

**Effect Of AI on Modern Day Human Resources Recruitment Processes****Author:** Bharat Singh Sengar, Khushboo Jha, NDIIT**Corresponding Author:** Asst. Prof. Zofail Hassan, NDIIT, New Delhi  
(An AICTE approved institute)***Introduction –***

Due to the usage of artificial intelligence in recruiting in 2018, millions of people's social media profiles became inaccessible to human recruiters. While this information isn't included in traditional resumes, recruiters may have a better understanding of a candidate's values, perspectives, and attitudes by looking at their social media presence. AI technology helps businesses find fresh talent by allowing them to use people who have already been verified and proven by screening the current pool of applications. Due to AI's objectivity, recruiters are relieved of tedious and time-consuming tasks like application screening. AI is accelerating the hiring process, which increases productivity. AI-powered chatbots that can converse with candidates and engage them in the hiring process may be used to facilitate conversations with candidates. The AI recruitment software assigns candidates a score based on their credentials, experience, and talents, and then determines whether to recommend them or not. AI-powered web and mobile applications simplify the hiring process for job searchers. Chatbots employ emails and text messages for real-time communication. Instead, it provides recruiters with knowledge of the applicants' prior employment and educational background. Also, traditional sourcing strategies like job applications and printed materials are being replaced by online resources and e-recruitment, where the variation in the applicant's accessibility capacity is drastically decreasing. Also, traditional sourcing strategies like job applications and printed materials are being replaced by online resources and e-recruitment, where the variation in the applicant's accessibility is drastically decreasing (Bartam 2001 Lee 2005).

Human resources (HR) are one of an organization's most important assets when it comes to its capacity to grow, compete in the market, and transform itself through innovation. Businesses compete for the best personnel as a result by investing a lot of time, money, and effort in finding and keeping them. The process of finding the best candidate to fill a position starts with an evaluation of the job requirements, then an announcement of the opening, followed by the screening and selection of candidates, and finally the hiring and welcoming of the newly hired staff. AI-based solutions are being employed in HR and recruiting to address issues of the future.

***Human Resource –***

An organization's human resources are the group of people who work there. They can also refer to a company's human resources as its human capital. Human capital, or the knowledge and abilities that an individual possesses, is a more specific term. Manpower, labour, personnel, colleagues, or simply "people" are comparable concepts.

The responsibilities include organising resumes and job applications, scheduling interviews, assisting in the process, making sure background checks are done, and planning, recruiting, and selecting the right candidates. Another role is payroll and benefits administration, which include tracking holiday and sick time, auditing payroll, and taking part in benefits activities like claim resolution, benefits statement reconciliation, and invoice payment approval. Moreover, HR manages programmes and activities related to employee relations, including but not limited to employee counselling. The final task is routine maintenance, which involves keeping employee benefits and employment status current, executing payroll/benefit-related reconciliations, and ensuring that the present HR files and databases are up to date.

### ***Impact Of AI Tools in HR –***

#### **1. Increased Efficiency**

For every industry, AI developers have produced products. Your HR managers will rapidly discover that they can manage their processes more effectively and thus spend less time on each individual activity with the correct gear. Quality won't be sacrificed for quickness. On the contrary, workers will produce more work with more accuracy.

#### **2. Competitiveness**

Keeping up with the competition these days is challenging. To have a chance, you need the appropriate procedures and equipment. You need to be certain that the strategies you're using to attract, engage, and hire the right talent are maximising your likelihood of success in an era where hundreds of businesses are vying for a small number of employees.

#### **3. Increased Engagement**

Eliminating the most difficult and boring jobs from the daily grind is one of the main purposes of artificial intelligence. Your employees will suddenly find the time to attend to what is important, what is intriguing, and what brings them the greatest satisfaction each day after you implement AI-based solutions in your workplace, increasing employee engagement across the board.

#### **4. Reduction in usage of Time and Money**

There is more to artificial intelligence than just output. What you can save is also important. True, many HR solutions are not the cheapest, but once you start using them, you can anticipate large savings, guaranteeing a favourable return on investment. If nothing else, AI relieves your staff of tedious jobs, allowing you to automate formerly manual processes and save time and money.

