IMPACT OF AI ON AIDING EMPLOYEE RECRUITMENT AND SELECTION PROCESS

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ABSTRACT

The fundamental objective of this research is to study the impact of artificial intelligence on the talent acquisition system of leading organizations across most sectors. In this study, an in-depth quantitative analysis has been conducted using a deductive approach to test the predicted hypotheses. This paper has been framed based on primary research and based on information from secondary sources to collaborate the evidence. The key findings of this study we get to know that AI has not yet been able to get full coverage of the hiring cycle as a whole but is on the verge of making breakthroughs across the world, also the hiring managers are quite optimistic of this new change in spite of certain concerns that AI might not be able to accurately judge the applicant of soft skills and/or the inability of the higher age groups to adjust to AI as a recruitment tool. The hypothesis was tested and it is proved that the implementation of artificial intelligence will be showing positive change in the hiring cycle by bringing about an overall improvement of the experience of both hiring managers and job applicants, reduce the cost, boosting the organization's revenue, and finally ensuring the PJ fitness of its new employees.

Keywords: Talent Acquisition, Automation, Human Resources, Data Analysis, Hiring Cycle, HR Manager, Recruitment Tool, P-J Fitness.

INTRODUCTION

In the Covid pandemic situation, it has become imperative to reduce human interaction as far as possible and at the same time maintain a similar level of efficiency, if not more, in the recruitment process of any organization. Industry or business firm needs quality employees to accomplish their objectives. Talent hiring is an essential part of any industry, where the HR Personals selects the most deserving candidate going through a list of numerous applicants. In this age of ever-increasing competitiveness among business firms, it is essential to reduce the inefficiency in recruitment and increase profits via productivity enhancement.

This study focuses on applying AI and ML algorithms and their growing domination in the hiring industry. The term artificial intelligence was first adopted in 1956 in a Dartmouth University conference organized by John McCarthy in 1956. Fast forward 55 years, HR managers are implementing artificial intelligence and related technologies to recruit proficient and skilled manpower.

From numerous analyses, HR managers believe that merging Machine learning into their organization's functional intricacies will benefit and improve the overall employee experience (Alkhazraji & Buhaliba, 2020). But it is evident that Artificial intelligence will not replace the human presence in the recruitment and shortlisting processes of candidates but will be of significant help to the employer. As a result, the professionals who had to conduct these recruitments can focus on some other responsibilities in their respective companies, which can directly or indirectly contribute to revenue growth. Close to about 30% of the companies utilize

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AI algorithms to reduce cost, time consumption and can place the right talent in the perfect position (Geetha & Reddy, 2018). Machine learning algorithms are already quite prevalent in recruitment with applications using the applicant's social media accounts to learn about his skills, personalities hence conducting a detailed behavioral analysis and presenting it to HR managers for further research (Faliagka et al., 2012).

The academic topography which constitutes the site of origin of millennials has substantially changed due to the availability of new updated technology and other core management programs. The changing technology terrain pushes the millennials to discover new approaches such as big data analytics, data science, artificial intelligence, machine learning, neural network, among others (Thejovathi & Krishnan, 2020).

However, the prevalence of AI dramatically varies depending on the region being considered. For example, AI is predominantly utilized to its total capacity in western countries and eastern Asia. Even though, most significant proportions of skilled labour are entering the labor market in the Indian subcontinent, culminating in extreme stress on the recruitment system and a dire situation among HR professionals in the war for talent. Due to this reason, HR managers are facing heightened difficulties while shortlisting eligible candidates for a particular position and often result in human errors or negligence due to which talented or skilled candidates are mistakenly getting eliminated in the process. The most popular and implemented option in AI-based recruitment is the implementation of big data to shortlist candidates for a particular job role. AI and machine learning algorithms are the most used and researched automation software whose role has generally been of prime importance for driving company revenue (Chanda, 2019).

According to a report, by 2035, intelligent and digitally networked systems, particularly AI, could account for additional growth over and above the current growth rate of roughly €420 billion in Western Europe alone (SIEMENS). According to a study by PWC, by 2030, AI can boost the global economy by an additional amount of around US$ 15.7 trillion to, hence the entry of AI into recruitment is inevitable and also highly crucial (PWC, 2017).

