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A STUDY ON AI IN RESUME SCREENING AND RECRUITMENT BENEFITS AT INFOSYS

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ABSTRACT:

Artificial intelligence is revolutionizing the workforce by streamlining and complicating the employment process. HR workers can save a lot of time by not having to go through as many applications because AI can efficiently evaluate and find the most eligible individuals. When compared to people, it is often more accurate in determining an applicant's knowledge, abilities, and fit for the position. In order to ensure that individuals from diverse backgrounds have equal opportunities, AI works to reduce bias. AI can locate competent candidates in a matter of minutes, greatly reducing the workload of recruiters. You may learn a lot about a candidate's potential and cultural fit with a company using predictive technology. This effectiveness shortens the hiring process and saves money by making better use of repetitive administrative tasks. All levels of management can benefit from having access to transparent, data-driven insights when making hiring decisions. Companies and candidates alike are finding the hiring process to be more engaging, transparent, and expedited thanks to AI.

Keywords: Artificial Intelligence (AI), Resume Screening Automation, Recruitment Efficiency, Talent Acquisition, Digital Recruitment Tools

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1. Introduction

The recruitment procedure is becoming more astute and productive with the support of AI. A lot of time would be saved by recruiters if AI programs could locate the top applicants fast instead of having to sift through a lot of applications. In addition to reducing the likelihood of judgments being influenced by prejudice, this also saves time and resources. This makes it more probable that candidates' skills and experience will be evaluated objectively. If the hiring process is more efficient and less time-consuming, companies will have more time to connect with prospects rather than fill out paperwork. Finally, AI is bringing a human touch to the employment process, making it more objective and fair.

Artificial intelligence (AI) is like a smart assistant in the employment process; it helps firms find and hire the finest candidates. AI can quickly sift through applications and identify top talent, which is a huge time saver for hiring managers. This optimizes the process, speeds it up, and improves its accuracy while simultaneously lowering the

chance of bias in decision-making. Not only do candidates have a better idea of their own abilities, but they also have a lesser probability of being passed over. When human resources departments shift their attention from time-consuming screening procedures to more strategic projects and activities that benefit people, employers reap the benefits.

By functioning as an intelligent filter, artificial intelligence aids businesses in finding the most qualified applicants swiftly when utilized for resume screening. It is able to extract relevant information about a candidate's experience, education, and abilities from resumes by utilizing algorithms for machine learning and natural language processing. Recruiters will save a significant amount of time compared to manually reviewing several applications. The shortlisting process is significantly accelerated because the algorithm discovers the best solutions autonomously. The use of AI ensures that qualified applicants are not overlooked due to its ability to quickly scan through massive files.

Among AI's many advantages is its potential to eliminate unconscious prejudice in the employment process. Factors such as gender, age, race, and education level can influence more conventional methods of getting things done. Artificial intelligence (AI) solutions prioritize knowledge, skills, and competencies when they are properly constructed. The employment process is now more accessible and equitable as a result. Providing individuals from diverse backgrounds with an equal opportunity to compete promotes diversity and strengthens the company's culture.

Because of AI, the evaluation of resumes and the hiring process are evolving. If applicants are not provided enough information or have to wait too long for a response, they may feel excluded from the traditional recruiting process. Chatbots and other AI-powered automated tools streamline and enhance the process by promptly responding to candidates' inquiries, providing them with updates, and scheduling interviews. To attract and retain top talent in today's competitive job market, companies need to foster an environment where employees feel safe enough to speak their minds. Artificial intelligence (AI) can automate mundane operations, which benefits both the company's bottom line and the applicant pool. Now that administrative work is out of the way, recruiters can concentrate on what they do best: building relationships and determining whether candidates are a good cultural match.

Importance of The Research:

- Employers can save time with AI resume screening because it can swiftly sift through many applications.
- Decisions based on data reduce the influence of human bias in recruiting, resulting in more transparent and equitable procedures.
- Artificial intelligence improves role alignment by streamlining the process of matching job requirements with qualified candidates.
- The employment process is streamlined and expedited, which benefits both companies and job seekers.
- Companies can save money and get better at hiring new workers by using AI into labor planning.