### ***Standard Recruitment Process –***

Edwin B. Flippas described Recruitment as the process of looking for discovering and encouraging prospective workers to apply for a position inside a business. It is one of the most important HR practises to follow to guarantee that the ideal candidate is selected and has a positive impact on the business. If a mistake is made during this phase, it could cause serious financial and economic impact. According to researchers, continuous monitoring of recruiting activities may contribute to improving the process' overall quality.

In the past, recruitment efforts were not centred on a particular model. The most frequent foundation for recruiting activities was the viewpoint of potential employers or applicants. During the hiring process, it was found that all recruiters followed a similar set of procedures. Some of the most common stages in the hiring process include the following:

- The process of filling the vacancy.
- The ideal personal qualities and the job description should be spelled down beforehand.
- Selecting and evaluating qualified applications from a pool of candidates.
- Interviewing a smaller pool of prospects after screening them.
- Choosing wisely and hiring the appropriate person.

In addition to taking time and money, these laborious procedures are fraught with bias and human error. Nonetheless, it has been argued and refuted that there is no one approach that guarantees the best hiring. It all comes down to the environmental analysis, whatever the conditions. A new model was created by innovating the first four stages of the recruiting process.

### ***Modern-Day or Digital Recruitment Process –***

In the digital industrial environment, new technologies like IoT, big data, and AI have changed how recruitment and other HR tasks are conducted. 4.0 Artificial intelligence (AI) describes a software or hardware system that has the ability to reason like a person and make decisions based on inputs. Although some AI-enabled tools, like voice and facial recognition, are currently in use at work, their usage in human resources is still in its infancy. AI is reshaping the connection between employers and applicants. Thanks to AI technologies like Chatbot, candidates interact with organisations in a novel and improved way. Other AI-infused applications can be used to evaluate candidates, organise interviews, verify references, and send job offers automatically. Only 10% of businesses are already using AI in a high context, but this percentage is expected to increase to 36% soon.

### **RATIONALE OF THE STUDY**

When it comes to recruiting artificial intelligence is making TAs lives easier by automating a variety of time-consuming processes. Establishing and upgrading common job matching procedures and shortening the time it takes to screen recruit and on-board new employees.

### **LITERATURE REVIEW**

1. (Albert 2019) under the title study (“AI in Talent 1. Acquisition: A Review of AI-Applications Used in Recruitment and Selection.”) Stated that the daily lives of the people have been impacted by AI technology in a variety of ways. When compared to how it was how it will be or how it is viewed technology and its innovations have touched every corner of the globe among people from the use of cell phones keyboards to voice-enabled assistants in tabs and computers. When it comes to health financial services & safety services schooling and governance—industries where AI may be used for the benefit of the nation as a whole—exploitation can occur. However artificial intelligence (AI) has almost reached every industry

2. (Breugh 2008) under the title (Employee recruitment: 2. Current knowledge and important areas for future research) has an aim to identify the appropriate candidate at the right time a human resources manager may use a larger number of candidates or a wider range of sources in the recruiting process. We use a variety of methods to locate and hire the best people to fill the open positions. The efficiency of an organization's recruitment efforts is determined by the organizations use of various techniques and processes which may be classified as either an internal or an external element. In order for the hiring process to be effective candidates must be stimulated and selected based on their demonstrated ability to do the job well. The use of personalized information data and sources when doing recruiting activities is more successful.

3. (M, 2018) under the study (HR New Digital Mandate." 3. Global Management Consulting Firm | Bain & Company) stated the growth of Facebook recruiting job applicants will have a clear image of what they're looking for while searching for a potential employment. As a result, recruiters will have a better understanding of who they should be looking out for. In order to find the best match between an applicant and a firm Facebooks Career Pages can assist. As an example, Earls a casual dining restaurant in North America has used a Facebook recruitment campaign since it enabled them to express business rules processes and cultures to prospective workers through the social network. They also noted that Twitter and LinkedIn were not as effective for recruiting new employees as Facebook was.

