

A STUDY ON USE OF AI IN RESUME SCREENING IN HR TECH AT ALGOHIRE TECHNOLOGIES

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ABSTRACT: Artificial intelligence (AI) is transforming the hiring process, particularly in the crucial area of resume evaluation. This research examines how AlgoHire Technologies employs AI-powered solutions to increase automation, decrease bias in resume evaluations, and expedite the hiring process. Large datasets can be swiftly combed through by AI algorithms to identify applicants whose qualifications, experience, and talents align with the job specifications. As a result, fewer applications need to be reviewed. Benefits like quicker decision-making, improved talent alignment, and increased operational efficiency are evident in the results. The research highlights a number of significant issues, including the necessity for algorithmic transparency and the moral obligation to guarantee justice. According to the survey, HR managers may locate the top applicants more thoroughly and effectively by utilizing AI to scan resumes, which also saves time and improves rating fairness.

Keywords: Automated Candidate Filtering, Machine Learning Algorithms, Bias Detection and Mitigation, Predictive Talent Analytics and Resume Parsing Technology.

1. INTRODUCTION

Technological advancements have fundamentally transformed nearly every facet of modern life, and human resources management is no exception. The application of artificial intelligence (AI) in recruitment has progressed considerably. Hiring managers previously had to manually evaluate a substantial volume of documents, a process that was time-consuming and could potentially lead to bias or errors. Currently, artificial intelligence serves as a powerful instrument that enables organizations to review resumes more efficiently and to make more accurate and equitable hiring decisions.

Resume screening is often a vital stage in the recruitment procedure. Ultimately, it determines whether prospects progress and the nature of skills that a business develops. AI-enabled devices are capable of executing this task efficiently and accurately. These technologies can efficiently identify the most suitable candidates and exclude individuals who do not meet the criteria by analyzing resumes for pertinent education, experience, and skills. HR professionals are no longer required to devote extensive hours to administrative tasks. Alternatively, they might focus on strategic responsibilities such as conducting interviews, facilitating induction, and developing workforce plans.

The capacity of artificial intelligence to mitigate bias in the recruitment process is among its most significant advantages. Unconscious biases related to race, gender, or educational background may affect recruiters, even those with the most well-meaning intentions. AI assesses candidates solely based on their qualifications after being trained on multiple

objective datasets. This promotes equal opportunities and supports the overarching goal of fostering diverse and inclusive workplaces, which modern organizations regard as essential to their culture and social responsibility.

The ability to expand represents another innovative feature. For a single position, large organizations may receive hundreds of applications, rendering a comprehensive review difficult. All of these documents can be efficiently organized by AI algorithms, which guarantee that no qualified applicant is disregarded. This degree of efficiency is essential during times of heightened workload, such as college application drives or major expansion initiatives.

AI accelerates processes and improves the experience of job seekers. Individuals seeking employment value straightforward and up-to-date information, and AI-powered systems can provide automated feedback or status updates. This enhances the company's reputation and mitigates impatience. In a competitive employment landscape, organizations that demonstrate professionalism, responsiveness, and innovation are more likely to attract top-tier talent, thereby increasing their visibility to potential employers.

2. REVIEW OF LITERATURE

Caliskan, A. (2025): In his research, Caliskan looks at how biased large language models (LLMs) could affect human judgment while reviewing resumes. Using AI-generated CV recommendations, 528 participants in a controlled trial were able to mimic real job interviews. It shocked me that people would often obey the AI's orders, even when they were biased against a certain race or ethnicity. This shows how AI could unintentionally supplant human judgment, which would have disastrous ethical and practical consequences. Eliminating bias from HR algorithms is a top priority, according to the report. Two possible approaches to addressing this issue include increasing the transparency of AI systems and providing interviewers with training on bias. While AI has the potential to streamline the hiring process, the paper warns that its implementation must be careful so as not to undermine human agency, accountability, and fairness.