The next most important aspect is the implementation of these algorithms in the post COVID job market. We are in the early stage of the fourth industrial revolution, and in such a moment, the pandemic has had a significant impact on the labor market. And now, when the COVID 19 pandemic is receding, the HR Managers must act dynamically as it is concerned with a workforce as an important factor performance of the organization (Peres et al., 2020).

According to an independent study, schools and employers have managed to adapt to the new normal of virtual recruitment. For instance, most of companies indicated that they were satisfied with the virtual recruitment process, making it likely that virtual recruiting will continue well into the Post-COVID world, this means there will be further modernization of this virtual recruitment and in such a time when the in-person interaction is being severely discouraged, AI becomes the only way out (Carnevale & Hatak, 2020).

Big data collection and data analytics, along with AI, can be beneficial in shortlisting. What the AI algorithm does, is that it observes the candidate's movement, communication skills, technical knowledge, confidence during the interview and, after that, studies and compares them to a particular calibrated response and decides whether the person is competent enough for the applied position (Brishti & Javed, 2020) The main advantage being that the AI algorithm can screen millions of profiles at a given time hence tremendously increasing the efficiency. The AI will conduct programmed job interviews to judge them provide regular assistance as and when

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needed to the employer; therefore, this will assist the employer and, reduce the hiring cycle and not replace employers (Lucci & Kopec, 2015).

LITERATURE SURVEY

Literature Review

As the days pass by, the involvement of artificial intelligence, machine learning, and the Internet of things (IoT) is becoming more and more dominant in our daily lives. It is said AI will bring in a new methodology and system that will be challenged by the organization's management, leading to the 4th industrial revolution (Brynjolfsson & McAfee, 2014). In the current times, intelligent systems that utilize AI often depend on Machine learning. In Machine learning, the system tends to learn from its previous data, often referred to as training data. The data set can be problem-specific training dates like for recruitment purposes; a training data set of applicant interviews is required for automating the entire process (Janiesch et al., 2021).

Every new technological advancement and frequent, rapid change in the structure of the corporate institution compels us to adopt a nascent perspective of management of human resources based on knowledge and collected data. The first thing in this direction comes from implementing the employee monitoring system in many corporations. Monitoring here indicates the system or procedure for collection, storage, and analysis of the data from multiple sources and reporting the employee's action and performance (Ball et al., 2010).

In the same way, it is not only entering the corporate system but also changing this very institution's fundamental and initial process, i.e., the employee recruitment system. Online recruitment, a small subpart of recruitment with AI, has hastened the screening of candidates via social media screening that allows a lot of relevant data about the candidate that helps in an instantaneous background verification of the job applicant (Melanthiou, 2015).

Corporations are adopting online recruitment and are also adding another component to it. These corporates are undergoing a large-scale infusion of artificial intelligence into their regular activities; hence, they use this resource extensively for recruitment.

The main benefits of AI in recruitment is that firstly, it saves an immense amount of time and effort on the part of the HR manager, which can otherwise be diverted to increase the gross productivity of the employees of the company, secondly, it makes the candidates experience more positive (Deshmukh, 2019). According to a recently published study from the Sage Group, approximately 24% of businesses worldwide have started using AI for talent acquisition. About 56% of the HR managers plan to adopt AI technologies over the next year. Secondly, according to the World Economic Forum (WEF) predictions, about seventy-five million current jobs will cease to exist. An additional one hundred thirty-three million new jobs roles and positions will be established for the uptake, especially due to Artificial Intelligence (AI) and Machine Learning (ML); due to this reason, there will be intense pressure on the HR department resulting in the company hiring more HR professionals. At the end of the day, this will escalate the company's expenses as a whole. Suppose AI is introduced into the hiring at such a crucial time. In that case, this will result in the cost-benefit from efficient functioning of the AI recruitment tool outweighing its cost of introduction and implementation.

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Areas of Application of AI

According to another article, eight percent of companies around the world already use AI in some way or the other for HR, with a staggering almost 100% of Chinese firms relying on AI and nearly 83% of U.S. employers/employees fully or partially depending on some of the other forms of the same technology (Brin, 2019).

