ARTIFICIAL INTELLIGENCE IN E- RECRUITMENT – AN EMPIRICAL STUDY ON IT SECTOR

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Abstract

In today's cutthroat business environment, success in any sector demands attracting and retaining top talent to help achieve the organization's goals. Presently, all of them are at the beginning of the Fourth Industrial Revolution. To thrive in today's information economy, businesses of all sizes are always on the lookout for new talent. Organizations that have a solid recruiting plan in place will be able to hire the right people to handle the challenges of today's rapidly evolving digital and business landscape. Artificial Intelligence (AI) has become the buzzword of the 21st century thanks to its widespread use in today's dynamic and competitive corporate environment. Primary data was obtained from 250 IT job applicants in several cities including Bangalore, Hyderabad, Chennai and Delhi to do research on the use of AI to online hiring. The hypothesis that NLP has any connection to the recruiting process is explored. Natural language processing, labour force and automation factors were shown to have a statistically significant association.

Keywords: Artificial intelligence, human resource management, recruitment, Talent acquisition

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1. Introduction

In order to thrive in today's information economy, businesses need to continually create and implement novel strategies. The use of fewer people and more machines in manufacturing is a direct result of technological progress. As a result, businesses must invest in staff training for operating computers, software and any other types of technology used in the workplace. Now more than ever, businesses are looking for ways to hire great individuals via strategic recruiting. Soon after John McCarthy (1950) released a paper titled "Computing Machinery and Intelligence," he created the term "Artificial Intelligence" to describe the emerging field. The field of computer science known as Artificial Intelligence (AI) focuses on finding solutions to problems with the help of symbolic programming and it has rapidly advanced into a fully- fledged scientific discipline with wide-ranging applications in fields such as business, medicine and engineering. Computer-based analysis, learning and interpretation of data are the focus of artificial intelligence research. A technique is a way of explaining something and its mathematical counterpart is a theorem. Numerous topics are connected to artificial intelligence, including statistics, machine learning, pattern recognition, clustering and similarity based techniques. Artificial Intelligence is a thriving technology that has many practical uses. Recently, unique and inventive applications of this potent technology have been discovered by the IT sector, allowing it to contribute to the resolution of some of the most pressing issues confronting the sector at now. The term "Artificial Intelligence" (AI) is often used in the IT industry to describe the application of programmed algorithms to problems that would otherwise need human reasoning.

Artificial Intelligence (AI) is an impressive example of how rapidly technology is developing. The term "Artificial Intelligence" (AI) has many distinct meanings and interpretations since it is used in so many different contexts. It has been designed to think and behave (logically) like a human person. The following definition of AI is broad enough to include any computer or technology that can learn and solve a problem with the same efficiency and effectiveness as a human. Artificial Intelligence (AI) refers to technology that mimic human intellect but the definition, benefits and applications of AI are considerably more diffuse and difficult to pin down.

Management, finances, operations and human resources are just some of the areas of business that have been revolutionized by the widespread use of electronic communication and the development of sophisticated technology tools and artificial intelligence-based systems. As a result of its efficiency and effectiveness in filling open positions as well as its cost-effectiveness and other long-term advantages, electronic recruiting and electronic-based HR operations have become commonplace. There are several ways in which businesses may save money and improve quality thanks to the development and widespread use of AI-based operations (Breaugh, 2013).

John McCarthy known as the "founder of AI," previously described AI as the "science and engineering of developing intelligent machines, notably clever computer programmes." AI mimics human intelligence in many ways, including its ability to learn and adapt as well as its ability to recognize and fix errors. AI is "the science and engineering of building intelligent robots," as defined by the man who first used the phrase, John McCarthy, in 1956. It's a robotic system, which is computer-enabled, and it's programmed to learn, make choices, and solve issues in the same manner that humans in an organization do. Artificial Intelligence (AI) is the study of how computers can "think" like humans.

2. Review of Literature

Kestenbaum(2018), The executive director of New York's talent-acquisition technology consultancy Talent Tech Labs agrees that human resources professionals may worry about AI's potential effects on their jobs at first. However, he argues that the use of AI software may alleviate HR's continuing problems by doing away with tedious activities and time-consuming data processing.

Rao (2020) Ultimately, it is the human resource manager's job to locate the most qualified applicant at the most opportune moment and they may need to broaden their search to do so. We would use a variety of channels to locate and place the most qualified applicants available for the open positions. The relative importance of the internal and external elements in recruitment relies on the specific procedures and processes used by each individual business. Successful recruiting involves generating interest amongst a pool of qualified candidates and narrowing that pool down to only the ones most equipped to do the job. The recruiting process is bolstered by the creation and distribution of tailored information, data and resources.

Sharmila (2021) to investigate the link between

HRM and AI at a few Delhi-based IT firms. To verify their hypotheses, the researchers used a multiple regression analysis which confirmed a significant positive correlation between AI and HRM capabilities. The research found that AI plays a crucial role in various HR processes, and that widespread use of this technology in the workplace will boost the effectiveness of HR operations generally.

A. Bhargava et al (2018) used the title "Artificial Intelligence and the Future of Work: Human- AI Symbiosis in Organizational Decision Making" for his research paper. Researchers emphasized AI's positive effects on society in their studies. Decision making, coping with ambiguity and notably ambivalence in decision making within an organization have all benefited from the use of artificial intelligence. Humans continue to play a crucial part in many fields and technology must rely on humans when making subconscious choices is necessary for evaluating and facilitating results.

James Elexrow (2021) looked at how AI is now being used in the selection and employment of new employees (R&S). The study looked specifically at the employment process and how and where AI technology may be used. Surprisingly, research shows that despite the widespread interest in AI, few businesses are really making investments in AI tools for HR purposes.