Wang, Z., (2025): In order to make resume screening more efficient, clear, and fair, Wang's research presents a new multi-agent architecture that uses large language models (LLMs). This method helps people make better decisions by maximizing the use of external data in candidate evaluations through the use of Retrieval-Augmented Generation (RAG). A group of AI bots works together to examine and verify resumes, providing recruiters with suggestions that are simple to understand and verify. Comparative studies show that this AI-assisted method lowered the time needed to review resumes without sacrificing or diminishing the quality of hiring decisions. One of the best things about this strategy is that it can provide you short explanations for each recommendation. The result is that people are more likely to act justly and ethically. Using AI alongside human supervision can make the hiring process more reliable, according to the research.

Singh, R., (2024): In their research, Singh and Gupta look at how AI could make resume screening more accurate and useful. Their method offers a more thorough understanding of a candidate's skills by transforming resume text into high-dimensional vector representations using large language models (LLMs). Sophisticated similarity scoring and ranking algorithms

are then used to rank the profiles of the candidates that best match the job requirements. Using AI to examine resumes during testing is a lot faster and more accurate than using traditional keyword-based strategies, which drastically reduces the amount of time needed for the process. Not only does the technology boost efficiency, but it also enables recruiters to make data-driven decisions by highlighting a candidate's strengths and areas for improvement. While the article does touch on how AI can change the recruiting process, it stresses the need of regularly reviewing and adjusting automated tests to make sure they are fair and accurate.

Chadha, A. (2023): Built on an AI-driven platform that offers personalized resume evaluations, Chadha's research investigates the possible effects of AI on job advice. In order to speed up the application screening process, ResumAI analyzes data, finds crucial talents, and matches candidate profiles to job requirements. It used to be quite time-consuming to review resumes. Both the system's structure and a number of moral issues are investigated in the research. In order to reduce bias, it stresses the importance of being open and fair. A rigorous test across different industries found that ResumAI greatly improved resume quality and accelerated the application process. Despite a number of problems—including the need for high-quality raw data and the likelihood of algorithmic bias—the research gives us useful information. It shows how AI could help people use common sense when assessing resumes and providing job advice.

Lu, H. (2023): Using deep learning to screen resumes has both ethical and technological challenges, which Lu's research delves into. The report also looks at the risks of national origin discrimination. This research shows that AI models, especially those trained on large text collections like Wikipedia, can be influenced by historical data and semantic links. If applicants' histories are given more weight than their actual skills in the recruiting process, biased hiring practices can be at work. The research looks at the ways bias gets into AI systems and how it affects things like justice, compliance with the law, and the reputation of a corporation. To alleviate these problems, the authors suggest using algorithms that are conscious of fairness, increasing the amount of training datasets, and doing algorithmic audits. Experiments show that these methods reduce biased results. In order to guarantee fair employment procedures, the paper stresses the importance of responsibly using AI.

Pandelu, A. P. (2022): Machine learning and AI are the topics of this article's discussion as they pertain to automating the screening of resumes. Using Natural Language Processing (NLP), the author explains how they built an AI-driven system that parses job applications for vital candidate information including skills, experience, credentials, and achievements. The algorithm evaluates each resume and assigns a score based on how well the candidate meets the job's specifications; this helps recruiters choose the best prospects. The accuracy, utility, and ability to decrease false positives in candidate selection are determined by developing and evaluating numerous machine learning models. The paper also addresses practical concerns, such as how to deal with unstructured data, the many resume formats, and the potential for algorithmic bias. A more fair and unbiased assessment of applicants, faster hiring, and easier decision-making are all possible outcomes of using AI to screen resumes, which the author explores in this article. This research explores the integration of these technologies with existing HRMSs with the goal of improving the efficiency and scalability

of the hiring process. The research concludes that AI and ML can revolutionize HR software by making it easier to use, producing better results, and reducing prejudice in hiring.

Parasurama, P., & Sedoc, J. (2021): In their research, Parasurama and Sedoc look into ways to make automated resume reviews less biased against women. In order to identify any gender-specific wording or trends that could impact AI systems, over 709,000 commercial IT apps were reviewed. As a result, they used strategies based on lexicons to remove gender-specific language from resumes. Based on their research, this approach reduces gender cues, which in turn reduces the chances of biased selection. Their proposed compromise is that, in the process of removing too much data, predictions may become less precise. Finding a middle ground between success and fairness is crucial, and the article offers advice on how to do just hiring. The importance of comprehensive preprocessing and bias reduction in eliminating job disparities is brought to light, which further complicates the ethical AI issue.

