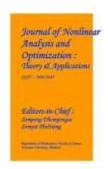
Journal of Nonlinear Analysis and Optimization

Vol. 15, Issue. 1, No.4: 2024

ISSN: 1906-9685



DATA-DRIVEN HIRING PROCESSES USING AI

ANURAG RAJAN, KISHORE KUMAR B, RITHICK K.M, III BCA, Department of Computer Applications, Sri Krishna Adithya College of Arts and Science, Coimbatore-641042

ABSTRACT:

Despite the fact that every business has a website to help with job recruitment, the majority of firms in our survey rely on applicant tracking systems (ATS) to track and store all the resumes and applications they get. Artificial intelligence (AI) technology is currently present in the best ATS systems, and it can greatly increase their efficacy. AI technologies enable professional recruiters locate the best prospect in a fraction of the time it would normally take using old tactics, in addition to helping them find the right candidate more correctly in the modern era. One of the most time-consuming parts of talent acquisition is the time it takes a recruiter to go through a pile of applications for a certain position when they know that many of the resumes will be from less-than-ideal candidates. This is where AI and talent acquisition intersect: with the advancement of AI technology, tasks that a few years ago could have taken a recruiter days to complete can now be completed in a matter of seconds.

KEYWORDS:

- Artificial Intelligence
- Recruitment,
- Human Resources
- Technology
- Employers
- Candidates

INTRODUCTION:

Across the globe, hiring is a vital task for businesses because it guarantees that the best people are hired to propel their enterprise forward. Artificial Intelligence (AI) has been increasingly prevalent in the hiring process in recent years. AI-driven assessment tools have been adopted by companies such as Accenture, a prominent global leader in technology and consulting services, to optimize their hiring procedures and quickly find the most suitable candidates.

The purpose of this conceptual study is to investigate the idea of hiring using AI, with an emphasis on Accenture's evaluation procedure. We will examine the essential elements of AI-powered hiring, as well as its advantages, drawbacks, and moral implications.

AI'S GROWTH IN JOB RECRUITMENT:

The use of Artificial Intelligence quickly led to an increase in innovation and efficiency in talent acquisition. It has the ability to completely change the hiring process, from finding applicants to putting them on board. Recruitment agencies may now make data-driven decisions, streamline procedures, and enhance the hiring process in a variety of ways thanks to cutting-edge technology like artificial intelligence (AI).

Words like "recruiting" and "talent acquisition" have returned to the top of the company list. Due to recently announced layoffs by major corporations in the event of a recession, many vacancies have been posted on various job boards. Many have spilled ink on the topic by writing and publishing about it in this open market.

Companies do not go above and above in attracting fresh talent or keeping hold of existing talent. Combining all of that with the increasing pressure of a reducing time-to-fill puts companies in a precarious situation.

For us to combat this challenge, a type of artificial intelligence is used in their recruitment plans for a large number of staff involved in the acquisition of talent. A recent study shows that when it comes to the introduction of technology into hiring processes, over 90% of jobseekers believe their experience is more effective.

AI IN RECRUITMENT:

- 1. **Resume Screening Automation:** AI systems are able to recognize relevant experience, education, and talents from resumes and job applications. As a result, less time and effort are needed for the preliminary screening.
- 2. **Chatbots and Virtual Interviews:** AI-powered chatbots and virtual interviewing systems can interview candidates initially by posing preset questions and rating their answers. Additionally, they are able to give candidates immediate feedback.
- 3. **Skills and Personality Assessments:** Through the analysis of candidates' answers to assessment questions or tasks, AI-based systems are able to analyze candidates' technical capabilities and personality qualities.
- 4. **Predictive Analysis:** AI helps recruiters make data-driven judgments by predicting a candidate's chance of success in a specific post based on past data and performance indicators.

