

## **IMPACT OF ARTIFICIAL INTELLIGENCE IN SELECTION PROCESS FOR AN INTERVIEWS (A NEW ERA OF HIRING)**

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**Abstract**—*The use of artificial intelligence (AI) is causing a major change in the employment process. This article examines how AI affects selection interviews, stressing its advantages, difficulties, and restrictions. In addition to addressing issues with prejudice, transparency, and candidate concerns, we look at how AI-powered interviewing technologies can enhance accuracy, efficiency, and the candidate experience. Best practices for HR professionals wishing to use AI in their selection interviews are provided in the article's conclusion. This essay offers insights into the future of hiring and the function of AI in selection interviews as the technology develops further. Artificial Intelligence (AI) is revolutionizing the employment process by allowing companies to make more accurate, efficient, and well-informed hiring decisions through the use of AI in selection interviews. We go over how AI-powered interviewing technologies can increase accuracy by lowering unconscious bias and guaranteeing a more equitable assessment of applicants. We also look at how AI might streamline the hiring process by automating repetitive processes like interviewing and screening candidates. However, we also discuss challenges with data quality, bias in AI algorithms, and opaque AI decision-making processes. Organizations may make the employment process more successful, inclusive, and efficient by embracing AI-powered hiring in a responsible and moral manner. With a focus on best practices for integrating AI in selection interviews and making sure that this technology works for both companies and candidates, this article offers insights into the future of recruiting and the role of AI in selection interviews.*

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### **1. Introduction**

Artificial Intelligence (AI) is at the forefront of the major changes that have occurred in the employment process in recent years. AI is significantly influencing selection interviews, for example. The effect of AI on selection interviews and its implications for recruiting practices in the future will be discussed in this article. Advances in technology, changing workforce demographics, and changing applicant expectations have all contributed to major changes in the hiring process in recent years. Artificial Intelligence (AI) is in the front of this transformation, transforming how businesses conduct selection interviews. Businesses of all sizes are embracing AI-powered interviewing solutions more and more because they promise to increase the recruiting process's effectiveness, precision, and equity. Conventional selection interviews, which have long been the mainstay of the recruiting process, mostly rely on human judgment to evaluate the potential and suitability of candidates. But there are drawbacks to this strategy. In addition to being time-consuming, expensive, and frequently inefficient at discovering top talent, human interviewers are subject to bias. Additionally, there is a sense of pressure for firms to implement more creative and effective hiring practices due to the growing number of job applications and the requirement for quicker hiring choices. This is where artificial intelligence (AI) enters the picture, using machine learning algorithms, natural language processing, and predictive analytics to revolutionize the selection interview process. AI-powered interviewing systems may evaluate candidates' abilities and fit, analyze their replies, and offer unbiased, fact-based insights to help with recruiting choices. This article will discuss the advantages, difficulties, and restrictions of artificial intelligence as it relates to selection interviews. We will explore the realm of AI-powered interviewing tools, going over their uses, potential drawbacks, and possibilities. You will have a better grasp of how AI is changing the employment process and what this implies for selection interviews going forward by the conclusion of this essay.

## **2. Review Of Literature**

### **2.1 1990s: Early Adoption of Technology in Selection Processes**

#### **2.1.1 Emergence of Computer-Assisted Selection**

Organizations started using technology to expedite the hiring process in the 1990s. The goal was to increase efficiency by automating administrative procedures. The advent of computer-based testing and its potential to improve assessment objectivity were covered by Gatewood and Field (1994). The use of multimedia in interviews was examined by Anderson (1993), who proposed that technology may standardize how interview questions are delivered.

2000s: The Rise of E-Recruitment and Basic AI Applications.

#### **2.1.2. Advent of Online Recruiting**

The transition to online hiring in the 2000s paved the way for the incorporation of AI. Galanaki (2002) looked at the adoption of e-recruitment and found that it was more effective to approach prospects online. Parry and Tyson (2008) emphasized how internet platforms started using automated keyword searches to streamline preliminary screening procedures.

### **2.2 2010s: Advanced AI and Machine Learning in Selection**

#### **2.2.1 Emergence of Predictive Analytics**

With the addition of machine learning and predictive analytics, AI technologies advanced. In order to improve the calibre of hiring, Chamorro-Premuzic et al. (2016) investigated how data analytics could forecast job performance. Van Indexing et al. (2016) examined how well machine learning algorithms assess the potential of candidates.

### **2.3 Late 2010s to Present: Ethical Considerations and Regulatory Focus**

#### **2.3.1 Increased Scrutiny of AI in Hiring**

Concerns about ethics and legality increased as AI got more widespread. The ethical ramifications of AI in hiring, such as privacy concerns and fairness, were emphasized by Dattner et al. (2019). The necessity of accountability and transparency in AI-driven selection systems was underlined by Raghavan et al. (2020).