Gan, C., & Mori, T. (2021): The importance of utilizing high-quality datasets when developing AI-based resume screening systems is emphasized in the research conducted by Gan and Mori. They expanded the sample size and improved the annotation criteria to produce a large corpus of English resumes with different formats and types of material. They used this dataset to test the efficacy of many pre-trained language models (PLMs) in classifying resume features like education, work experience, and skills. Datasets tailored to certain domains significantly enhance the precision and reliability of AI-driven screening, as shown by the results. In order to promote fair employment practices, boost productivity, and decrease bias, the research looks into how reliable databases do all three. The authors state that faster recruiting, better candidate-job matching, and less human error are all possible outcomes of using advanced AI models with carefully selected data. Ethical and moral HR technology is backed by all of these benefits.

Jiang, J., (2020): Specifically, Jiang's research aims to improve the precision with which AI can evaluate a candidate's fit for a post by enhancing the accuracy of job descriptions and resumes. In order to acquire contextual and semantic data, the authors suggest a feature fusion method that merges deep learning with structured feature extraction. Not only does this approach take into account explicit information like experience, ability, and credentials, but it also takes into account implicit information like candidate tendencies and past hiring data. This method improves matching accuracy while decreasing the demand for human screening by offering a more complete picture of applicants and job requirements. Research shows that this method improves the hiring odds by matching resumes more precisely than the status quo. In particular, the research highlights how AI-powered solutions could facilitate data-driven, objective recruiting and reduce bias in human candidate evaluation, among other potential broader consequences.

3. AI IN HR TECHNOLOGY

Artificial intelligence is changing the human resource landscape by automating once labor-intensive procedures. Modern workforce management is more efficient, accurate, and sophisticated because to the use of cutting-edge technologies like as predictive analytics and machine learning. Recruiters can use these tools to assess resumes, understand candidates' abilities, and make faster, more fair decisions than they would with just human judgment.



RESUME SCREENING IN HR TECHNOLOGY

Resume screening is an important component of HR technology since it helps firms discover the top candidates faster and streamlines the hiring process. Research enabled by AI and automation can help with recruiting faster, more equity, and data-driven decisions.

Efficient Candidate Shortlisting: Recruiters may make better use of the vast amount of resumes sent by using AI-powered resume screening systems. By finding people with the necessary skills and expertise fast, they were able to decrease the amount of labor required. This could lead to human resources departments focusing more on assessing highly qualified candidates and less on the applications themselves.

Enhanced Matching: Modern AI systems sift through applications and find matches between job postings and data sets, both structured and unstructured. This method guarantees that relevant keywords are used in conjunction with applicants' qualifications and competence to choose the best candidates. Irrespective of the expression, artificial intelligence is able to detect comparable experiences or abilities. This leads to more precise matching of candidates with open positions.

Data-Driven Recruitment: By analysing patterns in applicants' locations, skill sets, and work experience, AI-powered resume screening quickly weeds out unsuitable prospects. Human resources departments can utilize this data to enhance job descriptions, plan staff development programs, and make more informed hiring decisions. By gaining strategic insights from raw application data, organizations may improve their future recruiting efforts and potentially attract top talent.

Reducing Human Bias: Recruiters could unintentionally show bias towards some candidates based on characteristics such as gender, age, or level of education. Artificial intelligence can improve the uniformity of the assessment process by focusing only on objective requirements such as skills, qualifications, and experience. Hiring processes become more transparent and equitable when AI is used effectively, since it reduces the influence of implicit prejudice.

Cost and Time Savings: Reviewing papers by hand is labor-intensive and costly. By reducing the amount of time needed for hiring, HR organizations may manage more applications with fewer workers by integrating AI automation into this process. Teams can prevent productivity decreases while waiting to fill important jobs by using expedited hiring techniques.