Kumar (2019) with capital expenditures taking the place of labour costs, automation improves the overall efficiency of businesses. However, employees need ongoing training to keep up with the latest developments in the automation industry. Mechanization's final impact was the expansion of the labour force and the enhancement of preexisting positions.

No empirical research on the effect and connection between AI adoption and workplace reputation has been found by the investigator. This study builds on earlier research to assert that the use of AI in businesses has an effect on the recruiting practices of such businesses. Among the first studies of its kind, this one tries to conduct an in-depth empirical analysis of e- recruitment in the information technology industry.

Objectives of the study

- To understand how AI capabilities affect hiring in the IT sector.
- To examine the usage of artificial intelligence in the IT industry today.

Statement of Hypothesis

H1: There is no relationship between recruitment and Natural language process.H2: There is no relationship between recruitment and workforce.
H3: There is no there is a relationship between recruitment and automation.

3. Research Methodology

Convenience sampling was utilized to compile the sample of job-seekers interested in working in the field of artificial intelligence recruitment in the IT sector. Primary information gathered by use of a predetermined questionnaire. There were 300 valid replies from 250 questions. Major cities including as Bangalore, Hyderabad, Chennai and Delhi were all included in the distribution of the questionnaires. In order to analyze the data, we employed an ANOVA, a chi-square test and a correlation. The rating system ranges from 1 to 5 with 5 being the highest rating.

Data Analysis and Interpretation

Those polled were asked to rate the effectiveness of various technologies in fostering happinessamong those looking for work. There are primarily four criteria employed in analysis.

- Recruitment
- Methods of language development
- Workforce
- Automation

Table 1. Demographic Profile

Factors	**Frequency**	**Percent**
	Gender	
Male	179	71.6
Female	71	29.4
	Age	

18–30	120	48.0
31–40	45	18.0
41–50	49	19.6
51–60	36	14.4
	Marital Status	
Single	155	62.1
Married	95	37.9
	Qualification	
Graduate	93	37.2
Post Graduate	122	48.8
Any other	35	14
	Experience	
Less than 5 Years	139	55.6
5–10 Years	78	31.2
10–15 Years	22	0.88
15–20 Years	11	0.44

Source: own calculation

Table 1 presents the frequency data from the Respondents' Demographic Profile. The majority of the 250 responders (71.6%) are male, while 28.6% are female. In terms of age distribution, over half (48%) fall somewhere between the ages of 18 and 30. The data also shows that although 37.9% of respondents are married, 62.1% are single. 48.8% of the respondents are post graduate and 37.2% are Graduates.

Table 2 E - Both hiring and the natural language processing

Correlation				
			Recruitment	Natural language process
	Recruitme nt	Correlation Coefficient	1.000	.922**
		Sig. (2-tailed)	.	.000
		N	250	250
	Natural language process	Correlation Coefficient	.922**	1.000
		Sig. (2-tailed)	.002	.
		N	250	250
**. The 0.04 level of significance for correlation (2-tailed).				

Source: Own Calculation

Table 2 suggests a significance level of 0.00, which is lower than the necessary threshold of 0.05 and hence more likely to be due to chance. Therefore, the NLP and the recruiting process are related.

Table 3 E- Recruitment and Workforce

Correlation				
			Recruitment	Workforce
Spearman's rho	Recruitment	Correlation Coefficient	1.000	.820**
		Sig. (2-tailed)	.	.001
		N	250	250
	Work force	Correlation Coefficient	.820**	1.000
		Sig. (2-tailed)	.000	.
		N	250	250
**. The 0.02 level of significance for correlation (2-tailed).				

Source: Own Calculation

The significance level of 0.04 is less than 0.05 and less than the critical value of 1 as shown in table 3. In this case, the null hypothesis was disproved, and the alternative hypothesis was accepted. As a result, recruiting affects the size of the working population.

Table 4 E- Recruitment and Automation

Correlation				
			Recruitment	Automation
Spearman's rho	Recruitm ent	Correlation Coefficient	1.000	.883**
		Sig. (2-tailed)	.	.001
		N	250	250
	Automation n	Correlation Coefficient	.883**	1.000
		Sig. (2-tailed)	.000	.
		N	250	250
**. The 0.01 level of significance for correlation (2- tailed).				

Source: Own Calculation

The value of 0.01 in table 4 is considered to be statistically significant since it is less than 0.05 and also less than the crucial value of 1. In this case, the alternative hypothesis was accepted and the null hypothesis was rejected. So, it follows that automation and the process of hiring are related.

Table 5 when contrasting the e recruitment, natural language process, workforce,automation

Recruitment		Sum of Squares	df	Mean Square	F	Sig.
Natural languageprocess	Between Groups	2.983	170	.709	9.801	.000
	Within Groups	46.882	79	.618		
	Total	49.865	250			
Workforce	Between Groups	1.833	190	.711	2.785	.000
	Within Groups	49.909	59	.873		
	Total	51.742	250			
Automatio n	Between Groups	2.913	179	.588	2.983	.000
	Within Groups	32.819	70	.916		
	Total	35.732	250			

Source: Own Calculation

Table 5 of the results shows that between the dependent variable (Natural language process) and the independent variables (work force and automation), there is a high F value that is more than the significance value. In this case, the alternative hypothesis was accepted and the null hypothesis was rejected.

4. Conclusion

This study takes into account the widespread acceptance and deployment of AI as a key factor in defining e-recruitment in India's IT sector. Natural language processing, labour force and automation factors were all shown to have statistically significant associations in this research. In summary, it was determined that all expected direct and intermediary links were statistically significant and it was recommended that India's IT industry use AI-based solutions to perform business operations in other sectors. When it comes to the e-recruitment process, many IT organizations are having trouble using artificial intelligence.

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