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Artificial Intelligence in human resource recruitment

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ABSTRACT

The world is filled with technical advancement. In recent years, Artificial Intelligence have been a core component of every field ranging from medical, education and what not. This paper is all about how AI can be used in recruitment process. When someone is in need of job, interview is something that he/she has to go through. There is different process of interview. Every company opts for different methods. But the common person and the common step in every interview process is the Human resource person and the personal interview step. HR is someone who plays a vital role in a company. Finding the right man for the right position is something essential. And that's a very tedious part too. Although there have been many technological developments in the world, the interview scheduling process is something the same that has been followed for ages. So, we thought of bringing a change in the process. How about AI substitutes labor in the interview process? It is sure that, it is not possible completely. But still it can be adopted in certain areas like application screening and in some more places. In this paper we have told the possible areas of adopting the Artificial intelligence so that the labor and time of HR is cut short and it can be utilized in some more productive areas.

Keywords: Artificial Intelligence, Human Resource, Interview Introduction

1. INTRODUCTION

Recruitment process aims to hire a new talent for the company. The most important asset for any company's success is human capital. Main aim for any recruitment process is to source right person for the right job. This can be achieved by proper screening process. The steps involved in recruitment process changes from company to company but in general it involves inviting applicants, screening, testing based on job description and specification and finally onboarding. Talent acquisition is the key area of Human resource management. An extensive use of human resource in recruitment process can be reduced by using Artificial Intelligence in each step of recruitment. This also ensures that recruitment process is done with higher accuracy rate. This in turn helps in reduction in labor turnover since the interview process is held by advanced tools of AI. This paper includes the survey report which has been conducted and possible responses for AI in Human resource field was the result. There are different algorithms in Artificial Intelligence, this paper discusses about the vital algorithm and methods which can be adopted in order to provide greater accuracy in talent acquisition.

Objectives of the study

- To analyse the importance of artificial intelligence in recruitment.
- To survey how human beings react towards Artificial Intelligence in recruitment process

2. LITERATURE SURVEY

Title: RECRUITMENT- SCREENING PROCESS, WITH SPECIAL REFERENCE TO HR CONSULTING FIRMS

Author's Name: KANCHANA V & S. VASANTHA Findings:

- This article tells the methods of recruitment process to provide best results.
- It is a methodology based article which supports the phrase of finding right man for the right job.

Title: Artificial Intelligence: A Technological Prototype in Recruitment **Author's Name:** R. Vedapradha, Ravi Hariharan, Rajan Shivakami Findings:

- The article provides an evaluative study based on the suitability and adaptability of artificial intelligence in recruitment process and to provide the assessment on employee’s performance.
- It uses research methods such as ANNOVA to support the conceptual explanation.

Title: The impact of Artificial Intelligence in Talent Acquisition Lifecycle of organizations Author’s Name: Dr. Saundarya Rajesh, Mr. Umasanker Kandaswamy, Ms. Anju Rakesh Findings:

- This research paper based on the detailed study about how artificial intelligence can be used on each and every step of recruitment process and the output achieved in each process.
- It focuses on Talent acquisition lifecycle model to support the findings.

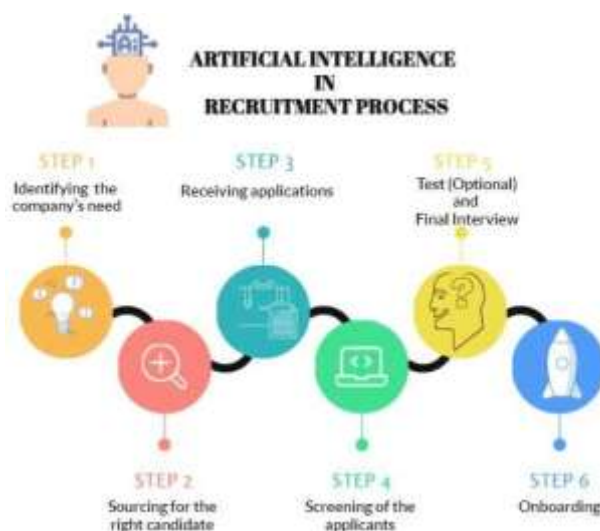
3. NEED FOR THE STUDY

- To impact the power of Artificial Intelligence in Recruitment process
- To support the efficiency of AI in talent acquisition through survey methods.

4. LIMITATIONS

- AI cannot replace 100% human resource workforce
- The data collected were limited and not complete enumerated one, and the employee’s attitude towards AI in recruitment is still questionable.
- Still more advanced techniques, to be adopted to excel final decisions in recruitment process.

