

Digitalization's Enhancement in HR Practices: The Impact of Incorporating AI in the Process of Recruitment and Selection

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Abstract: Many organizations' desires to attract the most value-adding talent has pushed their increased adoption of artificial intelligence in the processes of recruitment and selection. As AI can be generated into tools to conduct an analysis of applicants and provide an overview, it reduces the recruiter's time allocation on administrative tasks to focus on making more advanced decisions to execute the business's desired strategic directions and developments. This paper mainly examines the impact of AI in the talent acquisition processes on the three aspects of practical, ethical, and strategic impacts. The practical approach can improve the efficiency in recruitment and selection to find the best-fit candidate through AI algorithms for certain roles. The ethical approach of AI can ensure a fair talent acquisition process that reduces bias and discrimination to support final decision-making. The strategic approach allows organizations to use AI in conducting recruitment and selection practices with considerations on the future growth of the business, prospecting the required talents to achieve such growth. The attraction of using AI in the hiring process can lead to a more digitalized and trendy employer branding, making organizations appeal and expand to innovative pools of candidates. However, there are downsides to all approaches, including the lack of human involvement, the risks of data security and breaches, and the consistency of employer branding in utilizing AI technology. In exploring the benefits and limitations of AI's impact on talent acquisition, there should be a more structured approach to unleashing this technology in the HR practice.

Keywords: Artificial Intelligence, recruitment and selection, human resource practices, talent acquisition

1. Introduction

In an era of robust use of technology, many organizations have increased the adoption of AI tools in recruitment and selection. AI tools emphasize the accuracy of gathering applicants' information and evaluating their potential fit for the recruiting roles. As AI tools for recruitment and selection were initiated a decade ago, there are still limited areas of discussion regarding the effectiveness of AI tools in finding the right talent to add value to the business. It also raises questions on fairness and ethical considerations of utilizing such tools during the hiring process. Considering new issues emerge as AI

tools are constantly evolving and optimizing, this paper seeks to investigate the impact of the current involvement of AI tools in the process of talent acquisition [1]. By focusing on the practical, ethical, and strategic approach of AI tools in recruitment and selection, this paper seeks to highlight the degree of AI enhancement of HR practices, with relevant areas of limitations stated in each approach, through an in-depth analysis of the current examinations into AI tools for talent acquisition. The aim of this investigation is to outline the benefits of using AI tools in HR practices, while suggesting key considerations on how to tackle the current limitations to appropriately adopt AI tools to engage in making selection decisions.

2. Research Question

2.1. Practical Approach

One of the key highlights of the current involvement of technology and automation in business operations is efficiency. By adopting AI tools in talent recruitment and selection processes, firms are able to achieve greater efficiency which leads up to the practical approach of AI in the HR field. Recruiters are often seen as the most important contact point by candidates, as they establish meaningful relationships with candidates and build on their first impressions towards the hiring organisations that increasing the likelihood of offer acceptance, proactiveness in interview preparation, and creating positive relationships [2]. These aspects of recruitment are important, as it provide greater potential for recruiters to select the best-fit candidates to fill the recruited positions.

2.1.1. New Ways of Recruitment – Increased Efficiency

However, the current pain points in the traditional recruitment and selection assessments reflect the need for a highly standardized and automated talent acquisition structure. The traditional need for recruiters to conduct administrative manual tasks works of information gathering and determining different types of job knowledge, cognitive, or personality tests for a wide range of roles can decrease the efficiency, cost-effectiveness, and the amount of time allocated to select the best candidates. Using AI recruitment and selection tools helps to reduce time consumption in the process of shortlisting finalists for interactive interviews through combined algorithm analysis of job applications and candidates' social media. To maximize recruiter's dispersed work time, the availability of AI tools to match, select, predict potentials, and conduct compliance and legitimacy investigations on candidates can improve the recruiter's flexibility to make better-informed judgments and hiring decisions [3]. The AI tool improves the process for recruiters to select high-potential candidates amongst large recruitment pools while broadening the talent pool to reach high potential candidates through social media in the modern e-recruitment process.