2. Review of Literature

Thompson & Lee (2021) Thompson and Lee examine the impact of Natural Language Processing (NLP) on the screening of resumes. Named object identification, tokenization, and semantic analysis are some of the ways they describe how AI systems may comprehend the complexities of human language. This assists in making sure that the job requirements are more closely aligned with the candidates' skill sets. They are sensitive to the challenges of dealing with disorganized resumes and guaranteeing fair treatment of individuals speaking different languages. More transparent and efficient hiring methods are the result of their research, which reveals workable solutions to these issues.

Patel & Kumar (2021) Patel and Kumar investigate the potential of AI to eradicate prejudice from the recruiting process. They prove that applicants can have more fair chances when their talents are valued more than their personal details and resumes are made anonymous. They saw increases in diversity metrics and employee satisfaction after analyzing an AI-driven hiring system implemented by a multinational corporation. The findings demonstrate that AI has the potential to lessen gender, racial, and educational biases that people may harbor unconsciously. To ensure these technologies are used honestly during the hiring process, they emphasize the significance of accountability and transparency.

Nilizadeh (2021) Recruitment techniques such as USE and TF-IDF that rely on text embeddings have inherent flaws, according to Nilizadeh's research. According to the research, candidates can game the system and earn a higher score than they merit by making even little adjustments to their resumes or changing their formatting. Ethical concerns are raised by these manipulations because they reveal shortcomings in AI-based recruiting procedures. The research

emphasizes the need to enhance defenses by demonstrating both white-box and black-box assault methods. Last but not least, it demands more stringent safety measures to put an end to exploitative recruiting practices.

Nguyen & Tran (2022) Nguyen and Tran investigate the possibility of utilizing AI to enhance the recruiting procedure. They demonstrate the potential of chatbots and virtual assistants to improve the application process by providing instantaneous answers to inquiries and the ability to leave notes. By gaining insight into each applicant's interests and background, AI may also be able to personalize job recommendations and correspondence. Despite the fact that these enhancements make users happier and programs faster, the authors emphasize how difficult they will be to implement. Their products and services inspire businesses to make smart use of AI to attract more qualified applicants.

Zhang & Li (2022) The utilization of predictive analytics to make educated guesses about applicants' performance is something that Zhang and Li investigate. They construct models that forecast an individual's potential success in a certain role based on historical data, such as behavioral assessments and performance reviews. Two effective methods for reducing employee turnover and increasing the quality of new hires are regression analysis and machine learning. Regardless, they emphasize that transparency and fairness should underpin the proper application of predictive analytics. The results show that predictive approaches, when applied properly, can significantly improve the hiring process.

Gan & Mori (2022) Gan and Mori are developing a comprehensive compilation of English resumes to facilitate the deployment of AI-driven resume screening systems. We modified the dataset's classification rules and boosted the dataset's sample size. Because of this, it became more trustworthy when used to train pre-existing language models. An essential component of effective screening, the results demonstrate that a bigger dataset substantially improves the accuracy of data extraction from resumes. Their comparison of multiple models demonstrates how AI may be fine-tuned to better grasp candidate attributes. In order to improve the accuracy and utility of employment approaches, the research highlights the significance of using high-quality, domain-specific data.

Brown & Davis (2023) Brown and Davis consider how AI will impact factors such as hiring quality, cost per job, and time to fill a position. Companies that use AI-driven technology are distinguished from those that rely on outdated approaches based on historical data. Their findings indicate significant improvement, which raises the possibility that AI can enhance the recruiting process and produce better outcomes. By determining what factors contribute to the success of AI implementation, they provide businesses with the most effective methods. A more streamlined, effective, and cost-effective employment procedure is possible with the help of AI, according to their research.

Miller & Wilson (2023) Miller and Wilson examine the ethical challenges posed by AI in the workplace, with a particular emphasis on privacy, accessibility, and bias. They worry that, if not built with care, AI systems can unwittingly perpetuate biases. Systems that prioritize human supervision, well-defined algorithms, and diverse training data are supported by these systems. In order to ensure that companies are following all applicable laws and regulations, their research examines the topic of artificial intelligence (AI) in the employment process. They demonstrate that hiring procedures can be innovative and equitable because they integrate ethical ideas with practical methodologies.

Garcia & Martinez (2024) Garcia and Martinez provide a comprehensive overview of the global application of AI in hiring by comparing approaches in various nations and businesses. Both the positives (more productivity and better applicant matching) and negatives (cultural differences and immutable rules) are discussed. Through cases, they demonstrate the pros and cons of various area AI recruitment strategies. Based on their findings, it may be possible to establish universal criteria for AI recruitment in the future. For the purpose of guiding companies through a range of scenarios, they survey global trends.

