



Role of artificial intelligence in human resource management of selected it companies at Chennai city

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Abstract

In the competitive world Industries, gather the correct data and analyzed the collected data for the use of companies' growth and daily functioning is critical. Artificial Intelligence helps the industry to perform the tasks in a faster and cost effective manner. Artificial Intelligence is being applied to a variety of departments, including human resource department, finance department, marketing and production department. can be able to monitor the existing performance and day-to-day activities by using AI technology. Tough managers understood the value of artificial intelligence at work as market demands have increased. Generally speaking, the research paper is descriptive in scope. secondary data were used by the researcher to gather secondary data from research papers, journals, websites, HR blogs, survey reports, etc. the main aim of the study was to investigate the role of artificial intelligence in the human resource department and better understand the challenges in the HR department. According to the research, AI plays a larger role in the human resources department than previously thought. Robotics firms can manage hiring, analyzing and collecting data, collecting data, lowering workload at work, and enhancing workplace productivity.

Keywords: artificial intelligence, human resource management, information technologies, robotics, hiring, analyzing, age factors, ethnicity, managers, layoffs

Introduction

"The science that we work with today should have the inattentiveness, foresight and the vision for it to be the center of technology that we develop tomorrow."

- A. P. J. Abdul Kalam

Today's world is getting increasingly dependent on technology, which has altered the way we live. It has always been a crucial part of civilization and is present all around us in the form of fascinating machinery and equipment. In fact, we find it difficult to imagine a future without technology. A caveman's discovery of fire marks the beginning of a long development process for technologies, which has led to the most advanced rocket science technology. In the early stages of technological development, technology is restricted to tools like pulleys, levers, hammers, arrows, and other implements that require less effort from people and enable them to perform physical tasks. People's perspectives on technology changed during the post-industrial revolution, the following phase. The emergence of mechanically driven devices like the car, steam engines, computers, and others. All of these devices made it possible for people to transcend their physical limitations. Automation is the pinnacle of technological development, where a computer algorithm takes the place of human interaction. The World Wide Web didn't exist thirty years ago, and cellphones, as we all know, have only been around for a decade. Nevertheless, far more advanced technology is now at the forefront of our efforts to change how people live. The term "Artificial Intelligence" has been extensively researched and discussed since the year 2000.

Artificial intelligence (AI) seemed to be the next big thing in technology, and now that the Covid-19 pandemic crisis has brought about unforeseen and unanticipated changes, it appears that the time for AI has come for all of us.

Artificial intelligence

"Technology is unquestionably one of the most disruptive sources, thanks to automation and AI." Haze, Alan Before defining artificial intelligence, it is important to understand what intelligence is fundamentally all about. A general definition of intelligence is the capacity of the mind to learn, reason, and solve problems by combining cognitive processes like memory, language, attention, planning, and perception. Artificial intelligence cannot be described or understood in terms of just one definition. Different domains define AI differently, and the definition is often updated. John McCarthy, considered to be the inventor of artificial intelligence, stated that "artificial intelligence is the science and engineering of making intelligent machines, brilliant computer programmers. "Technology is undoubtedly one of the most disruptive forces nowadays because of automation and artificial intelligence.

Objectives of the study

- To examine the idea of artificial intelligence and how it affects methods for managing human resources.
- To research the respondents profile.
- To discover how IT staff members feel about AI capabilities and its application to HRM practices.
- To assess how artificial intelligence technologies are affecting human resources management in the research domain.

Review of literature

Capabilities of artificial intelligence

Langer *et al.*, (2019) examined how AI advancements allow the automation of every part of job interviews starting from acquiring data, analyzing data, selecting data and implementing action, resulting in fully automated interviews. It is found that efficiency exist, but not clear how employees reach to such interviews.

Grosz *et al.*, (2016) mentioned that Machine Learning is a paradigm that allows systems to enhance their performance at a task by observing relevant data and learning from it. Indeed, machine learning has been a major contribution to the AI boom in recent decades.

Rossi & Committee, (2018) described AI system through three main capabilities: perception, reasoning/decision making, and actuation. It is stated that these four capabilities are primary and basic on which other AI systems are built. In simple terms, all techniques of AI can be classified into two main groups that refer to reasoning and learning capabilities.

Tobias M. Scholz (2017) detailed the role of Big Data in the HR department. With regards to the practical implementation of big data, it is first suggested to fundamentally transform the human resource department, whereas at the same time, to predict the emotional discussion and resistance to the change, sounding a word of caution while professionally treating this transformational challenge.

de Laat *et al.*, (2020) argued that the increased digitization of work and social interaction, combined with recent research on workplace learning analytics and AI, opens up the possibility for designing *automated* real-time feedback systems capable of just-in-time, just-in-place support during complex problem-solving at work

Human resources management concept

Tursunbayeva, (2019) stated a few instances from other industries that show that HRIS and disruptive technologies like AI can help manage and provide ongoing insights regarding the whole career cycle of an employee. It is mentioned that there are only a negligible number of current studies that discuss AI technology.