Overall, when it comes to AI for HR, companies are followed by the percentage of use:

1. They identified the most suitable candidates for a given position based on open-source data, like social media profiles. The number of organizations that are using social media to screen job applicants has increased significantly; Career Builder found, according to their study in 2018, that the practice of screening candidate social media accounts had risen from 11 to 70% in a decade (Jacobson et al., 2020) - 44% growth YOY.
2. Coming up with suggestions for educating and training of new job applicants, for example the skills that they need to gain or training they'll require to work in their applied position (43%).
3. Using chatbots to engage with candidates during their hiring cycle will give the AI an all-around idea of their behaviour, speaking skills, communication skills, and overall nature. AI-driven management software systems can remove unwanted impedance to the measurement of the job applicant's performance, which otherwise would have existed in human interactions, with the help of real-time face-to-face communication. HR professionals generally evaluate employee performances annually, half-yearly, or maybe quarterly, but with this introduction, these evaluations can be done on a more regular basis resulting in higher efficiencies (Nishad, 2019) - (41%).
4. Screening and processing a large number of job applications is a very tedious and time-consuming job. For this reason, many organizations have created electronic pre-screening software that sort out job applications based on key features, for example, based on the presence or usage of special keywords and assessing candidates of their abilities during the recruitment process. AI for recruiting can also integrate with your ATS, CRM, and HRIS, which are successful screening software (Deshmukh, 2019) - (40%).

Fierce competition will push the organization to invest more into technology in the years to follow. However, the thing that remains to be seen is how the pace of adoption will impact the company's growth figures. Based on the speed of adoption, there are certain types of organizations like an innovator, early majority, late majority, laggard (Rogers, 1971).

Talent Acquisition

On the contrary to traditional recruitment procedures like CV screening or employee referrals, AI and machine learning algorithms are capable of finding patterns invisible to the human eye. It could be used to find the perfect suitable person for the open job position significantly faster and more efficiently. For any industry to proliferate in this age of competitiveness, it is essential to improve talent acquisition and management by taking full advantage of AI by shifting focus from an ethical HR system to an ethical AI-associated HR department (Rudresh et al., 2020). In the Figure 1 the top trends in recruitment and talent acquisition has been observed.

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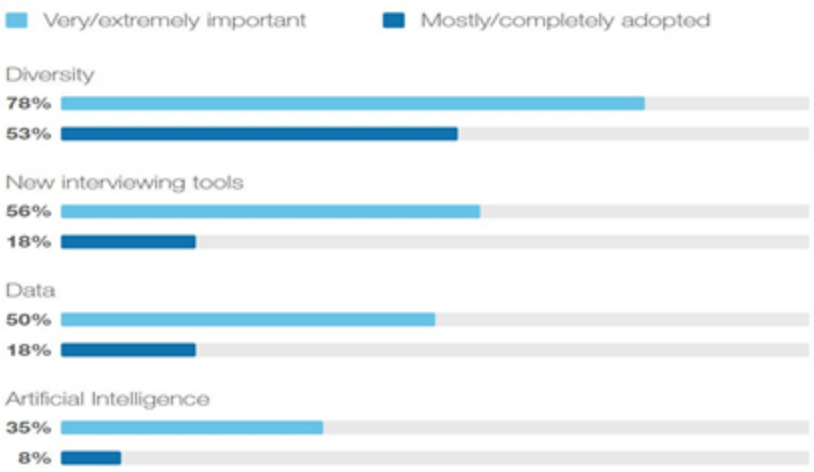

FIGURE 1
TOP TRENDS SHAPING THE FUTURE OF RECRUITING AND HIRING

After numerous interviews of 9000 leaders and HR managers across the globe, four precise trends were observed-2018 Global Recruiting Trends report LinkedIn, shown in Figure 1.

Access to Wider Applicant Pool

Industries are in constant need to hire competent and efficient individuals to match the organization's expectations and achieve both its short and long-term goals. Using AI means lesser human intervention and fast-paced activities. By cataloguing job openings on specific websites for recruitment, new job applicants can easily and swiftly access them any time. Furthermore, AI does not discontinue its work; hence, recruitment can be done anytime and anywhere (Johnson et al., 2020). Organizations had found that the use of online recruitment has led to access to a significantly larger applicant pool than what it used to be at the time when traditional recruitment procedures were used (Chapman & Godollei, 2017). For example, Kia motors received around 43,000 job applications for their vacancies within 30 days of advertisements for 2500 open positions when Kia motors started a new plant in Georgia (Adams, 2008).

