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A STUDY ON IMPACT OF ARTIFICIAL INTELLIGENCE ON TALENT ACQUISITION

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Abstract - Artificial Intelligence (AI) has emerged as a powerful and transformative force in the field of talent acquisition, significantly redefining the way organizations attract, assess, and hire employees. In today's competitive job market, companies are increasingly adopting advanced AI technologies such as machine learning, natural language processing, and predictive analytics to streamline and enhance their recruitment processes. This study focuses on understanding how these AI-driven tools are integrated into various stages of hiring, including resume screening, candidate sourcing, interview scheduling, and performance prediction.

The research highlights that the use of AI improves overall efficiency by automating repetitive and time-consuming tasks, thereby reducing the workload of human resource professionals. It also contributes to faster hiring decisions by analyzing large volumes of candidate data within a short period. Furthermore, AI systems help in improving the quality of hiring by ensuring better candidate-job matching through data-driven insights, which ultimately leads to increased employee satisfaction and organizational performance.

In addition to the benefits, the study also examines critical challenges associated with the adoption of AI in recruitment. Overall, the study emphasizes that while AI offers significant advantages in transforming talent acquisition, it should not completely replace human involvement. Instead, a balanced approach that combines AI capabilities with human judgment is essential to ensure fair, unbiased, and effective hiring practices.

***KEY WORDS*:** Talent Acquisition, Recruitment Process, Machine Learning, Natural Language Processing (NLP)

Introduction

Talent acquisition is a vital function within human resource management, as it plays a significant role in determining the overall performance, productivity, and competitiveness of an organization. The ability to attract and select the right talent not only ensures operational efficiency but also contributes to long-term organizational growth and success. In today's rapidly evolving business environment, traditional recruitment methods are gradually being replaced by more advanced and technology-driven approaches.

With the continuous advancement of digital technologies, Artificial Intelligence (AI) has emerged as a key enabler in modern recruitment practices. AI-powered tools and systems are increasingly being utilized across various stages of the hiring process, including candidate sourcing, resume screening, initial interview assessment, and predicting candidate performance. Technologies such as machine learning and natural language processing allow organizations to analyze large volumes of data, identify suitable candidates more accurately, and make informed hiring decisions.

Organizations across different industries are adopting AI-driven recruitment solutions to streamline their hiring processes and gain a competitive advantage. These technologies help in reducing manual effort by automating repetitive tasks, minimizing human bias in candidate evaluation, and improving the overall efficiency of the recruitment cycle. Additionally, AI enhances the candidate experience by enabling faster communication, personalized interactions, and transparent hiring processes.

However, despite its numerous benefits, the adoption of AI in talent acquisition also brings certain challenges and concerns. Issues related to transparency, fairness, algorithmic bias, and data privacy have raised important ethical questions regarding the use of AI in hiring decisions. Therefore, it becomes essential for organizations to implement AI responsibly while maintaining a balance between technological efficiency and human judgment.

Overall, the integration of Artificial Intelligence in talent acquisition represents a significant shift in recruitment practices, offering both opportunities and challenges. A thoughtful and ethical approach is necessary to ensure that AI contributes positively to the hiring process while upholding fairness and trust.

Review of Literature

The impact of Artificial Intelligence in Talent Acquisition Lifecycle of organizations, IJEDR 2019 | Volume 6, Issue 2 | ISSN: 2321-9939 explores how AI is transforming talent acquisition by automating candidate screening, enhancing decision-making through data analytics, and improving overall hiring efficiency. The study highlights AI-driven tools such as chatbots, predictive analytics, and machine learning algorithms in recruitment. It also discusses the challenges

organizations face in adopting AI, including bias mitigation and ethical concerns.

ARTIFICIAL INTELLIGENCE IN TALENT ACQUISITION, ©2021, The Intersect Group examines the integration of AI in modern hiring practices, focusing on its role in streamlining candidate sourcing, resume screening, and interview scheduling. The report highlights how AI-driven automation enhances hiring efficiency, reduces human bias, and improves the overall candidate experience. Additionally, it discusses the evolving role of HR professionals in leveraging AI technologies for strategic decision-making.