Pradeep Kumar *et al.*, (2018) analysed the impact of AI introduction on employment generation in the IT sector and its impact on its economic growth. To be more specific, the study's main objective is to shed light on the impact of AI on HR.

Verma & Bandi, (2019) stated that the IT sector is using AI to aid them in making better, faster decisions, and this applies to the human resources field as much as anything else. HR recruiters have utilized Artificial Intelligence software to help accelerate recruiting and increase competency in the overall recruitment and selection process. Easa & Orra, (2021) 71aimed to investigate the characteristics of the relationship between human resource management practices and innovations in private and public organizations, the reviewed articles suggested some improvement towards a better understanding.

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Potential outcome of using ai in HRM

Rajesh *et al.*, (2018) explored the impact of Artificial intelligence in the Talent Acquisition process of organizations today. They reported the current role of AI in the Talent acquisition efforts of companies. The study critically reviewed AI-powered tools in the HR domain. They have focused on AI's potential in eliminating biases in the recruitment process and the impact of AI in various organizational functions.

George & Thomas (2019) focused on qualitative research and attempted to explain how AI has been incorporated into various HR functions and how it impacts the organizations, HR processes, and employees. It is found that integrating AI technologies in HR functions like recruitment & selection, on boarding, training does not mean that AI would completely take over the place of HR manager.

Hmoud & Várallyai, (2020) reviewed past proposed models, a set of literature, and articles on the most frequently used AI solutions for the human resources

acquisition process to analyse and understand better the past contribution. The study has found that AI offers optimistic solutions for the employer to optimize the recruitment process by eliminating time-intensive redundant tasks such as sourcing, filtering, and screening applicants, neutralizing human biases, and enhancing the overall quality of the hiring process.

Shaurya (2021) found that using a mixed approach comprising both quantitative and qualitative designs, removing monotonous tasks, increased quality, and speed were the main positive outcomes of using AI in HRM practices. AI is expected to take administrative chores in both the recruitment process and HRM in the recruitment activities, influencing job fit and recruitment outcomes.

Research methodology

Statement of the problem

This study seeks to address the persistently compelling issue that more and more HR experts and employees of organizations are worried and fear that AI would someday replace humans in the workplace. In this case, it is crucial to examine what the most advanced AI technologies of today are capable of, how they are really used in HRM practices, and what the prospective effects of doing so could be without using exaggerated or understated language. The perceived effectiveness of AI technologies in HRM practices and the prospective effects of human-machine collaboration in HRM are also highlighted in this study. The study looks into the effects of artificial intelligence technology on human resource management and tries to provide some insight.

Research methodology

There are basically two approaches of research used in social sciences, namely quantitative and qualitative research approaches. Quantitative research explains occurrences by collecting numerical data that are analyses using mathematical methods, especially statistical methods. The quantitative method is generally objective in nature and is focused on measuring phenomena. A qualitative approach is based on qualitative phenomena and involves non-numerical observations and examinations for finding out the underlying relationships and meanings, such as depth interviews, focus groups, projectile techniques, etc. The researcher has used both these techniques as and when they are needed. Apparently, the study's mainstay is a quantitative research approach; a qualitative approach will also be used specifically during the exploration phase of the

study, problem formulation, and research tools and instrument development. When it comes to the research design, a thorough examination of the previous works reveals that most of the authors have classified the types of research design into three basic categories, namely exploratory research, descriptive research, and casual research based on the type of information required. The dominant method expected in the study is descriptive research, but the exploratory method is also required in this initial research phase to formulate a research problem and objectives.

Table 1: Sample size

Estimated Proportion	0.3
Desired precision of estimate	0.05
Confidence level	0.95
Population size	100

Table 2: Demographic profile of the respondents frequency distribution of age of the respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	22-25 yrs	21	31.0	31.0	31.0
	26-30 yrs	44	46.0	46.0	77.0
	31- 40 yrs	19	21.2	21.2	98.2
	Above 40 yrs	16	1.8	1.8	100.0
	Total	100	100.0	100.0	

Table 3: Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	66	49.1	49.1	49.1
	Female	38	50.9	50.9	100.0
	Total	100	100.0	100.0	

Table 4: Monthly income of the respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	41	38.0	38.0	38.0
	Married	63	62.0	62.0	100.0
	Total	100	100.0	100.0	

Table 5: Group statistics for gender

	Gender	N	Mean	Std. Deviation	Std. Error Mean
TA/RS	Male	41	3.8787	5.39170	.42625
	Female	59	4.0397	4.52899	.35152
EEI	Male	45	3.7637	4.60636	.36416
	Female	55	3.8855	3.69490	.28678

Table 6: Group statistics for marital status

	Marital Status	N	Mean	Std. Deviation	Std. Error Mean
ML	Single	46	4.0032	3.08941	.27744
	Married	54	3.8891	4.73785	.33335
P/MV	Single	42	3.7322	4.92115	.44193
	Married	68	3.9029	3.83000	.26948
AUT	Single	57	4.0854	3.77017	.33857
	Married	43	3.9208	4.21813	.29679