Candidate Experience for Higher Age Groups

Experts say that AI will help ensure the welfare of workers of higher age groups when they return to work in a post-pandemic job market, without age-related discriminations creeping in. It hires people based solely on their experience, abilities, attributes, and success, not on their external appearance (Allam, 2021). Even though the procedure might be a bit new to the higher age groups and they might face issues adapting to it, its advantages outweigh its disadvantages and will be a valuable addition (Choi, 2020; Bhalgat, 2019).

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METHODOLOGY

Research Approach

This study adopts a quantitative strategy with a deductive approach. And it allows the usage of a large sample size hence conducting extensive sample tests unlike qualitative study, which uses a small sample size (Karan, 2019). Quantitative research usually involves the systematic and empirical analysis of an observation from a large sample using statistical and mathematical tools to study and process data collected from the sample. Finally, the analyzed result is used to verify the assumptions and hypotheses of the author. "*Most quantitative research falls into three broad categories: experimental, relationship research and survey research*" (Willis, 2008). An appropriate research methodology is highly crucial and essential to perform the correct and more accurate scientific study.

In this paper, we use a deductive approach, wherein a hypothesis was first framed, and then data was collected from the sample. Statistical analysis is conducted to verify the aforesaid view.

Sample and Procedure

A structured questionnaire was designed and sent to the participants individually to participate in the survey. In this study, a purposive and convenient sampling technique was applied. The sample of respondents consists of around 50 working professionals who hold essential decision-making positions in both multinational and national companies in various industries like IT, technical, finance, HR, education, and many more, whose results were further used for statistical analysis.

The Fieldwork Process

The entire fieldwork process was conducted in two phases, a pilot survey, and thereafter the final survey. The measuring tool for the questionnaire adopted was the Likert scale.

Testing

The data analyzed in SPSS and presented for all the 50 responses Table 1 by the Cronbach's Alpha test.

Table 1
CRONBACH'S ALPHA TEST

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.728	0.725	15

Interpretation

Cronbach's alpha was calculated as shown in Table 1 to find the internal consistency of the variable. The number of Items taken for analysis is 15. Cronbach's alpha based on standardized Items is 0.725. The value arrived at is 0.728, which shows data collected was reliable.

As can be deduced from the data collected and analyzed, the Cronbach's alpha value in the data shows a satisfactorily high degree of reliability. Each question strongly correlates to another question given in the main questionnaire.

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Table 2
DESCRIPTIVE STATISTICS

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
N	Valid	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean		2.34	4.1	3.92	3.74	3.26	4.18	3.84	3.38	3.14	3.62	4.08	4.16	4.12	3.28	4
Median		2	4.5	4	4	3.5	4	4	4	3	4	4	4	4	3	4
Mode		2	5	4	4	5	4	4	4	4	4	4	4	4	3	4
Std. Deviation		1.222	1.165	0.922	0.751	1.536	0.825	0.842	0.967	1.143	0.923	0.9	0.842	0.918	0.97	0.7
Variance		1.494	1.357	0.851	564	2.36	0.681	0.709	0.934	1.307	0.853	0.81	0.709	0.842	0.94	0.49
Skewness		0.633	-1.331	-1.463	-1.034	-0.317	-1.487	-0.967	-0.705	-0.114	-1.583	-1.212	-1.385	-1.236	0.238	-0.372
Std. Error of Skewness		0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
Kurtosis		-0.573	1.098	2.901	2.773	-1.369	3.804	1.828	-0.08	-1.058	2.349	2.005	3.217	1.878	-0.882	0.269
Std. Error of Kurtosis		0.662	0.662	0.662	0.662	0.662	0.662	0.662	0.662	0.662	0.662	0.662	0.662	0.662	0.662	0.662
Range		4	4	4	4	4	4	4	4	4	4	4	4	4	3	3

Interpretation

Analysis as shown in Table 2 helps to find out the summary and the characteristics of the data in a sequential way. A valid sample of around 50 data sets was taken for analysis. Arithmetic mean is a widely used measure for a central tendency. The minimum standard deviation value is 0.70, where the maximum value is 1.536. The mean value is greater than the median. Therefore, the value arrived is positively skewness. The maximum range value arrived here is 4; the kurtosis's standard error is 0.662.

