A Review Paper on the Use of AI in the Recruitment Process

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Abstract: Human resource management is a field that involves people's brains, bodies, psychological behaviours, codes of conduct, and other aspects of human behaviour. on. Every company has a human resources division. primarily committed to promoting improvement in the workers beginning with sourcing, screening, and hiring , on boarding, performance evaluation, and employee activities, learning & development, and engagement. In Technology innovation in the modern era is over. advancing technology and science in HR operations of the business. The advancements in AI and ML have worked to put them into practise in completing the HR procedures that could reduce rather than share the work done by the HR staff. Work of artificial intelligence towards streamlining the Managers' work. However, there is a different belief that, regardless of the sort of employment, artificial intelligence can replace the human worker. Work can be transformed and deviated towards automated systems with the added benefit of being done more efficiently and with fewer errors.

Keywords: Artificial intelligence, Recruitment process, Sourcing, Screening.

I. INTRODUCTION

Artificial intelligence (AI) has become increasingly important in many fields of endeavour thanks to the simplicity of labour and technological advancement.Every sector, from engineering to human resources, uses AI in some capacity. It has aided humans in carrying out tasks in an orderly manner, which has benefited the accomplishment of organisational goals. All of the other processes that might be used to operate the business operations are greatly streamlined by the HR department. These company processes use employees at all levels, from entry level to senior level.

One of the main areas where technology has assisted in dividing the work load is in streamlining the entire team to reach a consistent work process. Even though AI cannot compare to the human brain, it has been helpful in completing tasks that must be completed in a specific manner, regardless of human behaviours.

The issue is, how does technology assist? The solution might be found by adhering to the given instructions and completing the tasks in accordance with the established algorithm. Any innovation or technological development requires a set of experiments to be carried out and literary research with in-depth and illuminating understanding of the advancements before it can be put into practise.

AI is built in a way that can be related to science using the Algorithms that make it follow the trend and follow a predetermined pattern in order to solve such problems. Perception and emotion are uninvolved in this situation. Bots and voice recognition systems both leverage such technologies.

Voice recognition has transformed technology into intelligent features that have had an influence and assisted in task reduction by serving as an assistant to any HR and carrying out the chores in a predetermined sequence.

According to the tasks that AI is used for, the bots serve as HR assistants when it comes to learning and instructing when it comes to tasks involving speech to text voice recognition systems and systems where there are specified sets of instructions.

BOTS can be utilised in situations where tasks need to be completed according to the keywords and phrases. It can be used for education, conversation, direction-giving, and other purposes. Although there are many obstacles to overcome, even the simplest of decisions contain complex logical problems that must be resolved. Candidate short listing follows a predetermined framework for the requirements, which must be confirmed during verification. By helping the HR with this pre-determined list of documents and the short listing process, AI helps to distribute the HR's workload.

AI helps HR with the duty of comparing the documents and the historical data to make predictions, not just during the joining process but also throughout the attrition analysis.

AI proves to be an effective assistant to HR and reduces their workload, making it simpler for them to carry out the work for n number of employees with a high level of perfection. Tasks like talent acquisition, talent development, and retention are concerned. It is a laborious effort to cross-check the data so that the things can be brought in line with the work flow, but technology has stepped up to aid humans rather than take over the work entirely. As long as data is gathered, there is a chance that a lot of useless information will be gathered, which occasionally will make more labour necessary.

Additionally, there are situations in which perception, feelings, and emotions are crucial to HR job, and in those circumstances, AI still has a weakness that could distance employees from HR. Last but not least, AI relies on binary logic, but HR doesn't have all black or all white, therefore it can occasionally get complicated to keep workers comfortable. In terms of technological development, AI still has to make a number of progresses. In addition to discussing the significance of AI in HR, this study discusses the importance of AI in HR job flow and workload sharing.

In contrast to humans, who do not place any restrictions on the thoughts or questions that enter their minds, bots also have certain constraints because each individual has a unique capacity for cognition that results in a varied set of questions. However, this won't be achievable with the bots. This is due to the fact that the bots are programmed with a set amount of questions, and they tend to respond to those questions, leaving any queries that are not in their database unanswered or with the incorrect response. The user may be misled as a result of this.

II.   ARTIFICIAL INTELLIGENCE

A"The art of making machines that perform functions that require intelligence when performed by people" (Kurzweil, 1990) can be summed up as artificial intelligence. The area of computer science that focuses on automating reasoning behaviour (Luger &Stublefield, 1993). The inventor of artificial intelligence, John McCarthy, defined it as "the science and engineering of creating intelligent machines, especially intelligent computer programmes."

Artificial intelligence is analogous to human intellect in that it can learn, adapt, recognise, and make corrections. Its originator, John McCarthy, defined it as "the science and engineering of making intelligent machines" in 1956.