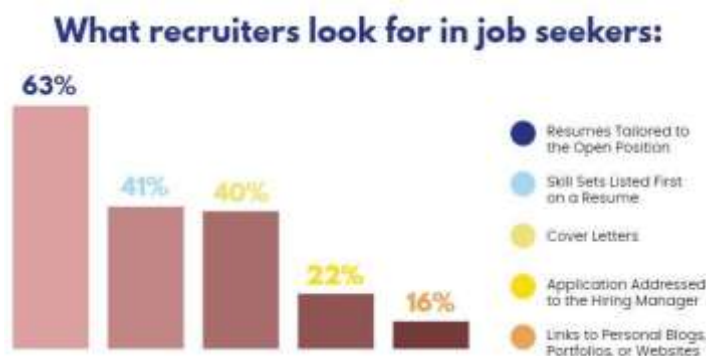
5. RECRUITMENT PROCESS



AI in Sourcing the right candidate

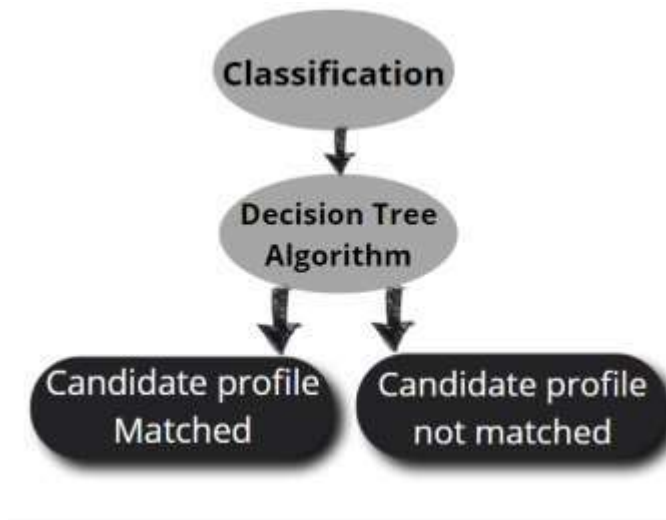
In this competitive field, recruiters find nearly 100 candidates suitable for a particular field. But choosing the right one is the tedious job. For that, various portals like Naukri, and lot more applications that helps us in screening. So, it is easy to apply AI here.

The initial step is to make a neat description of the job specifying almost every detail required. Right from “job title” to “salary” must be made available. This can be done using AI algorithm such as augmented writing. After this, the specified job description can be uploaded either directly or in a software which can do the remaining job. The AI will update the job in various portals and will bring up applications. This is how AI can be implemented in “Sourcing for the right candidate”.



Screening of the applicants

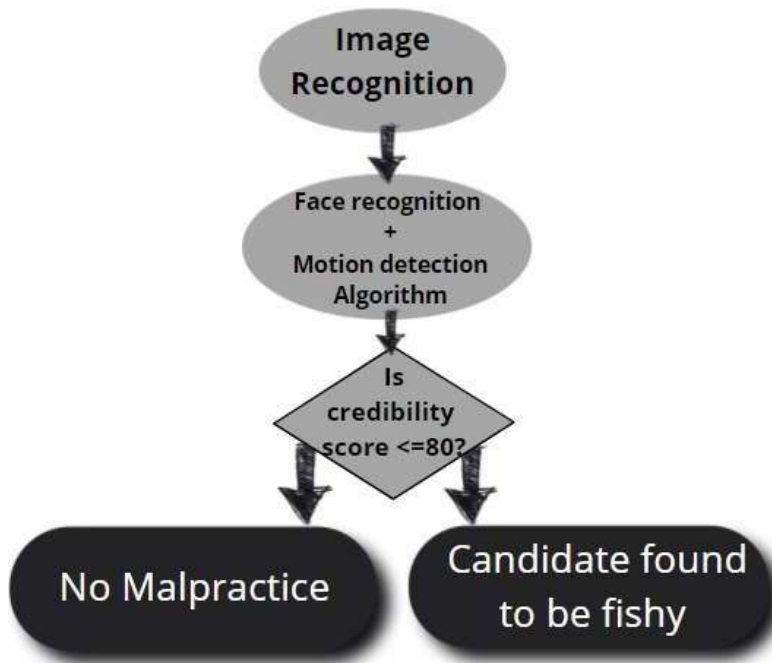
AI can be used to screen applicants based on certain keywords that are related to the job description. For example, in case if there is a requirement for some data scientist for the company, then AI can screen applicants based on the keyword “data scientist” and other keywords which will match the job description. The classification algorithm can be adopted to take only the required candidates and leave off the candidates whose resume or initial application doesn’t match with the required need.



Conducting tests

Conducting test are optional. It varies according to the job role. For example, for the software engineer role it is mandatory to analyze the coding skills via testing. The candidates can take up tests online with their video “on” and this can be proctored by AI in such a way that it studies about the eye movement of the candidate to avoid mal practices. This helps to screen best fit candidates for the role. The algorithm can be designed using image recognition and motion detection algorithm to detect the candidate’s bodily movements.