Integration with HR Systems: A lot of the time, applicant tracking systems (ATS) and other HR software are compatible with resume screening technologies. Consequently, there are more efficient methods for organizing interviews, contacting applicants, and updating selected users in the system. Integration promotes consistency and lessens administrative mistakes.

4. AI IN RESUME SCREENING

The application of AI in HR software streamlines the resume review process by leveraging NLP and ML. In this way, businesses may more easily find candidates with the right set of skills and experience for open positions, and then rank them accordingly. The time, money, and bias saved from not having to screen candidates is invaluable to managers, who can then focus on other important aspects of the hiring process. This automated approach improves the

efficiency and quality of hiring by assisting HR workers in managing large amounts of applicants.

GUIDELINES FOR RESUME SCREENING



Talk To The Hiring Manager: Prior to examining resumes, consult with the hiring manager to have a thorough understanding of the position's requirements and the attributes that are most important to potential candidates. Outside of the job description, they may also talk about necessary skills, qualifications, and preferred work history. Preliminary alignment ensures that the screening approach is focused, fair, and effective.

Look For Resume Red Flags: Keep an eye out for irregularities, discrepancies, extended unemployment, and job hopping in the applicant's calendar and resume. Make sure you follow up with applicants after the conversation to offer them another opportunity to voice any concerns and avoid making hasty judgments.

Identify Potential Keyword Stuffing: Using irrelevant keywords is one way that some applicants try to avoid resume screening. Seek out a candidate who, rather than merely projecting an air of authority, can converse fluently and authentically in business jargon, displaying actual expertise. Real resumes are well-organized and consistent, while resumes that are keyword-stuffed look inauthentic and don't do the candidate justice.

Incorporate Testing Into Screening: Consider adding quick tests to the resume review process to uncover talents and abilities that aren't listed on the CV. To further narrow the pool of top candidates before the interview stage, further tests may be administered after the first screening. Carefully constructed evaluations offer an extra layer of evidence.

Look Beyond Minimum Qualifications: Compile details that set a candidate apart from the competition, such as proficiency in a foreign language, relevant work experience, research papers, or extracurricular activities that show they are willing to go above and beyond what is demanded. In order to assess their fit for the role, it is important to consider how well they mesh with the company's culture.

Pay Attention To Details: Verify for typos and grammatical errors that could show carelessness, lack of concentration, or incorrect information. Having measurable facts and performance indicators to support claims makes them more credible. The evidence of your achievements can be found in accolades and acknowledgment. Potentially illuminating aspects of the candidate's character and compatibility with the culture are their interests.

5. USE OF RESUME SCREENING IN HR TECHNOLOGY

Resume screening is an important component of HR technology, and companies can benefit from AI-powered systems when dealing with large numbers of candidates. One way to

improve the initial stage of hiring is to use HR technology to filter resumes. This allows for more effective and efficient applicant selection.

Time Efficiency: While human supervisors could take days or weeks to go through hundreds or thousands of applicants, AI-powered resume screening could do the task in minutes. By automating mundane tasks like removing unqualified applicants, HR personnel may free up more time for high-priority tasks like conducting interviews, developing recruitment strategies, and communicating with top candidates. Because of this efficiency, companies may fill unfilled positions faster and spend less time on the hiring process overall.

Improved Candidate Matching: The capabilities of artificial intelligence programs extend well beyond the comprehension of human language. Finding transferable strengths is possible by looking at one's experience, education, talents, and accomplishments in the right setting. Companies benefit from higher hiring quality and fewer costly mismatches when qualified candidates are a good fit for open positions.

Data-Driven Decisions: In-depth insights, such as the distribution of candidates' abilities, normal experience levels, and common educational backgrounds, are provided by AI-powered resume screening tools. With this data, HR can better predict staffing requirements, design more accurate job descriptions, and make informed decisions. It is much easier to regularly assess the efficacy of recruitment campaigns with data-driven tactics.

Reduced Bias: By establishing uniform criteria for evaluation, such as level of experience and skill, we can be sure that every applicant is being considered fairly. Effective AI reduces bias based on age, gender, and background, ensuring that decisions are made with the individual's best interests in mind. A more inclusive and accessible hiring process promotes justice, diversity, and equity in the workplace.