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5. (Khosla, 2016) under the study (Artificial Intelligence 8. Chat boats Are New Recruiters.") Stated that it is undeniable that artificial intelligence (AI) plays a critical role in optimizing recruitment techniques. Artificial intelligence (AI) solutions relieve the load of tedious and time-consuming repetitive processes like sourcing and screening applications. As a result of this leverage, the cost of hiring will be greatly reduced, as well as the quality of recruitment. Furthermore, AI will increase transparency in the recruiting process, reduce human biases, and improve job seekers' opinions of companies, hence improving firms' image and brand.

## **RESEARCH METHODOGY**

### **Objectives of the Study**

1. To Identify AI tools used in the process of R&S of consulting sector.

2. To find out the effectiveness of identified AI tools in R&S process.

#### **HYPOTHESES OF THE STUDY**

- Hypothesis: 1
- Ha: There is a positive relationship between recruitment and selection and the use of AI tools.
- H0: There is no positive relationship between recruitment and selection and use of AI tools.
- Hypothesis:2
- Ha: There is a significance ease of use of AI in the process of recruitment and selection.
- H0: There is not a significance ease of use of AI in the process of recruitment and selection.
- Hypothesis:3
- Ha: There is a positive relationship between effectiveness of AI tools and its measurable parameters in recruitment and selection
- H0: There is a negative relationship between effectiveness of AI tools and its measurable parameters in recruitment and selection.

#### ***Research Design –***

Quantitative (survey) methodologies, as well as exploratory and descriptive methods, are used in the study. A well-structured survey research study may collect data more effectively and efficiently than a rushed survey. Exploratory research is a type of investigation that tries to provide you a theoretical or speculative understanding of the study topic. Descriptive research focuses on the study topic's what, when, where, and how rather than the why. Open-ended questions do not provide the set of answers, as participants have to put response by themselves.

#### **DATA COLLECTION TECHNIQUE**

The main technique of data collection will be a descriptive research design, with a questionnaire serving as the medium, exactly as it did in the study. The question would be tailored to the respondents' degree of understanding of the study's findings. Secondary data will be collected using the exploratory study design, which will entail looking through publicly available research papers, scientific journals, and books.

#### **EXAMINIG METHOD**

Primary research sources – This is the primary data source for a research project, as well as a questionnaire – Survey (Question/Answer) approach, Form-Filling, and Observation. Secondary sources of data - Online portals, newspapers, journals, and magazines are some examples of secondary data sources for market and consumer segmentation information.

#### **Analysis and Interpretation**

Reliability Test of Analysis

Reliability Statistics	
Cronbach's Alpha	N of Items
.735	20

Cronbach's Alpha reliability test was used to see whether the variables were internally consistent based on the data obtained. As long as Cronbach's Alpha is larger than 0.7, the data acquired is credible and consistent, allowing for further investigation.

### Chi-Square Test of Analysis

Table:1 Chi-Square between recruitment and selection and the use of AI tools

Recruitment and selection and selection and the use of AI tools. Crosstabulation							
Count		Selection and the use of AI tools					Total
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
Recruitment and selection	Strongly Agree	65	30	10	15	0	120
	Agree	25	30	20	8	5	88
	Neutral	15	15	10	5	5	50
	Disagree	0	2	0	4	0	6
	Strongly Disagree	10	0	0	0	0	10
Total		115	77	40	32	10	724

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	50.188 <sup>a</sup>	16	.000
Likelihood Ratio	48.591	16	.000
Linear-by-Linear Association	23.609	1	.000
N of Valid Cases	215		

17 cells (68.0%) have expected count less than 5. The minimum expected count is .01. The Chi-square value for examination of hiring and selecting processes as well as the application of AI technologies at the 0.01 level is (2= 49.188, p= 0.001).