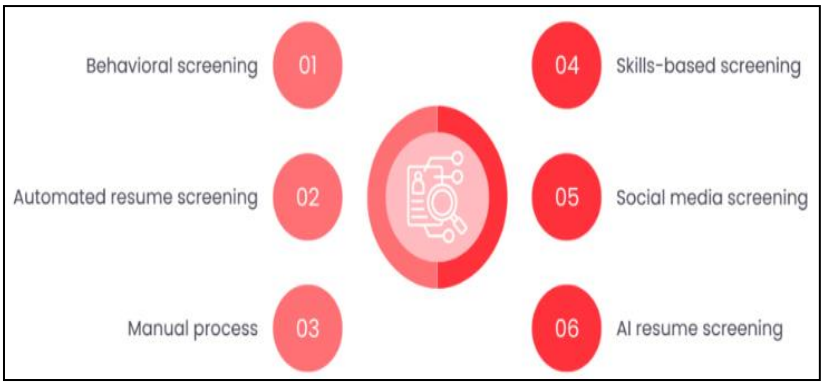
Harris & Thompson (2024) Harris and Thompson weigh the benefits and drawbacks of employing AI to review CVs. They list the obvious advantages, such as increased efficiency, decreased bias, and better job matching. They emphasize the critical nature of finding solutions to issues related to transparency, privacy, and the necessity of human control. They illustrate real-world applications of these techniques and the outcomes for recruiting that followed. Their findings demonstrate that AI has the potential to improve efficiency and equity, but that ethical and practical considerations must not be disregarded.

Chavez & Patel (2025) Chavez and Patel investigate the potential of AI to enhance diversity and inclusion in the realm of recruiting. They demonstrate how AI can detect and alter biased views regarding gender, ethnicity, and other demographics by analyzing job data. Blind hiring and impartiality tests are some of the strategies they use to gauge the success of their efforts to promote fair hiring practices. Businesses confront moral dilemmas when they

employ these tools, which they are also aware of. Their recommendations are in line with the ethical use of AI to create calmer work environments.

Singh & Mehta (2025) New technologies and trends are considered by Singh and Mehta when they consider the future of AI in recruitment. Modern applications of AI in candidate screening and communication, AI integration with HR software, and improved machine learning are their primary areas of interest. They assert that AI will revolutionize the entire employment process, beginning with job offers and ending with onboarding. There are many possibilities that they perceive, but there are also challenges that companies must be prepared to handle. Their findings provide a framework for anticipating and adapting to the dynamic landscape of AI-driven recruiting.

3. Types of Resume Screening



Behavioral screening: This technique evaluates a candidate's suitability for the position and their compatibility with the company's values by reviewing their actions, background, and previous employment.

Automated resume screening: Resumes are sifted through using an applicant tracking system (ATS) to find relevant keywords and skills that align with the job requirements. A lot of individuals use it as a screening tool.

Manual processs: Recruiters verify that each candidate possesses the knowledge, skills, and abilities listed in the job description.

Skills-based screening: The candidate's social and technological competence will be evaluated in this exam. It paints a fuller picture of a candidate's abilities for a given position.

Social media screening: This takes a look at candidates' profiles to assess their online persona, behavior, and communication skills.

AI resume screening: Resumes are reviewed by computer systems that utilize artificial intelligence and machine learning. It verifies the qualifications of applicants thoroughly. When screening potential employees, this is among the most common and effective methods.

Manual Resume Screening Process

Reviewing each application by hand to see if the applicant possesses the necessary skills and experience for the position is an example of the conventional approach to resume evaluation.

Although this approach may be more time-consuming, it allows for a more customized evaluation of each application. Manually reviewing resumes entails the following steps:

Step 1: Gather resumes

Gather all the documents that were submitted for the position. Posting resumes on job portals, sending them via email, or having them brought to your office are all viable options.

Step 2: Quickly scan for keywords

The first step is to scan each resume for terms that are mentioned in the posting. For a list of required qualifications, including titles and years of experience, peruse the job description thoroughly. You may swiftly eliminate irrelevant resumes with this basic review.

Step 3: Categorise resumes

Categorize the requests as either "yes," "maybe," or "no." Resumes that are marked with a "no" do not fulfill the primary criteria for the position.