In case if the AI detects something that is fishy, it can be designed in such a way to reject the candidate automatically by letting them out of the test room. This can be done by allotting a certain amount of credibility score to the candidate. The level of score starts from 100 and when the candidate does any malpractice his/her credibility decreases. A benchmark of 80% is set to ensure if they have less than 80% then they are out of the interview. It can also be designed in a way to instantly grade the candidates and give them a reply about their status.



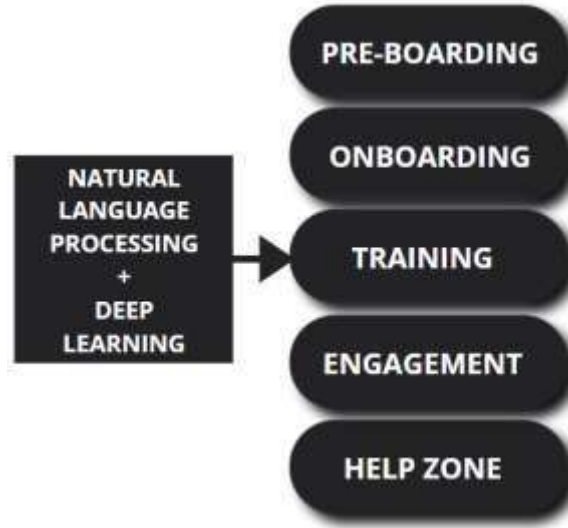
Scheduling of interview

The next process after conducting test is the evaluation of the test. AI can be used to screen the responses and evaluate them based on the benchmark given initially. After the evaluation process is done, we can categorize people based on the score that they have got. Also, after categorizing the applicants, the next step is about scheduling the interview. The selected applicants can be sent with an auto generated mail by scheduling each applicant to a particular time. Auto generated mail is something that is existing in the corporate sector. In this way, we can implement the AI in scheduling process.

Onboarding

After clearing all the rounds, personal interview can be conducted by the HR or it can be conducted by AI using Natural Language

Processing Technology. The next step will be either taking in or rejecting the candidate. When a candidate is selected, the first thing the candidate will be assigned to is the induction or the training program. In this process, AI can help the candidate in providing adequate training based on their ability. This can be done by Natural language processing and deep learning methods of AI.



6. RESEARCH DESIGN

This study adopts descriptive pattern which gives a brief detail about the existing pattern and also helps us to give a summary of the adopted technique. Here we used random sampling method.

Data Collection

We collected some primary data which is subject to particular group of people which is students, working professionals and others.

Data Analysis and Interpretation

To place the collected data in an ordered form, the statistical tool used is the SMALL SAMPLE TEST

Hypothesis

- **Null Hypothesis (H0):** There is no significant relationship between AI and HR
- **Alternative Hypothesis (H1):** There is significant relationship between AI and HR
- **Total number of samples taken: 27**

	STUDENTS	TEACHERS	OTHERS	TOTAL
NEED AI IN HR	21	5	1	27
NO NEED AI IN HR	4	1	1	6
MAY BE	1	21	5	27
TOTAL	26	27	7	60

DEGREE OF FREEDOM is $(R-1)*(C-1) = 4$

Calculated Value: **32.33** Tabulated Value: **9.488**

Since the calculated value is more than the tabulated value, we Reject (H0). So, there is significant relationship between AI and HR.

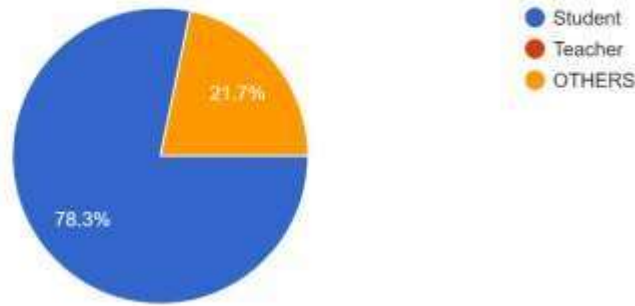
Data taken from the survey form Assumptions

We decided to conduct a survey with MBA students and teachers who would give us some clear insights to the topic. Hence, decided to target few students and teachers who are related to the corporate sector and circulated the google form to figure out the responses. The responses drawn from the survey is stated below.

