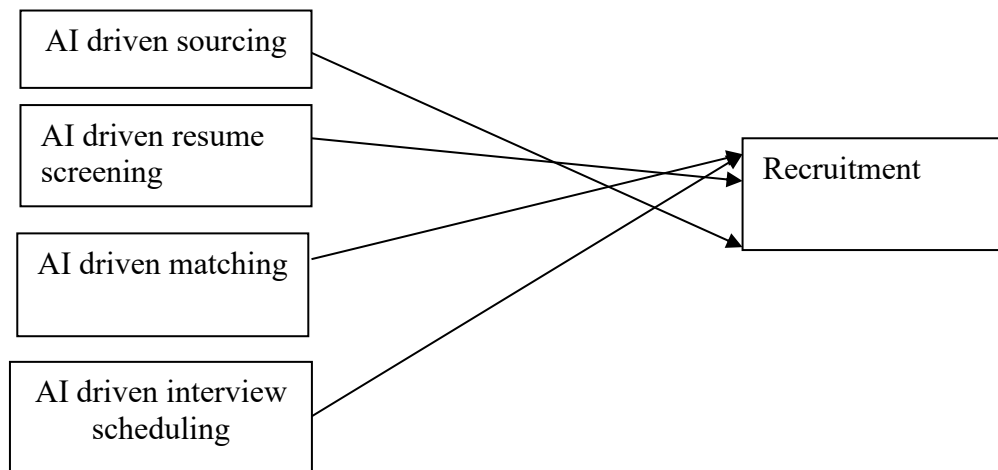


Figure-1 Conceptual frame work of the study

RESULTS AND DISCUSSIONS

In light of the research methods and assumptions that were supplied, this study assesses recruiting techniques with regard to AI-driven approaches in the city of Hyderabad. The use of a standardized questionnaire was used in order to collect the necessary information. Different studies (Dawkins et al., 2014, Alonso-Almeida et al., 2015) were consulted in order to choose the items that were included in the Structured Questionnaire for the purpose of evaluating progress. It was requested of them that they assess the extent of the techniques in connection to AI-driven recruiting strategies using a Likert-type scale with five points, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

The measuring items are presented in Table 1 below for the purpose of determining the reliability of the items that were used to evaluate the inner consistency of the constructs. Please refer to this table for further information. Cronbach's alpha is a evaluate of reliability that designates the degree to which the findings may be trusted (Cronbach, 1970).

Table 1. Constructs used in the model
Cronbach,s alpha test

Constructs	Cronbach Alpha 0.832	Item to total correlation
AI driven Sourcing		.805
AI driven Resume Screening		.790
AI driven Candidate matching		.813
AI driven Interview scheduling		.801
Recruitment		.809

Testing of Hypotheses- Multiple regression

In order to address the phenomenon known as "false relationships," regression analysis empowers researchers to investigate many variables simultaneously. The approach of regression analysis that is used the most often is known as linear regression. As stated by Gujarati (2004), the process of linear regression involves the construction of a trend line that provides the "best fit" from all of the data points that are available. To begin, each of the variables that will be included into the analysis must first be chosen and then incorporated into the proper model, which in this instance is a linear model.

H01: There is positive influence between (AI driven Sourcing, AI driven Resume Screening, AI driven Candidate matching, AI driven Interview scheduling) on recruitment.

Analysis of Variance (ANOVA)

Table 2: ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	51.062	23	2.220	6.077	.000
Within Groups	173.886	476	.365		
Total	224.947	499			

Predictors: (Constant), AI driven Sourcing, AI driven Resume Screening, AI driven Candidate matching, AI driven Interview scheduling

b. Dependent Variable: Recruitment

Table 2 shows that the independent factors (AI-driven sourcing, resume screening, candidate matching, and interview scheduling) have a extensive contact on the dependent variable (recruitment),

with an F-value of 6.077 at a significance level of 0.000.

Determination of the Model goodness of fitness

Model Summary

Table 3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics				Sig. F Change	Durbin-Watson
						F	df1	df2			
1	.529 ^a	.279	.274	.57227	.279	47.970	4	495		.000	2.007

a. Predictors: (Constant), AI driven Sourcing, AI driven Resume Screening, AI driven Candidate matching, AI driven Interview scheduling

b. Dependent Variable: Recruitment

In table 3, we can see that the independent variables—AI-driven sourcing, resume screening, candidate matching, and interview scheduling—account for 27% of the variation in the dependent variable (recruitment) with a coefficient of determination (R²) of 0.279. Moreover, these four independent factors were shown to have a considerable influence on the recruiting strategy overall (R-Value).

Determination of Coefficients

This data is similar to what's in the "Beta" column of the "Standardized Coefficients" table, with the exception that prior to weight computation, all dependent and independent variables have been standardised, meaning they have a zero-sum mean and a one-standard deviation. You won't find the value of (b₀) in the regression equation since it is always 0. Regression weights may be more accurately compared when all variables have been standardised, since unstandardized weights rely on the variance of the independent variables (Muijs, 2004). With all other variables input into the model, the "Sig." column of the "Coefficients" table shows the statistical significance of that variable.