AI-POWERED RECRUITMENT: TRANSFORMING THE HIRING PROCESS, Max Constance D'Souza, 2Dr. MooonPaiithannkar, IJEETE Journal of Research | ISSN NO: 2394-0573 | Volume 9 | Issue 2 | July -Dec 2022, explores the impact of AI in revolutionizing traditional recruitment methods. The study delves into predictive analytics, automated screening tools, and AI-driven interview systems that optimize hiring speed and accuracy. It also examines the ethical considerations and challenges organizations face while implementing AI-based recruitment solutions.

Impact of AI on aiding employee recruitment and selection process, Ishan Mukherjee, Vellore Institute of Technology, LRK Krishnan, VIT Business School, Journal of the International Academy for Case Studies, Volume 28, Special Issue 2, 2022, examines the role of AI in streamlining recruitment and selection. It highlights how AI-powered tools enhance efficiency by automating resume screening, candidate matching, and interview scheduling, ultimately reducing human bias and improving hiring outcomes.

The Transformative Impact of Artificial Intelligence (AI) in Talent Acquisition and HR Recruitment: A Critical Review, Dr. Sandhya Sheshadri, Dr. Hemant Palivela, International Journal of Innovative Science and Research Technology ISSN No:-2456-2165, Volume 8, Issue 9, September 2023, provides a comprehensive review of AI-driven advancements in HR recruitment. It explores the benefits of machine learning, predictive analytics, and chat bots in talent acquisition while also addressing ethical concerns and the evolving role of HR professionals in an AI-integrated hiring environment.

Exploring the Applicability of Artificial Intelligence in Recruitment and Selection Processes: A Focus on the Recruitment Phase, Journal of Human Resource and Sustainability Studies, 2023, 11, 603-634, https://www.scirp.org/journal/jhrss, ISSN Online: 2328-4870, ISSN Print: 2328-4862, including job posting optimization, candidate sourcing, and resume shortlisting. The study discusses how AI technologies improve recruitment efficiency while also evaluating the potential risks of over-reliance on automated systems.

Exploring the impact of AI in the recruitment and selection process, © 2023, IJRAR, August 2023, Volume 10, Issue 3, www.ijrar.org (E-ISSN 2348-1269, P- ISSN 2349-5138), investigates the integration of AI tools in hiring, particularly their impact on decision-making, fairness, and candidate experience. The paper explores AI's effectiveness in eliminating biases while acknowledging the challenges of AI-driven recruitment, such as data privacy and ethical concerns.

A conceptual study on the role of artificial intelligence in recruitment, Aswathy G and Dr. Anusree PS, Vol. 5, Issue 1, 2023, ISSN Print: 2664-8792, ISSN Online: 2664-8806, Impact Factor: RJIF 8, IJRM 2023; 5(1): 09-14 provides a theoretical analysis of AI's influence on recruitment practices. It explores how AI-powered algorithms and predictive hiring models enhance talent acquisition strategies while also highlighting potential risks such as data security concerns and algorithmic biases.

Artificial intelligence in talent acquisition: exploring organizational and operational dimensions, International Journal of Organizational Analysis Vol. 32 No. 11, 2024 pp. 108-131, Emerald Publishing Limited 1934-8835 DOI 10.1108/IJOA-09-2023-3992, 7 May 2024, explores the strategic and operational impact of AI in talent acquisition. The study discusses how AI-driven recruitment enhances efficiency, minimizes human bias, and optimizes candidate selection while addressing challenges related to ethical considerations and technological implementation in organizations

A study of Artificial Intelligence on Recruitment Processes: Effects on Employers and Job Seekers, VNSGU Journal of Research and Innovation ISSN:2583-584X, 2024, examines the dual impact of AI in recruitment from the perspectives of employers and job seekers. It highlights how AI-driven hiring tools improve efficiency for recruiters while analyzing concerns related to candidate experience, transparency, and algorithmic fairness in automated decision-making.