ACCENTURE'S AI-DRIVEN ASSESSMENT PROCEDURE:

AI integration into the hiring process has been pioneered by Accenture. While specifics may have changed over time, Accenture's standard AI-driven assessment procedure can contain the following:

Online Application: Online applications are submitted by candidates, and AI algorithms review them to find good matches.

Resume Screening: AI systems scan resumes for experience, qualifications, and keywords that are pertinent to the job.

Chatbot Interviews: Candidates may interact with chatbots driven by artificial intelligence to respond to introductory inquiries about their goals and background.

Assessment Tests: Technical testing, behavioral assessments, and situational judgment tests are examples of AI-driven evaluations. These tests are intended to appraise a candidate's abilities and suitability for the position.

Video Interviews: AI may be used to video interview candidates, evaluating things like body language, communication abilities, and answers to particular queries.

CHALLENGES AND ETHICAL CONSIDERATIONS:

Bias: If AI algorithms are not properly maintained, they may inherit biases from prior data, producing unfair or discriminatory results.

Transparency: Candidates might object to AI-driven procedures and want to see the decision-making process made transparently.

Data Privacy: Data security and privacy are issues brought up by the gathering and examination of applicant data.

Algorithmic Fairness: For companies such as Accenture, ensuring fairness in AI-driven assessments is a challenging task.

Ethical Considerations: The immense potential of AI also raises ethical questions. Bias may persist in algorithms if the training data is skewed. AI systems must be constantly observed and improved upon in order to guarantee equitable treatment and avoid discrimination.

Candidate Experience: Despite the increase in efficiency, candidates might still feel disengaged from the automation process. Achieving a great applicant experience requires striking a balance between personalized human touchpoints and automation powered by artificial intelligence.

Skillset Requirements: As the use of AI grows, recruiting staff members need to update their knowledge and learn new technologies. To stay up with the quickly evolving scene, it is imperative to learn about artificial intelligence (AI) and comprehend how it affects talent acquisition.

Data Privacy and Security: Because artificial intelligence depends on a lot of data, privacy and data security issues are brought up. Strong security measures must be put in place in order to protect candidates' sensitive information and adhere to data protection regulations.

FILTRATION REMAINS A HUGE CHALLENGE FROM BIG DATASETS:

Al uses large datasets as a source of inspiration for his work. Al is the instrument that extracts data and uses the details, whereas machine learning—which is closely related to Al—gathers and evaluates data to create these datasets.

A candidate with three years of experience working for the top competitor, for instance, may be far more advantageous than one with ten years of expertise in any other industry. If the recruitment agent requires a candidate to have at least five years of working experience, qualified candidates with three years of professional experience might not be allowed to proceed to the interview process. One of Al's components that you can employ to address the aforementioned issue is a chatbot. It might initially sift candidates and pose questions.

One feature of Al that can be helpful in solving the aforementioned issue is a chatbot. In the beginning, it could select the best candidates by posing simple questions. A candidate's softer and harder skills can be chosen through additional reviews utilizing psychographic profiles and gamification after they have passed the initial round of testing.

AI INCLUDED IN HIRING EFFORTS:

Some companies may be able to use particular artificial intelligence technologies to handle the employment process in a more automated or straightforward way. This implies that companies can augment their present systems and procedures with AI by using this technique to integrate AI into the hiring process. Furthermore, AI can streamline and automate the hiring process at various stages. Additionally, this will free up recruiters to concentrate on tasks that AI hasn't yet taken over, like building face-to-face connections with candidates and determining whether they mesh well with an organization's culture. Additional benefits include the potential to remove prejudice from hiring decisions and guaranteeing that candidates who are rejected are informed of future openings.

BENEFITS OF ALIN JOB RECRUITMENT FILTRATION OF APPLICATIONS:

Efficiency: AI expedites hiring, cutting down on hiring time and HR staff administrative workload. **Data-Driven Decision-Making:** AI provides data and insights that help recruiters make informed choices.

Consistency: AI tools apply consistent evaluation criteria to all candidates, reducing bias in the hiring process.