Table 3
INTER-TERM CORRELATION

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q1 0	Q1 1	Q1 2	13	Q1 4	Q1 5
Q1	1	0.535	0.151	0.054	0.408	0.08	0.153	0.389	0.067	-0.08	0.068	0.184	0.127	0.116	0.191
Q2	0.535	1.0	0.406	0.147	0.669	0.533	0.412	0.564	-0.302	0.188	0.537	0.566	0.466	0.188	-0.05
Q3	0.151	0.406	1.0	0.266	0.289	0.18	0.246	0.47	0.26	0.179	0.205	0.096	0.132	0.02	0.063
Q4	0.054	0.147	-0.27	1.0	0.148	0.275	0.32	-0.255	0.123	0.296	0.213	0.358	0.224	-0.346	-0.311
Q5	0.408	0.669	0.289	0.148	1.0	0.542	0.285	0.496	0.161	0.172	0.398	0.504	0.455	0.173	-0.076
Q6	0.08	0.533	0.18	0.275	0.542	1.0	0.542	0.245	0.503	0.413	0.64	0.692	0.617	-0.421	0.177
Q7	0.153	0.412	0.246	0.32	0.285	0.542	1	0.227	-0.358	0.235	0.475	0.44	0.29	-0.194	-0.069
Q8	0.389	0.564	0.47	0.255	0.496	0.245	0.227	1.0	0.234	0.018	0.222	0.25	0.247	0.029	-0.032
Q9	0.067	0.302	-0.26	0.123	-0.17	-0.5	-0.36	-0.234	1.0	0.123	-0.33	-0.257	0.289	0.24	0.128
Q10	-0.082	0.188	0.179	0.296	0.172	0.413	0.235	-0.018	0.123	1.0	0.602	0.29	0.44	-0.221	0.158
Q11	0.068	0.537	0.205	0.213	0.398	0.64	0.475	0.222	0.329	0.602	1	0.629	0.581	-0.307	0.0
Q12	0.184	0.566	0.096	0.358	0.504	0.692	0.44	0.25	-0.257	0.29	0.629	1.0	0.741	-0.381	0.139
Q13	0.127	0.466	0.132	0.224	0.455	0.617	0.29	0.247	-0.289	0.44	0.581	0.741	1.0	-0.291	-0.095
Q14	-0.116	0.188	0.02	-0.35	0.173	0.421	0.194	-0.029	0.24	-0.22	0.307	-0.381	0.291	1.0	0.421
Q15	0.191	-0.05	0.063	-0.31	-0.08	0.177	-0.07	-0.03	0.128	0.158	0.0	-0.139	-0.1	0.421	1.0

Interpretation

Inter-term correlation shown in Table 3 was calculated to determine the internal consistency reliability. The inter-item correlation matrix highlights the connection and the linkage between the various elements and questions posed to the survey participants and the correlation between the various aspects covered in the study. A test or questionnaire is evaluated to see if each item on the test or questionnaire gives consistent, appropriate results; different

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items that assess the same general construct of the idea are contrasted with knowing if they share similar effects.

ANALYSIS AND DISCUSSION

Analysis of the Background of Responders

From the data we collected from 50 first responders, it is evident, especially from the chart given in Table 4, that people from a wide variety of industries have taken part in our survey; this will increase the accuracy of our result and help frame a better conclusion. About 17 of the 50 responders belong to the IT industry, which stands at about 34% and is the single largest sector in the study, followed by technical, education, and finance. Some of the top companies from which the responders belong are Apple, Cognizant, TCS, Goldman Sachs, (PWC, 2018) and many more. From the inspecting chart below, it can be inferred that most of the surveyed respondents belong to a technical background hence are aware of the emerging technologies in their respective fields.

Table 4
BACKGROUND OF RESPONDERS

Industry of Experience	Percentage of Responders
Information Technology	34%
Finance	12%
Education	12%
Museum/ Science Communication	12%
Technical	10%
Marketing	6%
Manufacturing	4%
Pharmaceutical	2%
Law	2%
Retail	2%
Manufacturing	2%
Retired at present	2%

Development of AI as a Recruitment Tool

According to our survey, AI was used/rarely used in the industries to which our responders belong. Figure 2 confirms its validity for almost 62% of our responders. It can quickly be concluded, that AI doesn't have much meaningful use as a real-time recruitment tool, but that will not stay for long. Among the fifty professionals we surveyed, 76% of them believe that AI is on the verge of making headways within the next five years, as is evident from Figure 3. It will have a significant responsibility in as a recruitment tool for hiring new talent in most organizations in the future.