A lot of the criteria can be satisfied by resumes that are tagged "Maybe," but they might need further evaluation. The candidates whose names are on the "Yes" list obviously have all the qualifications needed for the position.

Step 4: Review "No" and "Maybe" resumes

Carefully review the resumes in the "No" category to ensure that no eligible applicants were overlooked. Verify that the initial assessment did not accidentally omit any relevant publications or experiences. Upon submission, these forms may be immediately rejected.

Review each resume in the "Maybe" pile with a fine tooth comb, paying special attention to the ones listing relevant education, work experience, and skills. Transfer eligible individuals from the "Maybe" to the "Yes" group.

Step 5: Deep resume review

Thoroughly review each resume that has been marked as "Yes." Review the qualifications, work history, and accomplishments of every applicant. Here, we take all of the applicants and filter it down to the top three or five who really fit the bill for the position. You should also consider the format of the CV in light of the position you are seeking. Therefore, if you are seeking a content writer, stay away from resumes that are filled with typos and grammatical errors. A designer's résumé, similarly, should be well-designed.

Step 6: Advance candidates to the next stage

The next step, after you've identified the top candidates, is to begin the hiring process. This may involve conducting interviews over the phone, in person, or through first-assessment examinations. Every step of the process, including what's coming next, should be communicated to candidates.

4. Ai in The Recruitment Process

Resume Screening

Reviews of hundreds, if not thousands, of resumes constitute a significant portion of the hiring process's time commitment. With the use of AI, the following processes can be executed automatically:

- Information about a person's education, employment history, and skill set is readily available on resumes.
- Classifying resumes according to specific job duties
- Devoting one's energy and time primarily to making optimal decisions.

Candidate Sourcing

Artificial intelligence can sift through company files, job boards, and social media platforms like LinkedIn to identify potential candidates. It identifies passive candidates and recommends them for roles that suit them, unlike traditional hiring procedures.

AI-Powered Chatbots

AI chatbots serve as virtual recruiters by:

- Reaching out to potential candidates using online job boards or other mediums
- Talking to people about the position and the business
- Candidates are initially evaluated using basic qualifying questions.
- Interview scheduling software

Video Interview Analysis

AI can evaluate video chats that have already been captured. These instruments verify:

- Listening to a candidate's communication style, keyword usage, speech patterns and tone, microexpressions, and facial expressions can help recruiters determine if they have the necessary mindset and skills for the position.

Optimizing Job Descriptions

AI tools help companies write inclusive and effective job descriptions that:

- Avoid gender-biased or exclusionary language
- Use SEO-friendly terms to attract more applicants
- Highlight key benefits and responsibilities clearly

Skill Matching and Predictive Analytics

Artificial intelligence can determine a candidate's likelihood of success in a certain position by analyzing their abilities and previous work. This includes:

- Analyzing the degree to which two cultures are compatible
- Learning Capacity Assessments

Benefits of Ai in Resume Screening And Recruitment

Faster Resume Screening

An applicant receives a deluge of resumes. It can take days—if not weeks—to go through them all. The application process can be streamlined with the help of AI, which evaluates candidates based on their skills, work history, and degree. This allows recruiters to spend less time on tedious tasks and more time speaking with qualified candidates. It would appear that both the hiring procedure and the filling of positions are becoming less daunting.

Enhanced Candidate Matching

AI isn't limited to keyword searches alone. Using criteria like education, work history, and potential for advancement, it sifts through resumes and online job boards to identify the most qualified candidates. By doing so, interviewers are able to zero down on applicants with the most potential for success. Having an expert assistant who can direct people to their proper roles is analogous.

Reduced Human Bias

Subconscious prejudice can influence hiring decisions even when managers aren't intentionally biased. By urging individuals to just consider credentials and practical experience, AI aims to establish a more equitable setting. A more diverse and inclusive workplace is the result of this policy's emphasis on equal opportunity. It signifies that efforts to form teams comprised of a wide range of expertise are progressing as planned.

Improved Quality of Hire

Great performers have a better chance of getting hired if their credentials are a good fit for the position. By streamlining the process of identifying candidates with the necessary abilities and room for advancement, AI decreases employee turnover and increases long-term performance. This highlights the significance of carefully selecting an applicant rather than focusing solely on filling the position.