A study on the impact of artificial intelligence on talent sourcing, IAES International Journal of Artificial Intelligence (IJ-AI), Vol. 13, No. 1, March 2024, ISSN: 2252-8938, focuses on AI's role in sourcing top talent by leveraging data analytics and predictive modeling. The paper evaluates AI's efficiency in identifying high-potential candidates, enhancing job-candidate matching, and reducing recruitment time while addressing risks such as data privacy and the over-reliance on automated assessments.

Artificial Intelligence and its ability to reduce recruitment bias, World Journal of Advanced Research and Reviews, eISSN: 2581-9615 || CODEN (USA): WJARAI || Impact Factor: 8.2 || ISSN Approved Journal, 04 October 2024, analyzes AI's potential in mitigating biases in hiring decisions. The research discusses how AI-powered tools help create fairer recruitment processes by minimizing human prejudices while also identifying challenges, such as biased training data and ethical concerns in AI-driven hiring models.

RESEARCH DESIGN

The research design adopted for this study is quantitative with a descriptive research approach. A research design serves as a blueprint that guides the process of data collection, measurement, and analysis.

In this study, primary data is collected from employees involved in the recruitment process at Kapitus Strategy Services Pvt. Ltd. through a structured questionnaire. The quantitative approach is selected because it allows numerical data collection, which can be analyzed statistically to draw objective conclusions.

RESEARCH APPROACH

The present study adopts a quantitative research approach with a descriptive approach to examine the impact of Artificial Intelligence (AI) on talent acquisition at Kapitus Strategy Services Pvt. Ltd.. The quantitative approach is used because it enables the collection of numerical data that can be statistically analyzed to derive objective and reliable conclusions regarding the effectiveness of AI in recruitment processes.

The descriptive aspect of the study focuses on understanding the current usage of AI-based recruitment tools and employees' perceptions regarding their effectiveness, reliability, and influence on hiring practices. The analytical approach is used to evaluate the relationship between AI implementation and recruitment-related factors such as hiring efficiency, quality of candidate selection, cost reduction, and decision-making accuracy.

Data Collection Method

The study uses both **primary data** and **secondary data** collection methods.

Primary Data Collection

Primary data was collected directly from employees of Kapitus Strategy Services Pvt. Ltd. who are involved in the recruitment and talent acquisition process. Effectiveness of AI tools in recruitment

- Accuracy in candidate selection
- Fairness and transparency in hiring
- Employee satisfaction with AI-based recruitment systems

The questionnaire method ensured standardized responses, enabling accurate comparison and statistical analysis.

Secondary Data Collection

Secondary data was collected from various existing sources such as:

- Research journals
- Academic articles
- Books
- Company reports
- Previous studies related to AI and talent acquisition

STATEMENT OF PROBLEM

The application of Artificial Intelligence (AI) in talent acquisition and management has significantly altered recruitment, workforce planning, and decision-making. AI-powered tools improve efficiency by automating resume screening, candidate assessments, and interview scheduling. Exploring AI's Impact on the Recruitment and Selection Process, 2025). At Kapitus Strategy Services Pvt.Ltd., AI is being integrated into HR functions, but its effectiveness in improving recruitment outcomes, employee retention, and satisfaction is unknown. Also, the extent to which employees. More research is needed into employees' perceptions of AI-driven hiring, the challenges associated with its implementation, and its impact on workplace diversity and fairness. (The Impact of AI on Talent Acquisition and Management, 2025)

OBJECTIVES OF THE STUDY

1. To assess employees' perceptions of AI's effectiveness in enhancing recruitment efficiency and decision-making. (Exploring the Impact of AI in the Recruitment and Selection Process – Dr. Anita Choudhary & Krishan Kumar, 2025)
2. To analyze the role of AI in workforce planning and its impact on optimizing talent acquisition**.** (Enhancing Talent Acquisition Efficiency Using AI Tools, 2025)
3. To understand the ethical concerns and challenges employees face while using AI in recruitment. (Artificial Intelligence and its Ability to Reduce Recruitment Bias, 2024.

