Job Seekers' Perspectives on the Use of AI Chatbots in the Recruitment Process

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Abstract
Recruitment is a crucial aspect for companies, involving a significant investment of time and resources to streamline the process, many organizations are turning to AI chatbots that emulate human intelligence. This study evaluates the effectiveness of AI chatbots in recruitment from the perspective of job seekers. Using an Exploratory Research Design, we surveyed 100 respondents actively seeking employment, selected through the Snowball Sampling Technique. We analyzed the collected data using statistical techniques, focusing on identifying tasks suitable for AI chatbots in recruitment. The study also aims to pinpoint areas for improvement to better meet the needs of job seekers. The results indicate that job seekers have a moderate level of familiarity and comfort with AI chatbots during the recruitment process. Their opinion on the overall accuracy and effectiveness of chatbots in addressing queries is neutral. Job seekers, however, perceive AI chatbots as moderately effective in providing relevant information about the job application process, and matching skills and qualifications with job openings. They also find chatbots reasonably effective in scheduling interviews, conducting assessments, and facilitating post-interview communication. While job seekers acknowledge the moderate effectiveness of AI chatbots in specific tasks, they maintain a neutral stance on their reliability for all aspects of the recruitment process. These findings provide valuable insights for organizations aiming to enhance the integration of AI chatbots in their recruitment processes and improve the overall job-seeking experience.

Keywords: *AI Chatbot, Recruitment Journey, Job Seekers Perspective, Effectiveness and Reliability.*

1.0 Introduction

AI chatbots play a pivotal role in the recruitment process, contributing to various aspects from candidate sourcing to interview scheduling. These intelligent chatbots are capable of screening candidates based on their qualifications and experience while responding to predefined queries. Moreover, AI chatbots efficiently manage interview coordination between recruiters and candidates, resulting in substantial time savings for recruiters. The AI chatbot-powered method represents a more automated and AI-driven approach to recruitment. It encompasses the use of artificial intelligence to review resumes, schedule interviews, and even make hiring decisions. This approach offers enhanced efficiency and scalability compared to traditional methods, with the added benefit of potentially reducing human bias in the hiring process.

In our daily lives, we frequently interact with AI chatbots, sometimes even without realizing it. Messaging applications such as Facebook Messenger, WhatsApp, and Telegram commonly incorporate chatbots that assist us with various repetitive tasks. These tasks can range from sending reminders and making bookings to swiftly providing access to essential information. AI chatbots have revolutionized the HR department, providing it with the wings to climb to new heights. The study explored the potential of AI chatbots to improve the recruitment process from the perspective of job seekers. The study found that AI chatbots can be effective in reducing the time to hire, improving the candidate experience, and increasing diversity and inclusion. However, the study also found that there are some challenges associated with using AI chatbots, such as accuracy, personalization, and trust (Marinelli, M., 2020). The study surveyed 200 job seekers in China to assess their perceptions of AI chatbots in the recruitment process. The study found that job seekers were generally positive about the use of AI chatbots, but they also had some concerns about the accuracy and reliability of chatbots (Zhang, Wang, and Li, 2020)

2.0 Literature Review
These AI chatbots excel at screening resumes and applications. Leveraging Natural Language Processing (NLP) algorithms, they meticulously scan resumes and applications for keywords that align with the job descriptions. Furthermore, these chatbots possess the ability to analyze candidate information, taking into account work experience and skills, to make informed judgments on their suitability for a particular job role. This not only enhances the efficiency of the recruitment process but also saves valuable recruiter time by swiftly eliminating candidates who do not meet the essential qualifications.

This research delves into the impact of artificial intelligence (AI) chatbots on the recruitment process. Focusing on the use of chatbots for candidate engagement and service delivery, the authors explore how these technologies influence each stage of recruitment. Through examining secondary sources like conceptual papers, peer-reviewed articles, and websites, the study aims to identify the overall impact of chatbots on this crucial process. The findings suggest that AI chatbots offer significant benefits and can be highly productive tools within the recruitment landscape. They can contribute to crafting strategic approaches and even tackle complex issues within the process. While research interest in AI-powered recruitment is growing, there remains valuable ground to explore in this ever-evolving field. This paper concludes by proposing future research avenues for investigating the intersection of chatbots and the role of recruiters. Nawaz, Nishad and Gomes, Anjali Mary (2020)

The study looks into how applicants perceive AI-enabled recruiting, as well as their experiences and perspectives on hiring procedures. According to the findings of this study, applicants see AI technology in recruitment operations favourably, seeing it as beneficial and straightforward to use (Piotr Horodyski, 2023). Reduced Response Time but Lack of Human

Judgement, biases in algorithms, speech/text detection, insufficient optimization for video interviews, and a lack of transparency when engaging with AI Programmers should improve AI tools and make them more effective in the HR context. Recruiting top talent is now crucial for business success, and AI-powered methods are rapidly becoming the norm. However, how candidates react to these tools remains unclear. This study examines how factors like social media use and job fairness influence their willingness to engage with AI recruitment processes. The goal is to help companies understand and optimize their use of AI technology for a smoother and more successful talent acquisition experience. (Van Esch, P., & Black, J. S., 2019).