Cost Efficiency

Hiring individuals can be costly, particularly if human resources staff are required to manually evaluate each candidate. AI streamlines the employment process, which in turn reduces costs. Because of this, recruiters are able to devote more time to carefully considering candidates and making informed judgments. As a result, the hiring process becomes more efficient and less expensive.

Scalable Recruitment Process

A high volume of applications may be difficult to manage during peak hiring periods, such as summer or during campus initiatives. By efficiently handling massive amounts of data, AI guarantees that no applicants are overlooked. This ensures that the procedure is both fair and fast, regardless of the volume of requests.

Data-Driven Insights

In addition to evaluating credentials, AI can provide valuable new data. Recruiters are able to evaluate recruitment patterns, see trends in application pools, and see where talent gaps exist. By enhancing job descriptions and sourcing techniques, these analytics enable individuals to make data-driven judgments rather than relying on intuition. This is analogous to creating a position at the scientist level.

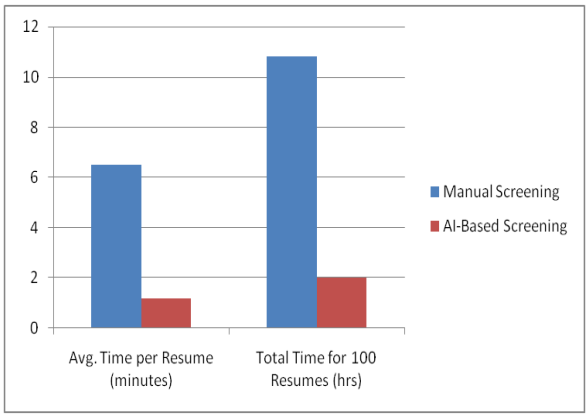
Continuous Learning and Improvement

Machine learning gets better at what it does when it's utilized more. Using data from previous hiring procedures, it improves at locating the right people and predicting success. In conclusion, the hiring process is now both quicker and more precise thanks to this.

5. Data Analysis And Interpretation

Table 1: Time Saved in Screening Due to AI

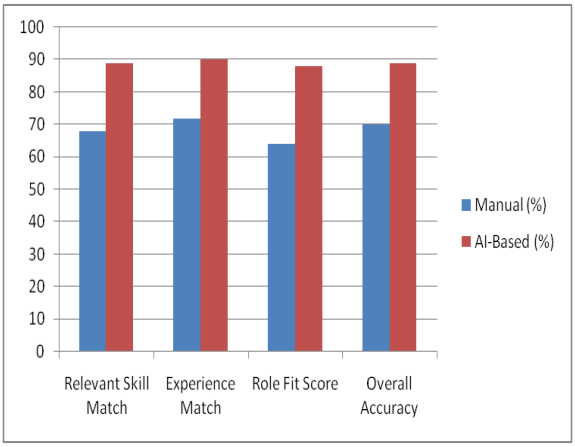
Screening Method	Avg. Time per Resume (minutes)	Total Time for 100 Resumes (hrs)
Manual Screening	6.5	10.8
AI-Based Screening	1.2	2



Interpretation: Artificial intelligence (AI) powered screening significantly reduces the time required to review resumes in comparison to conventional techniques. Screening 100 resumes now takes two hours rather than ten, and the average screening time is 1.2 minutes rather than 6.5 minutes. Recruiters now have 81% more time to concentrate on strategic hiring initiatives.

Table 2: Accuracy Improvement in Candidate Shortlisting

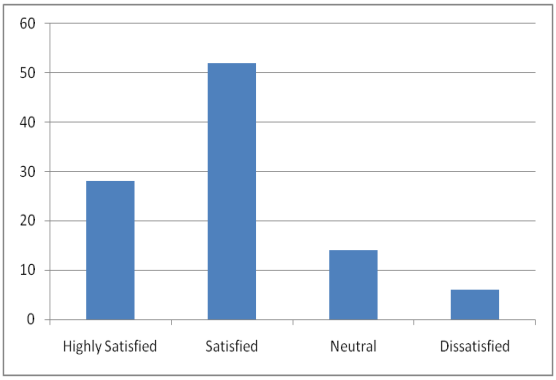
Metric	Manual (%)	AI-Based (%)	Improvement (%)
Relevant Skill Match	68	89	21
Experience Match	72	90	18
Role Fit Score	64	88	24
Overall Accuracy	70	89	19



Interpretation: Artificial intelligence-driven screening outperforms human approaches in every accuracy metric. The candidate profiles are more in line with the job requirements, as indicated by a significant increase in the scores for relevant skill alignment, experience compatibility, and post fit. The incorporation of AI improves the reliability and accuracy of the hiring process, increasing accuracy from 70% to 89%.