## **2.4 Future Directions**

### **2.4.1 Integration of Advanced Technologies**

In order to improve candidate assessments, Zhang et al. (2020) anticipated a greater usage of natural language processing and deep learning. Prioritize the Development of Ethical AI Global initiatives to create moral standards for AI were emphasized by Jobin et al. (2019), encouraging responsible innovation. Models of Hybrid Selection In order to enhance hiring results, Ryan and Deros (2019) argued for models that integrate human intuition with AI efficiency.

## **3. Objectives of the Study**

- To examine the effectiveness of AI in the selection process.
- To investigate the impact of AI on candidate experience.
- To analyse the role of AI in improving hiring efficiency.
- To discuss the ethical implications of AI in hiring.

## **4. HYPOTHESES OF THE STUDY**

- ✓ H01: There is no significant relationship between the use of AI in the selection process and the cost of hiring
- ✓ H02: There is no significant difference in the candidate satisfaction levels between AI-powered interviews and traditional interviews.
- ✓ H03: There is no significant difference in the hiring efficiency between AI-powered interviews and traditional interviews.

## **5. SCOPE OF THE STUDY**

With an emphasis on the advantages, difficulties, and ramifications of utilizing AI-powered interviewing technologies in the recruiting process, this study attempts to examine how artificial intelligence (AI) affects selection interviews.

- **Geographic Scope:** The study will concentrate on American businesses and industries; however future research may expand to other nations.
- **Organizational Scope:** The research will look at how different organizations employ AI- powered interviewing tools.
- **Industry Scope:** The research will look into how different sectors employ AI-powered interviewing tools.
- **Methodological Scope:** A mixed-methods approach will be used in this study, integrating qualitative and quantitative research techniques.

## **6. STATEMENT OF PROBLEM**

Concerns over the effects of artificial intelligence (AI) on the recruiting process, specifically with regard to applicant experience, accuracy, and fairness, have been raised by the growing usage of AI in selection interviews. Understanding the advantages and difficulties of AI- powered interviewing technology is becoming more and more important as businesses want to use it to increase productivity and effectiveness. Furthermore, nothing is known about how AI will affect the hiring process. AI-powered interviewing solutions could be more convenient and flexible, but they might also be devoid of the human contact and personal touch that candidates frequently desire. Because of this, companies could find it difficult to draw in and keep top personnel in a competitive labor market. The influence of AI on selection interviews must be thoroughly examined in order to allay these worries. Investigating the advantages and difficulties of AI-powered interviewing tools is part of this, as is looking at ways to reduce bias and guarantee accountability and openness in AI decision-making procedures. By doing this, companies can guarantee that AI-powered interviews for selection are impartial, efficient, and improve the applicant experience in general.

## **7. RESEARCH METHODOLOGY**

The Research methodology is a method to solve the research problem systematically. It involves gathering data, use of statistical ways, interpretations and drawing conclusions about exploration data. An influence of AI in selection interviews is examined using the view from objectives of the study. Chi-square has been used for descriptive statistical analysis and excel has been used for statistical modeling analysis with 134 sample.

### **Data Collection**

Data refers to a collection of systematized information, generally the results of experience, observation or trial, or a set of demesne. To achieve the objectives of this study, both primary and secondary data sources were utilized.

### **Sources of data collection**

Data is collected through primary and secondary sources.

**Primary Data:** Information was directly collected through a structured questionnaire, designed to assess AI selection process for an interview.

**Secondary Data:** Additional insights were gathered from industry reports, research papers, organizational records, and previous studies on AI selection process for an interview.

**Sample Size:** The sample is selected on the basis of random sampling technique drawn from two organizations viz, Focus organization and Dracarys incorporation. A sample of 134 employees is selected and analysis has been done by questionnaire.

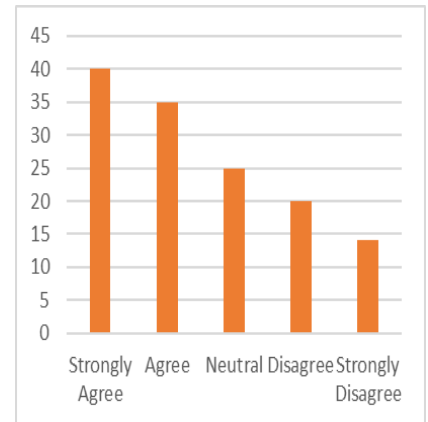
**Stastical Tools Applied:** Statistical tools applied in the present study are Bar plates, Pie plates.