STATASTICAL TOOLS

CHI SQUARE

Null Hypothesis (H_0):

There is no significant relationship between AI reducing recruitment delay and AI helping in selecting better-skilled candidates.

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Alternative Hypothesis (H_1):

There is a significant relationship between AI reducing recruitment delay and AI helping in selecting better-skilled candidates.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24.858[a]	12	.016
Likelihood Ratio	26.286	12	.010
Linear-by-Linear Association	.696	1	.404
N of Valid Cases	130		

a. 4 cells (20.0%) have expected count less than 5. The minimum expected count is 3.55.

INTERPRETATION:

The Pearson Chi-Square value is 24.858 and the p-value (significance) is 0.016, which is less than the significance level (α = 0.05). This indicates that there is a statistically significant relationship between the variables.

Therefore, the null hypothesis is rejected, and it can be concluded that AI reducing recruitment delay is associated with better selection of skilled candidates. This suggests that the use of AI improves both efficiency and quality in the hiring process.

CORRELATION

Null Hypothesis (H_0):

There is no significant relationship between AI reducing recruitment delay and AI helping place the right person in the right job role.

Alternative Hypothesis (H_1):

There is a significant relationship between AI reducing recruitment delay and AI helping place the right person in the right job role.

Correlations

		Do you feel that AI reduces delay in recruitment, leading to smoother workflow in your team?	Do you believe AI helps in placing the right person in the right job role?
Do you feel that AI reduces delay in recruitment, leading to smoother workflow in your team?	Pearson Correlation	1	.085
	Sig. (2-tailed)		.338
	N	130	130
Do you believe AI helps in placing the right person in the right job role?	Pearson Correlation	.085	1
	Sig. (2-tailed)	.338	
	N	130	130

INTERPRETATION:

The Pearson correlation value is 0.085 with a p-value of 0.338, which is greater than 0.05, indicating no statistically significant relationship between the variables.

Therefore, the null hypothesis is accepted, and it can be concluded that AI reducing delay is not significantly related to placing the right person in the right role

FINDINGS:

1. The Pearson Chi-Square value was 24.858 with a p-value of 0.016. Since the p-value is less than 0.05, the relationship between the variables is statistically significant.
2. The correlation analysis showed no significant relationship between AI reducing recruitment delay and placing the right person in the right job role ($p = 0.338 > 0.05$). Hence, the null hypothesis was accepted.

CONCLUSION:

The study concludes that Artificial Intelligence (AI) has become an important technological advancement in the field of talent acquisition and recruitment management. The findings reveal that AI-driven tools significantly contribute to improving recruitment efficiency by automating repetitive tasks such as resume screening, candidate sourcing, interview scheduling, and data analysis. These technologies help organizations reduce recruitment delays, streamline hiring procedures, and improve overall workflow efficiency.

The Chi-Square analysis indicates a significant relationship between AI reducing recruitment delays and the selection of better-skilled candidates. This suggests that AI-based recruitment systems support organizations in identifying

suitable candidates more efficiently and improving the quality of hiring decisions. AI technologies therefore play a positive role in enhancing recruitment effectiveness and operational performance.

However, the correlation analysis shows that there is no significant relationship between AI reducing recruitment delays and placing the right person in the right job role. This finding indicates that although AI improves speed and efficiency in recruitment, human judgment and decision-making continue to be essential in ensuring appropriate candidate-job matching.

Overall, the research concludes that AI has a positive impact on talent acquisition at Kapitus Strategy Services Pvt. Ltd. by improving recruitment efficiency and supporting better hiring outcomes. However, AI should be used as a supportive tool rather than a complete replacement for human involvement. A balanced approach that combines AI capabilities with human expertise is necessary to achieve fair, accurate, and effective recruitment decisions.

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