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FIGURE 2
RESPONSE TO QUESTION 1

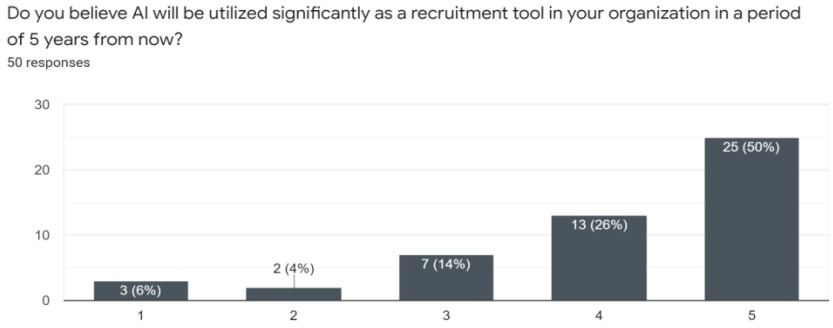

FIGURE 3
RESPONSE TO QUESTION 2

H_1: *AI has improved the general experience during hiring cycle by reduce its duration.*

Table 5
QUESTIONS AND RESPONSES FOR HYPOTHESIS 1

	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Do you agree that talent acquisition function in your organization is standardized and at par with other organizations?	22%	60%	10%	4%	4%
2.	Usage of AI tools will improve candidate experience for higher age groups during the hiring process?	10%	60%	26%	2%	2%
3.	Does your organization use Big Data in software like Application Tracking System to identify potential candidates for the organization?	30%	20%	18%	12%	20%
4.	Do you agree that usage of AI tools will help fill open positions faster?	36%	52%	8%	2%	2%
5.	Do you believe that implementing AI as a recruitment tool will be user friendly for all candidates?	18%	56%	20%	4%	2%

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Does your Organization use Big Data in Software like Application Tracking System to Identify Potential Candidates for the Organization?

AI has improved the general experience of the hiring cycle and has been able to significantly reduce its duration, thereby reducing the expenses in this process, increasing the organization's revenues, and diverting the workforce where it is required to a greater extent. From Table 5, almost 50% of our responders agree/strongly agree that their respective organization uses Application Tracking Systems (ATS) and other big data software to fasten the process of recruitment. On greater analysis, the majority of the 50% responders belong to the IT industry, which is quite natural due to the greater technological penetration in that industry.

Do you Agree that Usage of AI Tools Will Help Fill Open Positions Faster?

In Table 5 given above, 88% of our responders agree that AI tools will help fill open positions faster than human effort in the recruitment cycle. This proves that professionals across almost all service sectors consider AI as an efficient recruitment tool and hence verifies our hypothesis, stating that "*AI has improved the hiring cycle by reducing hiring duration*." By filling up open positions faster and avoiding unnecessary delay, it improves the general experience of the job applicant, which makes them more confident.

Do you believe that Implementing AI as a Recruitment Tool will be user-friendly for all Candidates?

From our survey question in Table 5, around 74% of the responders agree/strongly agree that AI as a recruitment tool will be user-friendly for all candidates, which verifies our hypothesis that AI improves the hiring cycle by elevating the candidate experience in the hiring cycle.

H_2: *AI has substantially reduced the cost and error in the hiring cycle*

Table 6
QUESTIONS AND RESPONSES FOR HYPOTHESIS 2

Sr. No	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	I consider myself knowledgeable about using artificial intelligence (AI) for talent acquisition.	6%	50%	24%	16%	4%
2.	Do you believe the usage of AI based recruitment software will add to the ambiguity as to why a given applicant was selected or rejected by the system?	10%	36%	18%	30%	6%
3.	AI recruitment tools and machine learning will complement human recruiters in the long term.	6%	68%	14%	6%	6%
4.	Cost benefit from efficient functioning of the AI recruitment tool will outweigh its cost of introduction and implementation?	34%	48%	12%	4%	2%

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I consider myself knowledgeable about using Artificial Intelligence (AI) for Talent Acquisition

From all of the respondents who answered the question as shown in Table 6, it is evident that HR recruitment professionals are pretty much aware of the introduction of artificial intelligence to hiring and are also cognizant of its usage and application. Going deeper into analysis, 50% (25) respondents stated that they were confident about how to use AI as a recruitment tool; however, only 6% of the total respondents strongly agreed, which symbolizes that they are not very confident in their skills of handling AI as a recruitment tool. Suppose the people handling the AI are in cognizant of its operation. In that case, it will exponentially enhance the AI's accurate and error-free decision-making ability while removing any chances of errors from human judgment or handling, which verifies our hypothesis. The lack of training and technological readiness is expected to pose a significant challenge in adopting AI as a recruitment tool. On that, AI is expected to replace the primary tasks of the HR managers, which will, in turn, interfere with managers' authority and the organization's outcomes. Despite these factors, HR managers are willing to adapt to the change for the organization's benefit (Praveen & Krishnan, 2021).