Number of student and teacher’s ratio who were considered

DESIGNATION

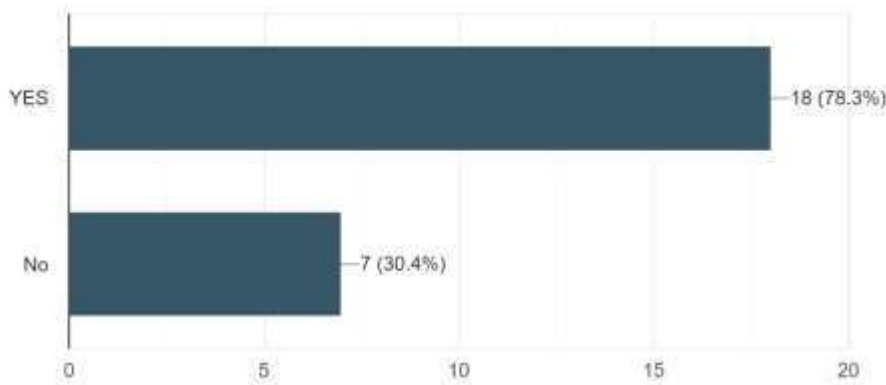
23 responses



To conduct a survey in random sampling method, we chose the MBA students and the MBA handlers as the target. Our main target were still the MBA students, as they will be aware of the roles and responsibilities of HR. The maximum people who responded were MBA students.

Do you think that HR role is difficult?

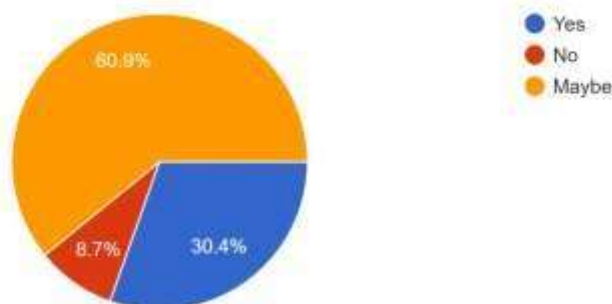
23 responses



The role of HR is very crucial in a company. Although it is a fact, we took it as a question in the survey and the result that we got is actually similar to the fact that prevails. Many agree to the fact that the role of HR is something difficult. The role of HR does not end in screening resumes and taking people in. There are still many roles and responsibilities that are handled by the HR. The contrary result is prevailing because maybe some enjoy the profession the profession that they do and hence the difficulty is not known to them.

Do you think that the management will require additional labor in HR panel?

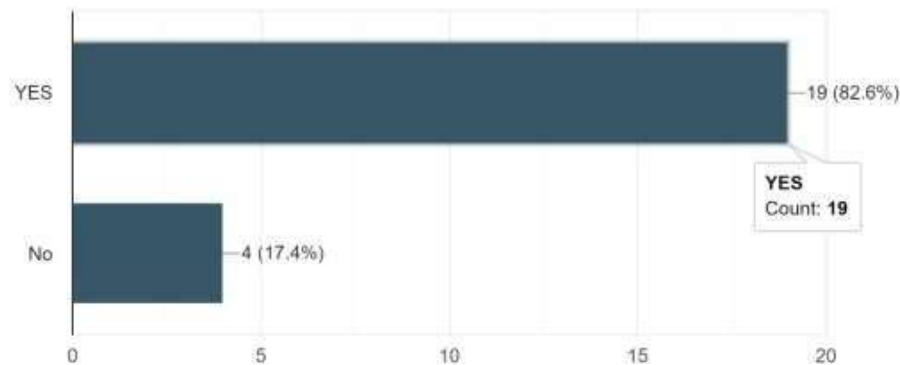
23 responses



From the survey it is also clear that the HR panel may require some additional labour. This “may be” result is clear that in case if there is any additional labour in the HR panel, their job is going to be more efficient. Hence, it is clear that there is some additional requirement in HR panel.

Is it a right option to include AI in HR panel?

23 responses



7. RESULT

Though there is a dilemma in additional labour requirement in HR role, the option of adopting AI in HR panel is quite clear. The result drawn from the survey is that there is some additional requirement in HR panel and the best solution could be the AI in the HR panel.

There were still some suggestions from the survey form, which are attached here.

- Introducing AI to HR can have its positives and negatives. Because in this technology era anything can be possible. AI can reduce the duties of HR also I fear that HR's may lose their importance due to this.
- The HR duties can be reduced can by Implementing an AI based Chat Bot for Employees in an organization.
- Outsourcing employees can be done effectively by AI
- Hire and retain star performers: An organization's ability to attract, hire, and retain top talents is critical to compressing costs.
- Increase the number of HR members or divided the duties for them
- AI reduces some of the duties of HR like maintaining payroll and employee records.

8. CONCLUSION

Artificial Intelligence in HR in earlier days sounds to be uninteresting since a talk on human intelligence in recruitment cannot be done by robot. But in today's world anything and everything is possible through AI. In this paper, we have provided methods and algorithms for implementing AI in recruitment. To be intact, the best way to reduce the job of human resource people, is to implement AI in the recruitment process so that more time can be saved. This facilitates HR people to be optimized for more productive works. Further research work can be done on finding more advanced algorithms which can be implemented for accurate detection in the recruitment process.

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