"Artificial intelligence (AI), the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings," according to the Encyclopaedia Britannica. Intelligent creatures are able to adapt to their environment.

Dictionary 1 states that "artificial intelligence" refers to a machine's capacity to carry out tasks that are typically regarded to require intellect. the development of this capability in machines, as it relates to the field of computer science.

Dictionary 2 states that symbolic knowledge representation for inference-making purposes and computer-based symbolic inference methods are the focus of this branch of computer science. AI is an effort to simulate elements of human thought on computers.

Artificial intelligence is the incorporation of human brains into computers, which has the potential to result in significant innovation that makes human life easier. Even though each field's workload is divided and decreased, human interaction is still necessary for simultaneous cross-verification.

Every task performed in daily life now relies on science and technology, so it is essential to carry out the work in a streamlined manner to produce the results quickly.

There are numerous departments inside the organisation that use technology to do tasks, rather than simply one department using AI to do so. It enables workers to do comparable tasks more effectively and with less error-prone labour. Every task in everyday life now requires the use of science and technology, so it is essential to complete tasks quickly in order to provide the desired outcomes.

Many departments within the organisation use technology to do tasks, rather than just one department using AI to assist with the work. Employee productivity increases as a result of using fewer resources and making fewer mistakes to do similar tasks.

III.   REVIEW OF LITERATURE

Heene (1997) asserts that the competence-based model is a form of HR tool that is particularly beneficial for organisations to meet their personnel goals through effective applicant recruitment, planning, and development.

The competency model, as stated by G. Liddon (2006), is a description of knowledge, skills, capacities, and behaviours. To carry out any type of work or duty that has been assigned in the organisation, certain abilities are necessary. The organisations may employ a competence-based system that anticipates the core competencies and designs the company strategy appropriately in order to acquire a productive output and an efficient outcome.

These methods are simplified for hiring and selection, evaluation, performance management, training and development, and employee engagement tactics for their career growth. They are utilised to ascertain how a business model will operate. This research details the effects of artificial intelligence on human resource management, according to Murgai (2018).

The purpose of this article was to examine the application of artificial intelligence to different aspects of human resource management, including hiring, selecting, keeping employees, performance reviews, etc. The goals were met using secondary data gathered by the researcher.

The purpose of this research, according to Geetha R. and BhanuSree Reddy (2018), was to examine the function of AI in the recruitment process. The primary goals of this essay were to examine or research how artificial intelligence has affected hiring practises in businesses. The researcher explored additional ways for hiring or recruiting the participants in this study using secondary data from websites, journals, newspapers, etc.

The purpose of this paper, according to RaviproluAnjana (2017), is to examine how artificial intelligence is used in recruiting. The researcher also learned about numerous methods and tactics.used during the hiring process. Using secondary data, the researcheraccomplish the goals.

According to Jain S. (2017), the researcher in this report examined the force behind the upcoming wave of corporate transformation.

The investigation of how AI is transforming HR was the purpose of this paper. In this report, researchers also examined how AI changed many managerial departments, including marketing, human resources, finance, and manufacturing. In a nutshell, the study came to the conclusion that HR managers can employ the most recent AI technology for all the different human resource activities including hiring, selection, training, development, compensation, and reward administration, among others.

According to Ruby Merlin and Jayam R., the researcher has examined the human-machine collaboration in this paper for a variety of repetitious duties in the HR Management function. The duties include not only those related to vetting, sourcing, and hiring but also those involved in the HR Operations lifecycle, such as performance management, training, learning, and development, etc.

IV.   OBJECTIVE OF STUDY

● To study the impact of artificial intelligence in recruitment process.

V.   METHODOLOGY OF THE STUDY

This essay is primarily descriptive. Secondary sources of information were used by the researcher, including books, newspapers, journals, theses, websites, case studies, reports, periodicals, etc.

VI.   RESEARCH STUDY

Artificial Intelligence's Effect on the Recruitment Process

Artificial intelligence is the employment of a machine to carry out a task, hence lessening the workload placed on humans. There are typically extremely few chances for error when work is completed by a robot or other technological device. Even if the hiring procedure is typically the most crucial activity for any business, it is still vital to mark up work accurately to avoid any mistakes that can cause the candidate for the position to meet the exact profile.