2.1.2. Chatbot – New Form of Communication

The act of utilizing AI tools further expands the organization's talent competitive advantage throughout the process, by enhancing communication quality with user-generated content. This seeks to decrease the costs required to establish processes in communicating important talent acquisition information, providing more practical potentials for recruiters to delve their focus deeper into determining fit by comparing different candidate qualities and potentials. According to Tian and peers' research, the current machine learning approaches to recruitment and selection more specifically allow text-mining AI tools to extract and analyze meaningful information about the candidate to match vacant jobs and job descriptions, which reduces 16% of recruitment administration tasks [4]. With this advancement, AI tools can reduce recruiter's efforts in completing administrative tasks, CV and resume screening, and automate communication and interview booking requests with touch

points made in time. It saves recruiters from filtering through numerous candidate information and assessing them based on the requested criteria on the job description, and creates space and time for recruiters to establish meaningful interactional interviews with potential best-fit candidates. This increases recruiters' capabilities to make better-informed decision-making to benefit firms in attracting and onboarding the best talents. The potential to apply AI's machine learning in recruitment and selection can optimize its support for recruiters, so they are able to focus fully on fields that require more expertise and human decision-making. The AI Chatbot function expanded from machine learning leads to the pre-selection assessment that records and analyses candidates' initial screenings for job vacancies [5]. Demonstrating timeliness and emphasis on the hiring business's response to candidates, Chatbot can provide reasonable and prepared responses to candidates enquiring about the organization and application process, which represents organizations utilizing the Chatbot function as highly modernized and tech-savvy. This reduces the amount of effort recruiters engage with candidates with repetitive inquiries, while also performing to the standard of making key contacts with candidates in a timely manner.

2.1.3. Limitations in AI Practicality

In terms of the practical approaches, the utilization of AI tools in recruitment and selection could lead to negative experiences and poor results from the organization's AI interview process, as the lack of flexibility in AI recruitment and selection could lead to losing potential applicants based on the pre-determined selection criteria [5]. As humans design the selection criteria, it's possible for the algorithm to contain certain levels of biases that could overlook potential candidates to fit specific positions. Unlike the AI selection process, the human selection process in finding the best-fit candidate may not match every criterion of job requirements but contains the ability, potential, and expertise to perform well at the recruited positions. Raising concerns about the current maturity of AI technology, HR professionals believed a failure to incorporate flexibility in recognizing potential candidates may result in a loss of talent and barriers to create hesitations for job searchers to apply. Furthermore, automated communications, acceptances, and rejections may create a negative image of the organization as a less human-centric business. Due to fewer interpersonal interactions being exercised throughout the recruitment process, AI tools could lead to potential dissatisfaction with the recruitment experience, shaping a negative representation of the organization. This creates an impression that it is not an employer's choice workplace, as less perceived empathy is exerted in the AI recruitment process [6]. Therefore, careful considerations on the extent of AI tools applications should be reviewed before launching the attempts to engage in recruitment and selection.

2.2. Ethical Approach – The Elimination of Human Bias

Regardless of the maturity levels of conducting AI tools in the recruitment and selection process, the machine learning aspect of algorithms in AI tools are able to detect biases from job descriptions and resume analysis and provide suggestions on removing certain structures to prevent human bias [7]. This aspect of AI tools benefits the ethical aspects of recruitment and selection at organizations, presenting more objective and less manipulative analytical results [6]. Since recruitment and selection processes traditionally involve more human interactions, final decisions would generally be more subjective, as candidates could influence the final decisions. So, utilizing AI tools are able to guide recruiters to make more objective and fairer decisions based on designed benchmarks, identifying the best-fit candidates for recruited positions.

2.2.1. Tailored Skill Assessment

The future workforce consists of candidates from a generation that grew up with technology and lived through technological advancement decades. The recruitment aspect of incorporating AI tools can further provide areas of applicant attraction, due to the ability for websites and messages to customise messages that targets specific applicants [8]. It improves candidate's satisfaction in the experience of browsing through different job advertisements with specialized designs. This can provide better-fitting positions that align with the applicant's needs, exerting applicant attraction by delivering the recruiting organization's job advertisements to high-potential candidates that could be interested in the role and meet the selection criteria. Moreover, AI tools are able to tailor questions to match candidate's skill levels, which does not provide tests that fall outside of a person's skill level. For example, the Computer Adaptive Tests (CAT) can determine the test questions given to candidates, which decides on the difficulty of the next question presented based on their correct or incorrect answer to the previous questions. This showcases an easier test analysis method for recruiters to identify the ceilings and floors of each candidate's skill level and make more ethical selection decisions that align with the organization's strategic goals. This would be beneficial to implement in roles that require heavy utilization of skill sets, acting on the fairness of testing based on the level of experience and knowledge of each candidate.