**DATA ANALYSIS AND INTERPRETATION**

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**7.1 Does using AI in hiring reduce costs and time?**

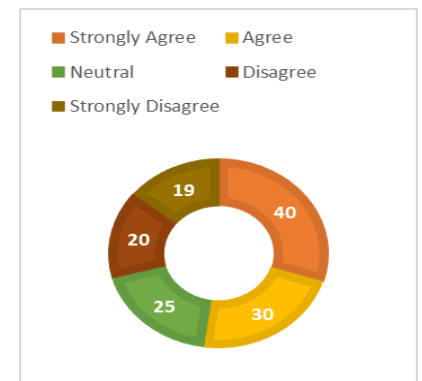
Response	Observed (O)	Expected (E)	$(\frac{O}{E}) - 1$	$(O - E)^2$	$(\frac{O - E}{E})^2$
Strongly Agree	40	26.8	13.2	174.24	6.5
Agree	30	26.8	3.2	10.24	0.38
Neutral	25	26.8	-1.8	3.24	0.12
Disagree	20	26.8	-6.8	46.24	1.73
Strongly Disagree	19	26.8	-7.8	60.84	2.27



Interpretation: Since  $\chi^2 (16.97) > 9.49$ , **reject the null hypothesis (H<sub>01</sub>)**. There is a **significant relationship** between the use of AI in the selection process and the reduction of hiring costs. AI plays an important role in improving efficiency, reducing administrative workload and minimizing hiring time.

**7.2 Are candidates more satisfied with AI interviews than with traditional ones?**

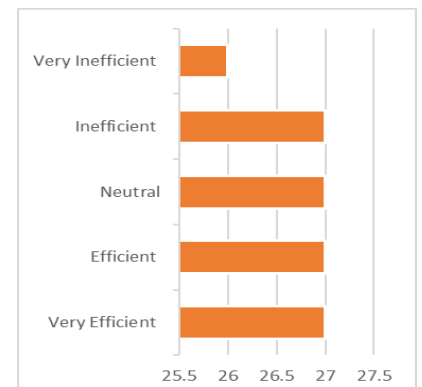
Response	Observed (O)	Expected (E)	$(\frac{O}{E}) - 1$	$(O - E)^2$	$(\frac{O - E}{E})^2$
Strongly Agree	40	26.8	13.2	174.24	6.5
Agree	35	26.8	8.2	67.24	2.51
Neutral	25	26.8	-1.8	3.24	0.12
Disagree	20	26.8	-6.8	46.24	1.73
Strongly Disagree	14	26.8	-12.8	163.84	6.11



Interpretation: Since  $\chi^2 (10.00) > 9.49$ , **reject the null hypothesis (H<sub>02</sub>)**. There is a **significant difference** in candidate satisfaction between AI-powered and traditional interviews. AI-powered interviews have a different impact on candidate satisfaction compared to traditional interviews.

**7.3 Is there a difference in hiring efficiency between AI interviews and traditional interviews?**

Hiring Efficiency Level	Observed (O)	Expected (E)	(O - E)	$(\frac{O - E}{E})^2$	$(\frac{O - E}{E})^2 / E$
Very Efficient	27	26.8	0.2	0.04	0.0015
Efficient	27	26.8	0.2	0.04	0.0015
Neutral	27	26.8	0.2	0.04	0.0015



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<b>Inefficient</b>	27	26.8	0.2	0.04	0.0015
<b>Very Inefficient</b>	26	26.8	-0.8	0.64	0.0237

Interpretation: Since  $\chi^2 (0.0287) < 9.49$ , **accept the null hypothesis (H<sub>03</sub>)**. There is no significant difference in hiring efficiency between AI-powered interviews and traditional interviews. The hiring efficiency is likely to be similar across both types of interviews.

**8. AI TOOLS FOR SELECTION INTERVIEWS**

**Chatbots:**

**Chatbots interact with candidates, respond to inquiries, and offer details about the business and position using natural language processing (NLP).**

1. Video Interviewing systems: These systems evaluate applicant replies, body language, and tone of voice using analytics driven by artificial intelligence.
2. Predictive analytics tools: These tools analyze candidate data, forecast performance and select the best candidates using machine learning algorithms.
3. Virtual Assessment Tools: These tools evaluate candidates' skills, talents, and behaviors using AI-powered simulations.
4. Language Analysis Tools: These tools analyze candidate replies using natural language processing (NLP) to find trends, tone and language usage.

**9. BEST PRACTICES FOR IMPLEMENTING AI IN SELECTION INTERVIEWS**

A Handbook for Human Resources Professionals

Here are some recommended practices for HR professionals that want to use AI in their selection interviews:

- I. Begin modestly: Start by testing AI-powered interviewing software on a limited number of applicants.
- II. Keep an eye out for bias: Examine AI decision-making procedures frequently to make sure they are impartial and equitable.
- III. Speak with potential candidates: Give applicants performance comments and a clear explanation of how AI is used in the interview process. AI in selection interviews needs to be carefully planned, carried out, and continuously assessed.