Seamless Integration: In order to keep the screening process going, AI often integrates directly with HR management systems and applicant tracking systems (ATS). Because of this, the HR department can keep track of applications, set up interviews, and automatically update the status of selected candidates much more quickly. By standardizing the application and hiring processes, integration lessens the likelihood of administrative mistakes.

Enhanced Candidate Experience: Artificial intelligence shortens the waiting period by facilitating faster screening and more immediate information delivery to candidates. By keeping candidates informed in a timely and open manner, we can build trust and encourage their active participation. This response improves the company's image and increases the chance that top-tier applicants will accept offers by making sure the hiring process is fair, transparent, and candidate-centric.

TOP AI RESUME SCREENING TOOLS

Artificial intelligence (AI)-powered application evaluators have risen to the top of their fields. The following materials are commonly utilized by HR professionals:

TOOL NAME	KEY FEATURES	IDEAL FOR
HireVue	Evaluations and rankings are conducted via artificial	Enterprise-level hiring

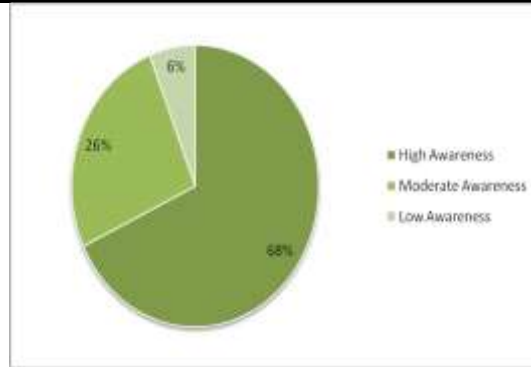


	intelligence.	
Pymetrics	Evaluating the psychological and emotional faculties.	Diversity-focused companies
Hiretual	Evaluating applications and recognizing exceptional persons	Tech and startup hiring
Zoho Recruit	Screening utilizing artificial intelligence in combination with application tracking technologies.	SMEs and mid-sized companies
SeekOut	Utilizing AI for the assessment and recruitment of persons from varied backgrounds	DEI-focused recruitment

6. DATA ANALYSIS AND INTERPRETATION

Awareness Level of AI Tools at Algohire

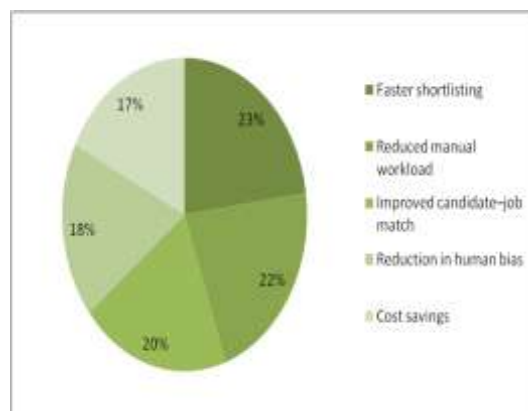
Awareness Level	Frequency	Percentage
High Awareness	68	68%
Moderate Awareness	26	26%
Low Awareness	6	6%



INTERPRETATION: It appears that the internal communication and training were successful because a large part of the respondents (68%) were familiar with Algohire's AI-powered screening processes.

Perceived Benefits of AI Resume Screening

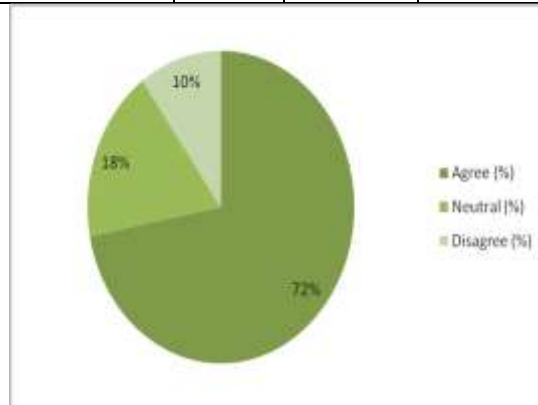
Benefit	Agree (%)	Neutral (%)	Disagree (%)
Faster shortlisting	88	8	4
Reduced manual workload	84	10	6
Improved candidate–job match	76	14	10
Reduction in human bias	70	20	10
Cost savings	68	22	10



INTERPRETATION: Approximately 88% of respondents believe that AI enhances effectiveness. According to 88% of the agreeing respondents, AI shortened the time it took to narrow down candidates, and 84% stated it reduced the amount of human work needed.