From the perspective of Job Seekers, AI Chatbot provides a convenient and accessible means of Interacting with Potential Employers and Job Portals. Job seekers can engage with chatbots at any time, receive immediate responses, and get quick access to relevant information. AI chatbots are capable of scanning and evaluating resumes to match qualifications, skills, and experience with job requirements. This helps job seekers by ensuring that their applications are aligned with the job they're applying for. Chatbots can answer common questions about job listings, company details, application processes, and interview schedules. This assists job seekers in obtaining the information they need without having to wait for human responses.

AI chatbots can suggest relevant job openings based on a job seeker's skills, experience, and preferences. This can save time and help job seekers discover opportunities they might have otherwise missed. Chatbots can provide updates on the status of job applications, allowing job seekers to stay informed about the progress of their applications. AI chatbots can offer feedback on resumes, cover letters, and interview techniques, helping job seekers improve their application materials and interview skills. AI chatbots are designed to be objective and free from biases, which can be advantageous for job seekers as they are assessed solely based on their qualifications and not subjective criteria. By analyzing the preferences and skills of job seekers, AI chatbots can help individuals discover job opportunities that are well-suited to their qualifications and career goals.

2.1 Objectives Of the Study

1. To assess the accuracy and efficiency of AI chatbots in the candidate recruitment process.
2. To evaluate the accuracy and efficiency of AI chatbots in matching candidates' skills and qualifications with relevant job openings, based on user interactions and feedback.
3. To determine which specific tasks or stages of the recruiting processes can be most effectively handled by AI chatbots.

3.0 Methodology

An exploratory research design serves as an initial and adaptable approach for acquiring insights and establishing familiarity with a research problem. It encompasses the collection of quantitative data through a questionnaire. Intending to investigate and generate hypotheses, this approach proves highly advantageous in situations where there is limited information about a particular issue, as it was beneficial in refining the research question for subsequent, more in-depth examinations. Primary data refers to original data that is collected directly from 100 Job seekers selected using a snowball sampling technique. Data was collected through Google Forms using close-ended questionnaires. A Cronbach's Alpha value of 0.938 indicates that the

questionnaire used for evaluating AI chatbots in the recruitment journey from a job seeker's perspective is highly reliable mentioned in Table 1 below. This means that the questions in the questionnaire consistently measure what they are intended to measure, and the responses are internally consistent.

Table 1: Reliability Statistics

Cronbach's Alpha	N of Items
.938	20

4.0 Data Analysis

Objective 1: To assess the accuracy and efficiency of AI chatbots in the candidate recruitment process.

Hypothesis:

Null Hypothesis (H0): There is no association between the use of AI chatbots and the accuracy of candidate matching in the recruitment process.

Alternative Hypothesis (H1): There is a significant association between the use of AI chatbots and the accuracy of candidate matching in the recruitment process.

Analysis:

Table 2: Descriptive Statistics representing Accuracy and Efficiency

	N	Mean	Std. Deviation	Minimum	Maximum
AI Chatbot Effectiveness and Capability					
1. AI chatbots can effectively conduct pre-employment assessments or skill tests for candidates.	100	3.1900	.96080	1.00	5.00
2. AI chatbots can effectively handle follow-up communications with candidates after the interview process.	100	3.1600	.99209	1.00	5.00
3. The AI chatbot's response time for answering job seekers' queries can be improved.	100	3.6500	1.31330	1.00	5.00
4. The AI chatbot should improve its ability to handle follow-up questions and inquiries from job seekers.	100	3.6300	1.31545	1.00	5.00
User Experience and Expectations					

1. The chatbot should be more sensitive and understanding in handling job seekers' concerns and emotions.	100	3.8300	1.16389	1.00	5.00
2. The chatbot should improve its ability to recognize and address different languages and dialects.	100	3.8200	1.16671	1.00	5.00
3. The chatbot should improve its ability to assist job seekers with questions related to job benefits and perks.	100	3.8300	1.17254	1.00	5.00
4. Job Seeker Interactions with AI Chatbot	100	2.57	1.13043	1.00	5.00

Table 3: Test Statistics-Chi-Square Test								
	AI Chatbot Effectiveness and Capability				User Experience and Expectations			
	1. AI chatbots can effectively conduct pre-employment assessments or skill tests for candidates	2. AI chatbots can effectively handle follow-up communications with candidates after the interview	3. The AI chatbot's response time for answering job seekers' queries can be	4. The AI chatbot should improve its ability to handle follow-up questions and inquiries from job seekers.	1. The chatbot should be more sensitive and understanding in handling job	2. The chatbot should improve its ability to recognize and address different languages and	3. The chatbot should improve its ability to assist job seekers with questions related to job benefits and	4. Job Seeker Interactions with AI Chatbot
Chi-Square	59.900[a]	54.500[a]	57.700[a]	31.300[a]	24.300[a]	36.700[a]	35.600[a]	37.300[a]
df	4	4	4	4	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000	.000
Exact Sig.	.000	.000	.000	.000	.000	.000	.000	.000
Point Probability	.000	.000	.000	.000	.000	.000	.000	.000

Interpretation:

The Chi-Square test suggests that there are significant associations between respondents' opinions on AI chatbot effectiveness and user experience items. The descriptive statistics table no 2, reveals areas where the chatbot performance is strong and where there's room for

improvement. The chi-square test results further highlight how user interactions influence their perceptions and expectations of the chatbot as mentioned in Table 3.