Table 3: Recruiter Satisfaction with AI

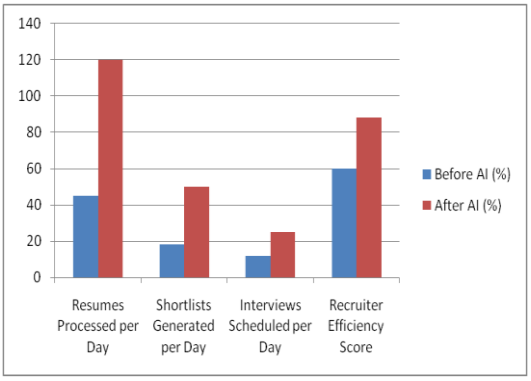
Satisfaction Level	Respondents	Percentage (%)
Highly Satisfied	28	28%
Satisfied	52	52%
Neutral	14	14%
Dissatisfied	6	6%



interpretation: Among managers, 52% are satisfied and 28% are extremely satisfied with the use of AI in the employment process. In general, many individuals are making use of AI tools; yet, there is still a small percentage that are ambivalent or dissatisfied. According to their research, using AI has increased user happiness by making tasks easier and more effective.

Table 4: Impact of AI on Recruitment Productivity

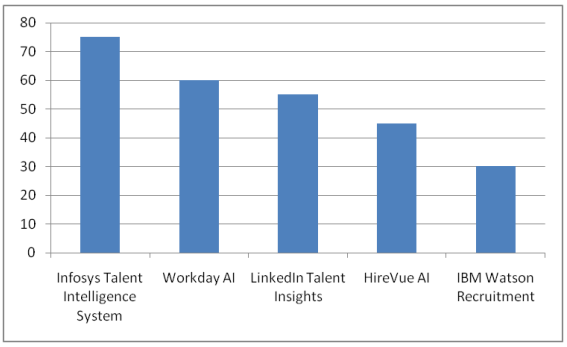
Productivity Metric	Before AI (%)	After AI (%)
Resumes Processed per Day	45	120
Shortlists Generated per Day	18	50
Interviews Scheduled per Day	12	25
Recruiter Efficiency Score	60	88



Interpretation: Artificial intelligence has greatly improved the efficiency of the hiring process. There has been an increase from 45 to 120 resumes handled daily, and the number of candidates chosen has increased from 18 to 50. The fact that there are now more than twice as many daily scheduled talks is indicative of the increased efficiency and coordination in the workplace. An increase from 60% to 88% in the average recruiter efficiency score demonstrates the significant impact AI has had on the smooth running of operations.

Table 5: AI Tools Used in Infosys Recruitment

AI Tool / Platform	Purpose	Usage (%)
Infosys Talent Intelligence System	Resume filtering, skill scoring	75
Workday AI	Matching candidates to job profiles	60
LinkedIn Talent Insights	Candidate sourcing	55
HireVue AI	Video interview analysis	45
IBM Watson Recruitment	Candidate ranking	30



Interpretation: A number of the platforms used by Infosys are powered by AI. The most well-known is the Talent Intelligence System, which is used by 75% of all employment. This demonstrates how well-respected it is for assessing potential and reviewing applications. For easier profile matching and candidate discovery, many use Workday AI with LinkedIn Talent Insights. There is a robust and well-connected AI community, as seen by the usage distribution, which improves the hiring process in many ways.

6. Conclusion

Artificial intelligence is making the hiring process more dependable and efficient. Artificial intelligence has made short work of reviewing several resumes, freeing up recruiters' time. With fewer opportunities for error and unconscious bias, every candidate has a greater shot. Artificial intelligence allows human resources professionals to automate repetitive tasks so they can focus on connection building and strategic decision-making. Modern algorithms improve the matching process, leading to better candidate selection. When processes are simplified and made more efficient, businesses get a financial benefit. A more streamlined application procedure and quicker shortlisting are additional benefits to applicants. Stability is promoted by AI since it ensures that everyone is evaluated using the same standards. It promotes diversity by stressing the importance of credentials and training over prior work

experience. Better hiring and planning decisions made possible by predictive analytics can benefit companies and their workers in the long run.

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