Accuracy and Fairness Perception

Statement	Agree (%)	Neutral (%)	Disagree (%)
AI selects the most relevant resumes accurately	72	18	10
AI reduces unconscious bias in screening	64	23	13
AI decisions are transparent	48	30	22

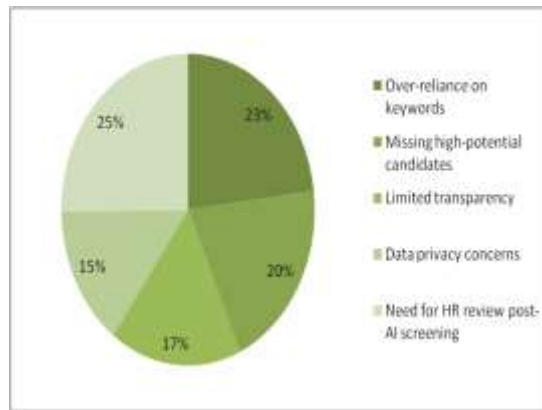


INTERPRETATION: Even while 72% of people think AI is accurate, only 48% think its output makes sense. This raises concerns about black-box algorithms.

Challenges in Using AI Resume Screening

Challenge	Frequency	Percentage
Overuse of keywords	55	55%
Absence of candidates with great potential	48	48%
Insufficient details	40	40%
Concerns regarding data protection	35	35%
HR must review it after AI screening.	60	60%

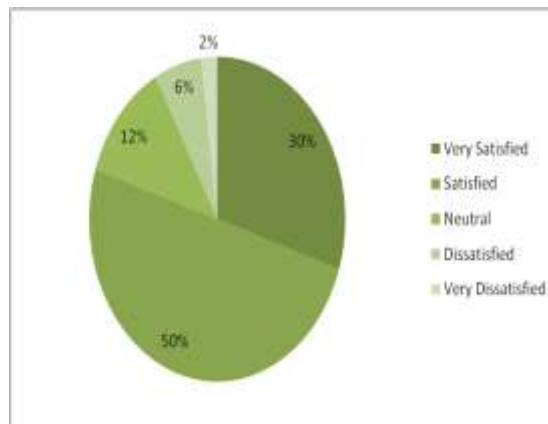




INTERPRETATION: Even with AI screening, 60% of people are concerned that human review of HR records will be necessary. This means the system is useful, but it isn't completely self-sufficient.

Overall Satisfaction with AI Screening at Alghoire

Satisfaction Level	Percentage
Very Satisfied	30%
Satisfied	50%
Neutral	12%
Dissatisfied	6%
Very Dissatisfied	2%



INTERPRETATION: Only 8% of people who took the survey are happy with or extremely happy with Alghoire's AI-powered resume screening process.

7. CONCLUSION

Improvements in the efficiency of resume reviews brought about by artificial intelligence (AI) have had a profound effect on HR technology. By handling the initial evaluations of applicants, AI allows firms to efficiently handle a large volume of applications. Due to the reduction of routine tasks, human resources experts are now free to focus on people management strategies. Professionals can use AI-driven resume screening services to check if their skills, work history, and degree are a good fit for open positions. Keyword matching, predictive analytics, and natural language processing are some of the methods that help in the

hiring process to locate the most qualified candidates. As a result, the organization is more likely to recruit individuals whose beliefs and aspirations align with its own. One of the key benefits of AI is that it can help reduce human bias when evaluating resumes. Through the use of data-driven research and consistent evaluation criteria, artificial intelligence can level the playing field for candidates from diverse backgrounds. Errors in the algorithms or training data can happen accidentally, therefore it's important to watch closely.

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