Objective 2:
To evaluate the accuracy and efficiency of AI chatbots in matching candidates' skills and qualifications with relevant job openings, based on user interactions and feedback.
Null Hypothesis (H0): There is no significant difference in efficiency between AI chatbots and human recruiters.
Alternative Hypothesis (H1): There is a significant difference in efficiency between AI chatbots and human recruiters.
The accuracy and efficiency of AI chatbots in the candidate recruitment process depend upon the AI chatbot's capability to match your skills and qualifications with relevant job openings.

Table 4: Summary table – Coefficients

Factors		
Skills	< 0.01	Significant
Experience		
Qualification		

Table 5: Model Summary- Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.551[a]	.304	.297	.80568
The AI chatbot's capability to match your skills and qualifications with relevant job openings.				

This means that the AI chatbot can effectively analyze and match candidates based on their skills, experience, and qualifications. The model summary mentioned in table no. 5, further supports this, showing a moderate R-squared value (0.304) and a low standard error of the estimate (0.80568), indicating a good fit between the model and the data.

AI chatbots have the potential to analyze large volumes of data and identify patterns in candidate profiles and job descriptions, potentially leading to more accurate and efficient matching. However, their effectiveness depends on various factors such as the quality of training data, the algorithm used, and the specific implementation. Evaluating their performance through user interactions and feedback is crucial to assess whether they fulfil their promise. The significant Value is <0.01 mentioned in Table no. 4, which indicates AI chatbots Exactly match the Skills, experience, and qualifications of job openings. R Square value is 0.304, which indicates AI chatbots moderately affect on recruitment process.

Objective 3:
To determine which specific tasks or stages of the recruiting processes can be most effectively handled by AI chatbots.
Hypotheses:
Null Hypothesis (H0): There is no significant difference in the effectiveness of AI chatbots across various stages of the recruiting process.

Alternative Hypothesis (H1): There are specific stages within the recruiting process where AI chatbots demonstrate significantly higher effectiveness compared to others.

Table 6: Stages of Recruitment

Stages of Recruitment		% of response					Mean
		1	2	3	4	5	
Before	Accuracy of chatbot to response FAQ during the application process.	4%	20%	46%	23%	7%	3.090
	Chatbot's capability to match skills and qualifications.	3%	13%	47%	32%	5%	3.230
During	Chatbot effectiveness to guide and provide step-by-step instructions.	8%	17%	43%	25%	7%	3.060
	Effectiveness of chatbots in scheduling and coordinating interviews.	6%	16%	44%	26%	8%	3.140
	Chatbot's effectiveness for pre-employment tests.	6%	13%	44%	30%	7%	3.190
After	Chatbot's effectiveness in follow-up communications.	7%	12%	48%	24%	9%	3.630

Interpretation: Table no. 6 highlights the Stages and tasks of the recruitment processes most effectively handled by AI chatbot. The mean valve for each stage is 3, which indicates that AI chatbots are moderately accurate, but there is a lot of scope to improve. The effectiveness of chatbots appears to be relatively higher in tasks related to the After Recruitment stage, particularly in follow-up communications.

5.0 Findings

The research assessed AI chatbots' impact on the recruitment process from job seekers' perspectives. Job seekers showed moderate familiarity and comfort with chatbots, expressing neutrality regarding their accuracy and overall effectiveness. While chatbots were found moderately effective in conveying job-related information and handling specific tasks like scheduling interviews or conducting assessments, suggestions for improvement focus on quicker responses, better follow-up handling, increased sensitivity to emotions, multilingual capabilities, and addressing queries about job benefits. Overall, job seekers consider chatbots moderately effective but see room for enhancement, suggesting further studies with larger samples and extended durations to refine their role in recruitment processes.

5.1 Conclusion and Future Recommendation

AI chatbots have the potential to revolutionize the way candidates are matched to job openings. By analyzing large volumes of data and identifying patterns, they can help to identify qualified candidates more quickly and efficiently than traditional methods. As AI technology continues to evolve, we can expect to see even more sophisticated and effective chatbots that can play a crucial role in the future of recruitment.

The aim is to create a more user-centric and effective AI chatbot that aligns closely with the needs and expectations of job seekers throughout the recruitment process. Regularly monitoring user feedback and making continuous improvements will contribute to the ongoing success of the chatbot in facilitating a positive user experience.

This study offers valuable guidance for organizations integrating AI chatbots into their recruitment strategies, emphasizing the importance of understanding and addressing job seekers' needs for a more positive and effective experience. we can gain a more comprehensive understanding of how AI chatbots impact the recruitment process from various perspectives. This knowledge will empower organizations to leverage this technology ethically and effectively, ultimately creating a more positive and successful experience for both job seekers and employers.

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