While we follow the hiring process, AI can be employed in three steps, such as:
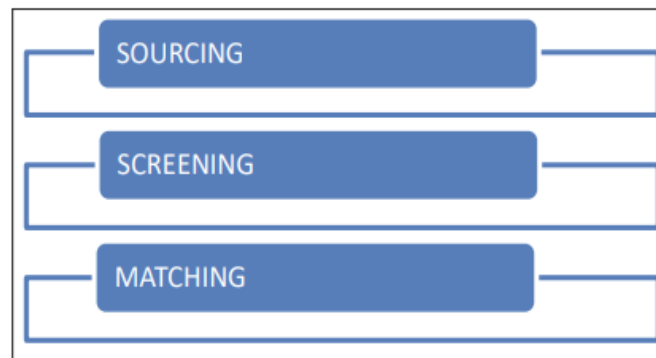

Fig: Hiring Process of Employee Through AI

To source effectively, one requires the knowledge of experts. Suitable for the organization's opening. Few job profiles need for specific technical and soft talents, and the persons looking for work after leaving an organisation turn into the applicant. One of the duties is the sourcing procedure. that eventually becomes tiresome for any HR, thus with the aid of AI and ML This task can be split up and the amount of effort minimised, hence The organisation can easily obtain the appropriate applicant list. for the proper position. Purchasing requires knowledge from numerous verticals, as well as the candidate basis's applicability their expertise, educational background, life experiences, and so forth. But if the required format is established, there is a chance for the applicants that the short listing can be completed at the sourcing level in the shortest amount of time, keeping the applicants informed of their short listing or else alerting them if they do not qualify for the position. All of this is feasible if candidate sourcing is carried out properly.

Through the ATS system, where a few keywords are fed into the system and the AI has already started screening, These keywords are matched with the applicant's resume. This facilitates resume screening and makes the work simple. to finish within the allotted time. The Candidate Monitoring system compares the words in the resume to the keywords, and The application is shortlisted if the text contains the exact wording. In a much less time, the entire set of data is filtered. When every steps are completed using AI, there is a possibility that the Human resource personnel need to double check the screening. When the HR department completes the entire process, it takes a lot of time, but when AI completes half of the task, it helps to lighten the workload.

The final stage before conducting interviews is matching the profile with the necessary characteristics, location, and package. This comes after the list of qualified candidates has been created. However, exact profiles need not merely contain the keywords for the sake of the name; for this reason, the matching of the profile plays a significant part. ATS tend to shortlist all the resumes that correspond with the keywords. The entire profile resume is examined during profile matching, together with the necessary information like salary, location, and core competencies. The key consideration at this stage is if the candidate's USPs match the profile the best or not. The chosen profiles are then called for the interview out of the n total profiles.

The use of AI aids in accurate applicant matching, allowing recruiters to find the best candidates faster and with fewer resources. There are specific processes and patterns that should be observed while scanning candidate resumes once the job description has been posted on the portals. When the resume is narrowed down and scanned using those keywords, everything go well. As a result, the tasks are simplified and the most qualified applicants are chosen based on the listed core competencies and soft skills.

VII.   LIMITATION

When HR cannot locate the exact match, there are occasions when the data gathered using AI contains trash data, adding another difficult duty. This makes the job of HR more difficult because they must screen candidates after learning about their profiles and short listing those who fit the necessary profiles.

Another flaw identified is the AI's inability to effectively separate the profiles for senior level roles. This failure can be attributed to the necessity for managerial abilities and core competencies for senior roles that call for in-depth knowledge and need for more than simply a resume. Last but not least, although AI relies on binary logic and does not have all-black or all-white HR, thus it becomes complex at times, to make the employees comfortable.

VIII. FUTURE SCOPE

AI is finding use in many facets of human resource as research advances and people's schedules become busier. The best uses of AI in HR Management range from task reduction to profile matching that is most appropriate. Not just in this area is the usage of AI constrained. It has actually come out on top in terms of helping HR with the induction procedures. The HR team is required to introduce new employees to the company and its policies. However, these instructions can also be given with the aid of bots, expanding the potential of AI. Additionally, there are the stated formality in the directions. All of these processes have a documented format that can be explained to new hires; this will not only lessen the effort of the HR Team but will also help to ensure a seamless process. AI has expanded its boundaries to the point that it can now help HR teams with processes like performance management and payroll. AI is no longer solely limited to the recruitment or selection process.

Even though the human emotional touch and reactions to control the situation may not be of great assistance, the task that is carried out in a prescribed and predetermined format can easily be completed with the assistance of AI. Therefore, AI tends to put its best foot forward in making a significant difference and decreasing the workload, thus also enabling ways to develop new, technically competent job openings. However, monitoring the outcomes would always be a chore that would be necessary. All academics are anticipating improvements and innovations in adopting the AI and fuzzy logics based HR system in the organisations pushing its approaches ahead in the future with minimal faults. The feedback given in a closed loop system during the building of AI systems for HR work will improve the capabilities producing excellent results and it will also help in reversing and correcting the earlier outcomes in the network.

IX. CONCLUSION

As organizations strive to remain competitive and make well-informed hiring decisions in an ever-evolving job market, the importance of embracing AI in recruitment cannot be overstated. By harnessing the power of AI, we can unlock its potential to identify the top talent that will propel our organizations towards a prosperous future.

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