Do you believe the usage of AI-based Recruitment Software will add to the Ambiguity as to why a given Applicant was Selected or Rejected by the System?

From the Table 6 even though the single largest group of responders agree that AI will not add to the ambiguity to the recruitment process there is a significantly large group of 15 individuals amounting to 30% of the responders who believe that AI will add to the ambiguity to the recruitment process by not being able to give proper justification as to why a job applicant was rejected or accepted.

AI Recruitment Tools and Machine Learning Will Complement Human Recruiters in the Long Term

The responses in Table 6 suggest that almost 68% or 34 professionals agree that AI can replace human recruiters as a recruitment tool. This strong belief stems from the error-free decision-making ability of AI recruitment tools and its highly cost-effective nature, which enhances its efficiency far more than its human counterpart. This substantiates our hypothesis stating AI as a cost-effective and error-free recruitment tool.

Cost-Benefit from Efficient Functioning of the AI Recruitment Tool Will Outweigh its Cost of Introduction and Implementation?

Currently, many industries consider the usage of AI intelligence in any activity as a costly procedure. The cost of setting up servers and other equipment might be quite expensive. Still, they must understand that the amount of money that will be saved from the efficient functioning of the AI as a recruitment tool added to the revenue growth coming from the proper diversion of manpower from activities like recruitment to other essential activities outnumbers its cost of introduction. This can be easily understood from Table 6, wherein 34% of professionals strongly agree, and 48% agree with our point of view.

H_3: *AI has enhanced the Person Job (PJ) Fitness through superior screening*

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Table 7
QUESTIONS AND RESPONSES FOR HYPOTHESIS 3

Sr. No	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Do you agree that usage of AI tools for recruitment will improve the ability to identify candidates with needed competencies?	36%	50%	10%	2%	2%
2.	Making recruitment automated helps the organization access a larger talent pool.	38%	44%	12%	4%	2%
3.	Do you believe that AI-enabled applicant screening system can be inaccurate and unreliable in certain cases?	12%	28%	36%	24%	0%
4.	AI might miss out on detecting certain intangibles like soft skills, cognitive abilities of candidates.	22%	58%	18%	2%	0%

Do you agree that the usage of AI Tools for Recruitment will improve the Ability to Identify Candidates with Needed Competencies?

In the current scenario, it is difficult for both recruiters and job applicants as they both have to go through irrelevant profiles and jobs respectively to get their perfect applicant or job. Here, artificial intelligence can set a job search preference with relevant job descriptions as required by the recruiters. A very similar algorithm can be applied by both the recruitment professional and the job applicant to consider soft skills, hard skills, job roles, education, etc.
According to our survey in Table 7, 36% of the people strongly agree, and another 50% agree that artificial intelligence will significantly hasten hiring people with needed competencies depending on the positions open for recruitment and hire far more qualified individuals with very little error. While 10% of people are neutral, it is essential to note that only 4% strongly disagree/ disagree with it, which strengthens our hypothesis. AI will be able to identify the perfect person with the required academic qualifications, work experience, and skills for the right job vacancy that is available.

Making Recruitment Automated helps the Organization Access a Larger Talent Pool

The manual recruitment process by HR professionals highly restricts the capability to hire from a much larger talent pool. However, automation of this process allows the AI to go through numerous applications faster. Moreover, the job vacancy can be advertised on various platforms as the AI deems necessary, giving access to a much larger population. From Table 7 it is evident that 36% of our respondents strongly believe it to be accurate and another 44% agree with us, which outnumbers the opposition significantly. If the organization is able to access a larger talent pool, it will be the probability of finding a more suitable person for a particular job improves a lot, finally enhancing the PJ Fitness of the organization's employees.