Descriptive statistics group statistics for gender

Table 7: Perception of respondents towards potential outcomes of using artificial intelligence technologies in human resources management

Rank	Potential Outcomes	Mean Rank	Df	X² value	'P' value
1	Time Saving	5.14	7	67.495	0.000*
2	Accuracy	4.77			
3	Consistency	4.61			
4	Personalization	4.45			
5	Real-Time Experience	4.42			
6	Unbiased	4.40			
7	Reduced Workload	4.14			
8	Cost-Effective	4.07			

Summary of analysis

This chapter has analyzed the Impact of ten Artificial Intelligence Capabilities on Human Resources Management Practices. It further enumerated the relationship between the eight potential outcomes of using AI in HRM and finally using AMOS software proved that AI technologies have a high positive impact on Human resources management and lead to potential outcomes. The next and final chapter summaries the predominant findings of the research, suggestions, and conclusion.

Table 8: Summary of analysis

Tools	Relationship	p-Value	Result
Linear Multiple Regression Analysis	Impact of AI Capabilities on Workforce Planning & Decision Making	0.000b	Significant
Linear Multiple Regression Analysis.	Impact of AI Capabilities on Talent Acquisition/Recruitment& Selection	0.000b	Significant
Linear Multiple Regression Analysis.	Impact of AI Capabilities on Training & Development	0.000b	Significant
Linear Multiple Regression Analysis.	Impact of AI Capabilities on Performance Analysis & Management	0.000b	Significant
Linear Multiple Regression Analysis.	Impact of AI Capabilities on Compensation(Pay) & Rewards	0.000b	Significant
Linear Multiple Regression Analysis.	Impact of AI Capabilities on Career Planning & Progression	0.000b	Significant
Linear Multiple Regression Analysis.	Impact of AI Capabilities on Work Environment & Job Satisfaction	0.000b	Significant
Linear Multiple Regression Analysis.	Impact of AI Capabilities on Employee Welfare Measures & Well being	0.000b	Significant
Linear Multiple Regression Analysis.	Impact of AI Capabilities on Employee Engagement/Involvement	0.000b	Significant
Linear Multiple Regression Analysis.	Impact of AI Capabilities on Employee Retention.	0.000b	Significant

Suggestions

With the help of analyzing various Artificial Intelligence capabilities, their application in human resources management practise, and potential outcomes of using AI in HRM, the significance of Artificial Intelligence and its Impact on Human Resources Management practise in the IT sector have been proven strongly. The findings of this study highlight the importance of incorporating AI into HRM processes. Based on the current study's findings, it is felt that the following suggestions are worth implementing.

To the organization

Organizations often think narrowly about the prerequisites for successfully integrating AI into the management process. While cutting-edge technology and talent are necessary, an organization's culture, structure, and the way the organizations work need to be aligned to support broad AI adoption, as the conventional mind-set and approaches of the organizations are making AI incompatible. The phrase "AI in Human Resources" may sound paradoxical and self-contradictory, yet it is turning out to be true considering how technology is revolutionizing how businesses operate today.

To the HR professionals

While organizations are implementing AI into their HR operations at varying rates, first and foremost importantly, HR professionals must prepare themselves for these profound and lasting changes by learning about technology and its use in different HR activities. While building a thoughtful change in organizations like AI implementation, HR people need to know the distinctions and advantages of AI and analyse which tasks, processes, and workflows will be automated.

To the employees

Employees should be aware that machine collaboration is not meant to replace humans; rather, it is meant to help humans work efficiently and use their distinctively human skills in more dominant ways. Even though many claim that automation will eliminate jobs, there is no data to back this up.

Conclusion

Artificial Intelligence (AI) technology is the new normal, as everything around us is powered by AI and has completely changed our way of life. Currently, AI is being extensively implemented by firms and organizations and assisting them in streamlining all their processes with enhanced efficiency, increased production, and lower costs. While combining AI with Human Resources Management approaches transforms how businesses hire, manage, and engage their human resources.

AI- powered machines can make better decisions, more accurately than humans, based on the historical data available and behavioral patterns. As a result of this shift, machines have taken over all routine manual labour, allowing HR professionals to take on more strategic duties. Hence, it is paramount for organizations, HR professionals and employees to understand AI abilities and their important role in HRM practices. The study uncovered how AI technologies are basic and crucial organizations to face challenging stiff competition ahead, and undoubtedly the AI technologies are projected to grow and penetrate more and

more as the years go on. The current study emphasized that AI and its allied technologies are embedded in almost all human resources management functions such as workforce planning, Talent Acquisition, Training & Development, Performance analysis, employee engagement, retention, and much more. AI can create a better business, workplace, and employee experience if organizations, HR people, and employees properly understand it. The study signifies that employees need to understand that man-machine collaboration is inevitable, and this is the right time for the workforce to identify their skill gaps.

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