**10. FINDINGS**

**Significant Relationship Between AI and Cost of Hiring (H<sub>01</sub> - Rejected):**

The null hypothesis was rejected, suggesting that the cost of recruiting is significantly correlated with the usage of AI in the selection process, and that AI may assist lower total costs by lowering human labour and expediting recruitment.

**Significant Difference in Candidate Satisfaction (H<sub>02</sub> - Rejected):**

The rejection of the null hypothesis suggests that there is a substantial difference in applicant satisfaction between traditional and AI-powered interviews. The lack of human involvement in AI interviews or the speed and consistency that AI provides may cause candidates to have varying degrees of satisfaction.

**No Significant Difference in Hiring Efficiency (H<sub>03</sub> - Accepted):**

The null hypothesis was accepted, suggesting that AI-powered interviews and conventional interviews do not significantly vary in terms of recruiting efficiency. Regarding the amount of time and money spent on the hiring process, both approaches seem to be about as efficient as possible.

## **11. SUGGESTIONS**

### **Leverage AI to Lower Hiring Costs:**

Businesses should keep using AI into their hiring procedures to expedite applicant screening, resume review, and interview scheduling since it significantly lowers hiring costs.

### **Balance AI and Human Interaction for Greater applicant happiness:**

Organizations should look for ways to enhance the applicant experience during AI-powered interviews, considering the notable disparity in candidate happiness. To close the gap in satisfaction, this might entail adding human engagement components like feedback or follow-upcalls.

### **Analyse AI's Hiring Return on Investment (ROI):**

Companies should carefully consider if investing in AI-powered interviews is cost-, time-, and efficiency-justifiable, as AI does not significantly increase hiring efficiency when compared to traditional techniques. To increase overall efficiency, a hybrid strategy that combines AI and human input may be taken into consideration.

### **Employee Adaptation and Training:**

Businesses should provide hiring managers and HR departments training courses on how to use AI-powered solutions efficiently. This will guarantee that the full potential of these technologies is utilized, optimizing cost savings and reducing any possible negative effects on candidate satisfaction.

### **Regularly Assess applicant Satisfaction:**

In order to pinpoint areas that require improvement, businesses should keep assessing applicant satisfaction in both traditional and AI-powered interviews. This will assist enhance the applicant experience, leading to greater company branding and higher-quality hiring.

### **Include AI as a Supplementary Tool, not a Replacement:**

Rather than serving as a whole substitute for conventional hiring practices, AI-powered interviews ought to be used as an adjunct. Human judgment remains crucial in determining cultural fit, communication skills, and other intangible attributes that AI could miss.

### **Optimize AI Tools for Recruitment Efficiency:**

a. Although AI did not significantly increase hiring efficiency, it could still have other benefits, such as data-driven decision-making, scalability, and consistency. To improve performance over time, businesses should keep refining these tools.

Emphasis on Transparency and Ethical Issues in AI Hiring:

b. As AI continues to become more prevalent in hiring, businesses need make sure that their AI systems are impartial, ethical, and transparent. Candidates' confidence will grow as a result, and any unfavourable opinions regarding the usage of AI in recruiting will be avoided.

## **12. CONCLUSION**

The data obtained from testing the three hypotheses reveals meaningful knowledge about how AI affects recruitment procedures and its connections with cost diminution and improved efficiency alongside higher candidate satisfaction rates. AI affects recruitment expenses positively through its implementation in hiring procedures for screening candidates and reviewing resumes as well as scheduling interviews thus achieving higher efficiency and lower staff-related costs. The combination of AI technologies provides enhanced productivity that results in cheaper hiring expenses. AI-powered interview methods provide distinguishable improvements against traditional interview methods when it comes to enforcing applicant satisfaction standards. AI-powered interviews maintain pace and operational consistency yet they diminish the human aspects which job seekers typically seek from traditional human recruiters thus demonstrating the need to harmonize machine performance with recruiter sensitivity abilities. The efficiency of hiring between AI-powered interviews and traditional methods showed no substantial difference thus validating traditional approaches keep their overall hiring speed even though AI possesses particular advantages. Organizations should investigate further how AI applications can be used during the hiring process to minimize operational costs as well as increase workplace efficiency. The hiring process requires a proper combination of artificial intelligence systems and traditional approach to achieve

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candidate satisfaction together with efficient recruitment practices. Businesses should optimize their AI use to reach optimal results by reducing potential negative effects.

According to the report, AI significantly lowers hiring expenses by expediting the hiring procedure. When compared to traditional interviews, AI-powered interviews result in varying degrees of applicant satisfaction, indicating that human contact is still crucial to a great candidate experience.

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