After doing statistical analysis and in-depth discussion on the impact of AI on the process of employee recruitment, we have been able to come to a conclusion that the role of AI in the hiring cycle is going to make headways in the upcoming decades and will end up boosting work productivity for not only its current employees but also for its new applicant. The AI recruitment tools will work in coordination with the organization's HR managers, which will reduce cost, save time, and improve the quality of the new hires.

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The following section concisely summarizes the facts that were discussed in this dissertation:

1. AI has improved the general experience during the hiring cycle by reducing its duration: Numerous hiring managers believe that manually handling talent acquisition tasks can hamper business productivity and affect the quality of new hires. The increase in overall workload also affects the morale of the hiring managers. Hence if the workload can be distributed to AI recruitment tools, it will boost the functional ability of the HR professionals and increase productivity and general experience. This automated hiring procedure also speeds up the hiring cycle hence boosting the confidence of new applicants on board and evens saving time for those candidates who have been rejected. More importantly, artificial intelligence in recruitment can effectively digitize repetitive activities, reduce inefficiencies of the hiring cycle, finally free up the time of the HR professionals to focus on other activities like improving candidate engagement and networking with important individuals holding key positions.
2. AI has substantially reduced the cost and error in the hiring cycle: AI recruitment tools significantly reduce the cost and boosts company revenues. Recruitment contributes to the significant workload on HR professionals; when this responsibility is handed over to AI-based recruitment software, it relieves them of their duties. Those professionals can divert their focus to other activities that can boost its revenue. Furthermore, an AI tool dramatically reduces human errors in the recruitment process and brings greater consistency into the hiring cycle. With the advent of new technologies, HR managers deploy new data analytics techniques and employ strategies that can identify the reasons that contribute negatively to candidate engagement and remove those components from the hiring cycle.
3. AI has enhanced the Person Job (PJ) fitness through superior screening: AI recruitment tools deploy competence-based job profiling wherein the AI tools don't just focus on the qualifications of a person applying for the job, but also on the practical skills that the applicant has gained over the years especially via formal/informal experience. Vulnerable groups like immigrants and refugees often miss out on potential job opportunities due to a lack of proper certification. Manual recruiters often miss the aforementioned skill sets, which does not happen when AI does it. Furthermore, adequate skill and psychometric analysis identify skills from the job applicant that they might not be aware of, hence it is incredibly beneficial. Once all the analysis has been completed, the AI tools can sort the candidate into a department that suits them based on their standard skillset.

With the rapid introduction of artificial intelligence into the business environment, the recruitment and selection of job applicants will gradually, with time, incorporate more AI-based software to automate the entire procedure. AI holds the possibility to provide more solutions for the talent acquisition department of any industry and optimize its efficiency by removing the repetitive tasks that the HR managers had to do by themselves. Artificial Intelligence application tools in new job recruitment will continue to develop more and more in the upcoming decades and impact the recruitment and job selection cycles to an even greater extent (Jennifer & Senja, 2019).

Impact on Practitioners and Recruiters

The HR managers are quite optimistic about the change in the hiring cycle. It is supposed to reduce a significant amount of workload from over their shoulders and focus on other essential responsibilities. From what is evident from the survey, the professionals are pretty confident they will undoubtedly be able to adapt themselves by learning about the functionalities of AI recruitment tools and educating themselves regarding the operation of such devices and tools.

Also, the fact that AI tools improve the PJ fitness of new hires implies that the organizations shall get better quality of job applicants and new employees convinces the hiring managers of the success of AI as a recruitment tool (Bridget, 2019).

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CONCLUSION

AI in recruitment employs machine learning algorithms like supervised/ unsupervised learning wherein it has to go through years of historical data to learn its purpose; hence there is a high chance that it might inadvertently pick up discriminatory procedures based on race, ethnicity, religion, from behavioural patterns of previous HR managers.

Our research work shows that there is a growing concern among bot job applicants and recruiters that AI recruitment tools might fail to judge the applicants based on their essential soft skills, which are crucial and other necessary skills that require a human presence to understand. Also, people of higher age groups might have difficulty adjusting to the fast-improving technological advancements, but people are quite optimistic about it.

Adding to that, costing is also an essential factor in introducing artificial intelligence. The small and medium scale industries do not have a sufficiently large budget to be able to afford AI as a recruitment tool; hence it is necessary for the pricing for servers, supercomputers, etc. to come down before a wide-scale application.

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