Table 5: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.865	.164		11.368	.000		
	AI driven	.197	.046	.200	4.285	.000	.668	1.497

Sourcing							
AI driven Resume Screening	.198	.044	.234	4.535	.000	.548	1.823
AI driven Candidate matching	-.004	.048	-.004	-.080	.936	.553	1.807
AI driven Interview scheduling	.192	.039	.232	4.916	.000	.652	1.534
a. Dependent Variable: Recruitment							

As can be seen in the table on top of, the results of the regression analysis indicate that the recruitment variables, which include AI driven Sourcing with a Beta value of .197 and a t value of 4.285 at a significance level of <0.000, AI driven Resume Screening with a Beta value of .198 and a t value of 4.535 at a significance level of <0.000, and AI driven Interview scheduling with a Beta value of .192 and a t value of 4.916 at a significance level of <0.000, indicate that all three recruitment strategies, namely AI driven Sourcing, AI driven Resume Screening, and AI driven Interview scheduling, were statistically significant. This was due to the fact that the response of employees with undefined reasons focused on AI driven Sourcing and AI driven Resume Screening in order to introduce new service ideas and develop in the recruitment process. In addition, the findings of the coefficients indicate that the only candidate matching that is statistically insignificant is the one that is driven by artificial intelligence.

This candidate matching has a Beta value of -.004, a t value of -.080, and a significance level of 0.936. As a result of the outcomes of this research, it has been determined that the model does not adequately account for all of the factors that have an impact on recruiting. There is a correlation between the conclusions of this research with the findings of Astuti (2022), who revealed that AI-driven Resume Screening, AI-driven Interview Scheduling, and location do not have any impact on the degree of recruiting. In light of the explanation that was presented before and the coefficients of the variables that are independent, the equation is shown below.

- Based on the Unstandardized coefficients,

$$(\text{Recruitment}) = 1.865 + .197X_1 + .198X_2 + -.004X_3 + .192X_4$$
- Based on the Standardized Coefficients;

$$(\text{Recruitment}) = .200X_1 + .234X_2 + -.004X_3 + .232X_4$$

CONCLUSIONS

Artificial intelligence (AI) has been used into recruiting and talent acquisition procedures, which has resulted in a revolutionary change in the way that businesses have approached employment. By automating repetitive processes, improving applicant matching, and increasing overall efficiency, artificial intelligence is altering recruiting, as is obvious from a study of the technologies that are now available in the field of artificial intelligence (AI). As a result of the use of artificial intelligence technologies like predictive analytics, and automated screening systems, the time it takes to acquire new employees has decreased, applicant assessments have become more accurate, and the recruiting process has become more customized. In spite of the fact that artificial intelligence has a multitude of advantages, it also presents a number of important obstacles, notably in relation to ethical issues such as algorithmic prejudice, a lack of transparency, and concerns over data privacy.

The existence of these problems highlights the need of continual monitoring and human supervision in order to guarantee that recruiting procedures are both fair and ethical. It has been shown via case studies conducted in a variety of sectors that the effective use of artificial intelligence in recruiting often relies on striking a balance between the utilization of knowledge and human verdict, make certain that AI complements slightly than re-AI driven recruitment.

Human decision-making is matched with candidate matching. Artificial intelligence's position in recruiting is anticipated to prolong to develop in the future, according to the important trends that have been identified, which include the emergence of new technologies, a rise in customization, and a greater emphasis on diversity and inclusion. When it comes to recruiting, artificial intelligence is no longer only about automating jobs; rather, it is about developing hiring procedures that are more intelligent, more efficient, and more inclusive. For the purpose of ensuring that technology breakthroughs do not violate ethical norms, organizations need to maintain a heightened awareness of both the potential and the hazards involved with artificial intelligence in the recruiting process.

This research highlights the fact that while artificial intelligence has the potential to address many difficulties in the recruiting process, its deployment must be intelligent and purposeful, with a focus on fair acquiescence, data security, as well as approaches to recruitment that is grounded in human-centered concerns. As a winding up, the hope of artificial intelligence in recruiting rests in its capacity to supplement human intelligence. This will ensure that hiring procedures are equitable, efficient, and inclusive, and that they are in line with both the aims of the company and the ideals of society.

REFERENCES

1. Bhardwaj, G., Singh, S. V., & Kumar, V. (2020, January). An empirical study of artificial intelligence and its impact on human resource functions. In 2020 International Conference on Computation, Automation and Knowledge Management (ICCAKM) (pp. 47–51).
2. Geetha, R., & Bhanu, S. R. D. (2018). Recruitment through artificial intelligence: a conceptual study. *International Journal of Mechanical Engineering and Technology*, 9(7), 63–70.
3. Gupta, P., Fernandes, S. F., & Jain, M. (2018). Automation in recruitment: a new frontier. *Journal of Information Technology Teaching Cases*, 8(2), 118–125.
4. Kaur, G., & Kaur, R. (2022, October). A critical review on analysis of human resource functions using AI technologies. In *AIP Conference Proceedings* (Vol. 2555, No. 1).
5. Mehrotra, S., & Khanna, A. (2022). Recruitment through AI in selected Indian companies. *Metamorphosis*, 21(1), 31-39.
6. Paramita, D., Okwir, S., & Nuur, C. (2024). Artificial intelligence in talent acquisition: exploring organizational and operational dimensions. *International Journal of Organizational Analysis*, 32(11), 108-131.
7. Pillai, R., & Sivathanu, B. (2020). Adoption of artificial intelligence (AI) for talent acquisition in IT/ITeS organizations. *Benchmarking: An International Journal*, 27(9), 2599-2629.
8. Raji N, George, V., Iyer, R. S., Sharma, S., Pathan, F. I., & Basha S, M. (2024). Revolutionizing recruitment: the role of artificial intelligence in talent acquisition. *ShodhKosh: Journal of Visual and Performing Arts*, 5(1), 750–759.