- Ha: The usage of AI techniques and recruitment and selection have a good link.
  - H0: The usage of AI techniques and recruiting and selection do not have a good link.
- Given that the value of p = 0.05 in the above table, it is clear that the null hypothesis is rejected and the alternate can be chosen.

### Correlation Test of Analysis

Table:2 Correlation between ease of use of AI tools in R&S process and its impact on recruiters and agencies

Correlations			
		Impact on recruiters and agencies	Ease of use of AI tools in R&S process
Impact on recruiters and agencies	Pearson Correlation	1	.338**
	Sig. (2-tailed)		.000
	N	215	215
	Pearson Correlation	.338**	1

Ease of use of AI tools in R&S process	Sig. (2-tailed)	.000	
	N	215	215

\*\* . Correlation is significant at the 0.01 level (2-tailed).

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	18.941	4	4.488	6.183	.000 <sup>b</sup>
	Residual	155.152	205	.726		
	Total	160.102	200			

a. Dependent Variable: Effectiveness of AI tools

b. Predictors: (Constant), measurable parameters in recruitment and selection: [quality of hire], [Applicant satisfaction], [Recruitment planning and strategies], [cost per hire]

The correlational value for the Correlation between AI tools' usability in the R&S process and its effect on recruiters and agencies is positively correlated at the 0.01 level, with the value being (r=0.338, p=0.001). This asserts a strong positive association between the employment of AI tools in the recruitment and selection process and its effects on hiring managers and agencies.

We shall reject the null hypothesis and accept the alternative hypothesis since the correlation coefficient between the ease of use of AI technologies in the R&S process and its impact on recruiters and agencies is p0.05.

### Regression Test Of Analysis

Table:3 Regression between effectiveness of AI tools and its measurable parameters in recruitment and selection

#### ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	18.941	4	4.488	6.183	.000 <sup>b</sup>
	Residual	155.152	205	.726		
	Total	160.102	200			

a. Dependent Variable: Effectiveness of AI tools

b. Predictors: (Constant), measurable parameters in recruitment and selection: [quality of hire], [Applicant satisfaction], [Recruitment planning and strategies], [cost per hire]

The effectiveness of AI tools is the dependent variable and its quantifiable parameters in recruitment and selection are the independent variable. The regression value for the regression between effectiveness of AI tools and its measurable parameters in recruitment and selection is 18.941 at 0.001 level.

Ha: AI tool effectiveness and its quantifiable characteristics in hiring and selecting candidates have a positive association.

H0: The effectiveness of AI tools and its quantifiable characteristics in hiring and selecting have a negative relationship.

The ANOVA table indicates whether or not the model fits the data well. As the null hypothesis is rejected by significance value ( $p$ )0.05, there is a positive impact of AI tool efficacy on the quantifiable parameters of recruiting and selection.

#### **Results from Chi- Square Test of Analysis:**

Chi-Square 1: The Chi-square value for examination of hiring and selecting processes as well as the application of AI technologies at the 0.01 level is ( $\chi^2 = 49.188, p = 0.001$ ).

Results from Correlational Test of Analysis:

Correlation table 2: The correlational value for the correlation between AI tools' usability in the R&S process and its effect on recruiters and agencies is positively correlated at the 0.01 level, with the value being ( $r = 0.338, p = 0.001$ ). According to this, there is a strong positive association between the employment of AI tools in the R&S process and how it affects recruiters and agencies.

#### **Results from Regression Test of Analysis:**

Regression table 3: The effectiveness of AI tools is the dependent variable and its quantifiable parameters in recruitment and selection are the independent variable. The regression value for the regression between effectiveness of AI tools and its measurable parameters in recruitment and selection is 18.941 at 0.001 level.

#### ***Conclusion -***

The concluding section makes it apparent that as technology has developed, business processes have undergone considerable modifications. Big data cloud computing, the Internet of Things (IoT), cyber security, nanotechnology, robots, and artificial intelligence (AI) are a few of these. These technological advancements have led to both new career opportunities and job losses. Industry 4.0's cutting-edge breakthrough of artificial intelligence (AI) enables robots to emulate human intelligence.