Filtration of Applications: Filtering out tens of thousands of applications for jobs to explore a few gems they seek is one of the most difficult things recruiters can do. Al comes in handy here. Employers can integrate Al into their existing Applicant Tracking System and improve its efficiency, by supplying labels of relevant or irrelevant resumes as part of a job explanation to train the model.

Predictive hiring: It can analyze documented data and potential information such as education, background, title or career shift in order to build predictive models of the success of candidates within a given role by integrating Al into ATS and HRMSS.

Drafting Job Descriptions: Combining Al into the current ATS and teaching the system by supplying multiple job definitions it can learn and provide customized job descriptions per the business culture and enterprise jargon simple discussion with Al delivers decent definitions, and we can further alter them to the needs.

Improved Efficiency: Let's just say goodbye to the manual screening of resumes! Applicant tracking systems powered by artificial intelligence ATS can scan a thousand applications in seconds and find the most qualified candidates based on predefined criteria. This makes it possible for recruitment consultants to spend their time and energy on attracting the best talent.

Enhanced Candidate Sourcing: To find possible candidates who meet the requirements of a position, artificial intelligence tools can trawl through several websites, social networking sites as well as networks of professionals. This allows for a wider talent pool, allowing recruiters to discover hidden gems they may have missed otherwise.

Objective and Unbiased Selection: The hiring process can be unknowingly influenced by human bias. In contrast, AI algorithms provide an objective assessment of applicants solely on their qualifications, skills and experiences in order to reduce unconscious biases and promote diversity and inclusion.

EMBRACING THE FUTURE:

Talent acquisition professionals are needed to embrace this transformation technology, as AI's advances continue. Recruiting agents can improve efficiency, optimize procedures and make informed decisions with the use of AI's benefits and challenges.

Al's not here to replace the Recruiter, they're just enhancing their capabilities. It allows recruiters to concentrate on building relationships, nurturing talent and playing an important role in their organizations. Talent acquisition professionals are able to shape the future of recruitment through a combination of human expertise with AI's ability to analyze data.

The way we approach the acquisition of talent has been revolutionized by AI. Artificial intelligence has immense benefits for recruitment agencies as well as employers, such as speeding the screening process and forecasting success of candidates. However, this also brings with it challenges which need to be addressed carefully and without delay.

Let's embrace the possibility of AI, but keep in mind that human touch is still essential. Talent acquisition specialists can leverage AI to open new opportunities and develop a more effective and inclusive recruitment process, if they find the correct balance of automation with personalized interactions.

PRO'S AND CON'S OF AI RECRUITMENT:

AI Pro: Shorten Administrative Processes:

90% of organizations utilize automation tools to reduce administrative time and responsibilities. Despite the availability of a variety of automation applications, AI is excellent at spotting trends and can increase automation effectiveness. This automation can be used to handle administrative activities including interview scheduling, screening candidates, looking up qualifications and talents, responding to candidate inquiries after hours, and data analysis.

Additionally, the program can scan resumes and arrange applications in your applicant tracking system (ATS) so you can access and manage them with ease.

AI Pro: Better communication:

Although recruiters desire to develop relationships with various types of prospects, it can be difficult to manage and do so simultaneously with many. AI, though, can aid in enhancing your conversation. Chatbots with an emphasis on customer service are very common, and they use AI. Recruiters can now use it during the hiring process.

By serving as a spokesperson to respond to inquiries from candidates, AI can assist with your candidate outreach. Simple questions can be answered by the chatbot without the requirement for your time or attention. You can intervene and have a conversation with a candidate if he or she has a query that AI is unable to address.

Even more recent AI technology exists under the name Personality AI. This technology communicates information about candidates' personality qualities and social interactions to you. With this knowledge, you can better plan your approach to establishing a sincere rapport with the candidate.

AI Pro: More Credible Applicants:

24 percent of companies use AI to hire top talent. If you only receive a small number of applications, this may assist you attract more qualified individuals. Additionally, AI can save recruiters time from having to go through unqualified candidates' resumes.