2.2.2. Algorithmic Machine Learning and Filtering Human Characteristics

Furthermore, AI tools are able to reduce bias by capturing specific data points of candidate behaviors during the assessment process, allowing for an in-depth focus on predicting the performance of candidates by combining skills and competency levels with personality traits and characteristics [9]. To eliminate bias after analyzing the characteristics of candidates, AI can be altered to ignore the candidate's personal attributes and personality characteristics during the interview, which provides a comprehensive understanding of the candidate's obtained skill sets, level of proficiency, and behaviors that could lead to certain, predicted results. By analyzing asynchronous interviews, AI algorithms are able to detect and break down different competencies while also comparing them to the current top performers' competencies to generate a shortlist of potential candidates [7]. AI is able to conduct a thorough analysis of top performers' data, which derives the desired aspects of current top performers to match with job applicants who have shown similar traits and skill sets. This helps recruiters to provide predictions of job applicants' fit and likelihood of achieving success in specific roles, with data-driven evaluations of their performances during the interviews. By conducting a data-driven analysis through criteria of top performers, the bias-prone intuitive decision-making process of recruiters will be less involved in designing the frameworks for AI tools to operate, based on the machine learning benefits of AI in recruitment and selection. It generates an autonomous analysis in assessing all aspects of performances that enables data-driven evaluations for direct comparison amongst candidates. Considering a good HR administration aspect, the use of automation systems can attract more applicants, based on the perceived fairness of the standardized job application process and good administrative experience in the initial stages of application and screening [8]. Thus, AI can support a better-informed recruitment and selection process based on standardized processes that increases fairness in making final recruitment decisions.

2.2.3. Limitations – Data Security and Privacy Breach

There are also visible limitations to adopting AI tools in the recruitment and selection process in the ethical approach, such as data security and privacy issues that remain unanswered in the current field of research [9]. AI tools can lead to a loss in privacy, which could be detrimental to candidates if the data security systems within the recruiting organization are weak and have the potential to leak

personal information. Therefore, it would be necessary for businesses to provide a request for information usage to job applicants, and applicants should have the opportunity to make decisions to agree or disagree with sharing their personal information with AI. In addition, the extent of privacy invasions in job applicant's personal social media profiles used for AI analysis in the recruitment and selection process can also raise questions on the appropriateness of assessing the job-fit potentials of candidates based on their personal and family background, which could increase bias and discrimination considering the reliability and purpose of using profiles, as part of the assessment criteria. Therefore, the extent of using AI in the recruitment and selection process should be specified, while also protecting the privacy of candidates before utilizing them to make more informed recruitment decisions.

2.3. Strategic Approach – The Act of Best-fit Practice and Expanding Competitive Advantage

In terms of incorporating AI tools in recruitment and selection as the strategic approach of businesses, AI can provide the most recent technology and information that allows businesses to find the best-suited candidate. This can serve to find candidates who can execute the strategic goals of the business and build upon the human competencies in acquiring human talents. In terms of attracting a high-quality pool of talent, the impact of adopting AI as the modern way of recruitment reflects the business's responsiveness to the popular and efficient technological trends in the modern way. Use AI tools in recruitment and selection, would often be viewed as innovative, flexible, and fast-paced, which sells an image of a business with high potential and strong adaptability to future trends of digitalization [10]. It serves to brand businesses to attract tech-savvy and new generation of candidates with exposure to digitalization, which attracts talented candidates that are willing to delve into their careers in growing with businesses that invest in AI tools and automation technologies. According to recent research conducted, AI tools in the recruitment and selection process can determine a candidate's offer acceptance rate and justifications on the extent to of AI can contribute to the overall perceived organizational attractiveness [11]. Furthermore, by focusing on transparency of AI tools usage in the recruitment and selection process can emphasize fairness in the selection process, contributing to candidate's experience and influencing their performances and final offer acceptance decisions.

2.3.1. The Rise of the Technological Digital Age

AI is also beneficial in the selection practice that contributes to the strategic success of a business because it can evaluate information and predict a business's advancements in the future years. With this feature enabled, recruiters have to make decisions that forecast future job requirements in the role in addition to the current requirements to obtain candidates that have the ability or potential to conduct high performances to align with the business's strategic ambitions. Being able to compare and contrast different candidate profiles, and collect and analyze quantifiable candidate data, AI tools can act by the personnel management theory, which supports a better decision-making process by assessing the candidate's "aptitude and suitability" for the advertised roles [12]. It narrows down different fields that require specific personal characteristics and skill sets for the applied jobs, while the machine learning aspect of AI tools frequently syncs data and information from the internet, firm analysis, and varied future requirements to find the right candidates for the recruiting jobs. However, since the final recruitment decision is still determined by humans, AI tools serve to reduce the intuitive decision-making aspect in the traditional human selection process, as it requires recruiters to consider more fact-based information to support their results when making a decision. Thus, AI

tools can provide strategic suggestions for the development of the business, regarding recruitment and selection directions and decisions.

2.3.2. Industry-specific Recruitment and Selection

The use of AI tools in recruitment and selection can be tailored to match the needs of organizations in different industries. The organisation needs to attract and retain employees from the initial stages of talent acquisition [13]. By adopting the new ways of recruitment and selection, AI can conduct an analysis of the job pursuit intentions, which allows employers to understand the aspects of jobs that have attracted candidates and what developmental attempts should be applied to the candidates in the future to retain candidates with high potentials. This further provides a prediction on the motivational and satisfactory factors required to attract talents in the talent pools for specific advertised roles, allowing a more accurate assessment of the requirements of obtaining best-fit employees. In the context of the hospitality industry, it is shown that an AI candidate selection method has increased the overall performance by 20% while also decreasing turnover rates by 35%, which demonstrates an improvement in the alignment of person-job and person-organisation fit with AI tools [8]. Furthermore, AI tools can perform predictive and assessment analysis on a candidate's degree of cultural fit with the hiring organization, in addition to measuring skills competencies, and personality [14]. The result it acts as a tool for recruiters to determine the potential organizational trust that the business can gain from the candidates, while also providing more attraction and favors to the screening candidates after acknowledging the AI-enabled aspect of the business [15]. Through these results, recruiters can narrow potential candidates to people that align with the organization's culture and values, deeming the best-fit candidate for the hiring positions.

2.3.3. Limitation – Employer Branding Requirements

Considering the benefits of using AI tools to achieve the business's strategic goals, the key disadvantage of using AI in talent acquisition for strategic goals would be a possible mismatch in the human and algorithmic perception of goals. Organizations will need careful consideration in the type of employer branding desired to align with the organisation's goals, given that AI in talent acquisition automatically provides a digital image for branding [16]. This needs to be tailored to suit different industries and organizations in communicating the message that matches the daily tasks of candidates going into specific roles. By narrowing the direction of employer branding, organizations can further determine how AI processes can be implemented to assist HR and the overall strategic goals of the organization. As predicted, 70% of job recruitment will be actioned by AI by 2025, the business needs to understand the aspect of recruitment and selection required for HR professionals to be involved and make final decisions, as the daily operation of organizations could alter, and high skill or interpersonal roles are dependent on human operations. This highlights the need for human power to achieve strategic goals in these organizations, calling for the need for recruiters to determine the best person-job fit.

3. Conclusion

Automation has been a key area of development and application in the current HR practices. In the field of recruitment and selection, AI can make practical, ethical, and strategic impacts on the efficiency, fairness, and strategic progression of organizations, contributing to various aspects of adding value and improving an organization's competitive advantage. This paper provides insight into the importance of performing AI tools with careful consideration, which could lead to positive or negative impacts on the hiring process and results. AI acts as a double-edged sword that could lead to high returns or high losses, depending on the extent of AI information used in decision-making and

the structured application that impacts its effectiveness in talent acquisition. Due to the nature of this current developing technology, there are limitations to this paper in examining the area of a fast-evolving technology with the lack of comprehensive views of the possible advancements. In the future, research can be conducted through surveys and interviews to explore the experiences from applicant's perspectives, who are directly impacted by the execution of AI tools in recruitment and selection. This research could focus on the different experiences and limitations of using AI in differing roles across all industries. It highlights the potential of further involvement of AI in specific roles and industries while determining AI tools as ineffective in other roles and industries due to insurmountable barriers in its nature.

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