The most qualified candidates for a position can be selected using AI's ability to screen candidates and resumes. As soon as you identify those individuals, get in touch with them and concentrate on developing a relationship with them because you have more time now that you aren't in charge of the screening process.

AI Pro: Lessens Human Bias:

Despite their best efforts, recruiters can still harbor some unintentional biases. Despite receiving adequate training and attention, some recruiters may nonetheless base their selections on various criteria.

AI may be useful in this situation. A candidate's personality, education, gender, or race may not be taken into account. Instead, it can concentrate on their credentials, backgrounds, and abilities that might make them excellent prospects.

AI Con: Absence of Human Judgment:

Even while AI is excellent at seeing patterns, human judgment is occasionally necessary, especially when evaluating applications.

If you aren't careful, your AI may be analyzing incomplete data and become caught in a loop that keeps promoting the same kinds of applicants for your company. This does not imply that AI should not be used. Instead, even if AI is a great starting point, you should analyze the choices it made to make sure you agree with them.

AI Con: Could be less accurate:

Because AI requires data to work, it may not be accurate enough for your hiring process if you have poor or insufficient data. There are still some aspects of AI that are developing, so you might occasionally make a mistake.

An applicant might use a different word or phrase to express a competence, for instance. A qualified candidate might be passed over if the AI doesn't have enough information to recognize that the talent is transferable.

On the other hand, many candidates also become aware of the value of keywords and the operation of AI. This can cause individuals to use resume keywords that make them appear more qualified than they actually are. AI won't be able to distinguish between them, but it will still suggest them as suitable options.

Because of this, it's crucial to review the outcomes of AI before giving the hiring manager a list of prospects. Also, make sure the information you provide it to read is of high quality.

AI Con: Changing Regulations:

Although integrating AI in the hiring process can make it more impartial and fairer, bias may still exist in some situations. Because of this, you must be cautious when choosing AI technologies to avoid having biased hiring.

Due to this, some nations are regulating the use of AI in the hiring process to guarantee that everyone is still treated fairly.

AI Con: It may be impersonal:

Building a strong rapport with candidates is one area AI is not particularly good at. While AI chatbots are excellent at responding to frequently asked questions, a recruiter still needs to build a genuine relationship with the candidates.

However, by automating and handling other activities that don't require a personal touch, AI can aid recruiters in developing that relationship. Once again able to focus on what they love, recruiters can successfully connect with prospects in order to place them in open positions.

This is one reason why AI will never completely replace the work of a recruiter. Human judgment is constantly required in HR-related activities like candidate selection and interviewing. However, AI can make the journey there faster.

CONCLUSION:

To help streamline your current hiring process and free up recruiting staff time for other projects such as face to face interaction with candidates, artificial intelligence can be incorporated into the existing recruitment processes. Artificial intelligence can also help to eliminate unintentional biases, like the gut reaction from a first interview that leads to more informed interviewing decisions, by integrating tough facts in an equation.

The point is to adopt, upgrade and exploit technology in order to benefit the business. Those who are adopting and using those technologies, whether it be a recruit or a nominee, will have more competition

JNAO Vol. 15, Issue. 1, No.4: 2024

6

than others. From the candidates' standpoint, those who adjust to these chatbots, and Al tools will increase their odds of profiting from technology. Al's a significant pillar, but the idea of turning it into an entirely functional building doesn't seem too farfetched.

REFERENCE:

 $\frac{https://www.techtarget.com/searchhrsoftware/tip/6-ways-AI-can-improve-the-talent-acquisition-process}{https://www.manatal.com/blog/talent-acquisition-benefit-artificial-intelligence}$

https://www.researchgate.net/publication/368653108 A Review Paper Role of Artificial Intelligence in Recruitment Process A Garg S Gaur P Sharma

https://www.emerald.com/insight/content/doi/10.1108/JTF-02-2020-0013/full/html