

## TECHNOLOGIES AND IMPLEMENTATION OF CURRENT ARTIFICIAL INTELLIGENCE IN HRM PRACTICES WITH REFERENCE TO INFORMATION AND COMMUNICATION SECTOR

Jyothi N  
Research Scholar,  
University of Technology, Jaipur  
Dr. Aparna Soni  
Associate Professor

**DECLARATION:** I AS AN AUTHOR OF THIS PAPER / ARTICLE, HEREBY DECLARE THAT THE PAPER SUBMITTED BY ME FOR PUBLICATION IN THE JOURNAL IS COMPLETELY MY OWN GENUINE PAPER. IF ANY ISSUE REGARDING COPYRIGHT/PATENT/ OTHER REAL AUTHOR ARISES, THE PUBLISHER WILL NOT BE LEGALLY RESPONSIBLE. IF ANY OF SUCH MATTERS OCCUR PUBLISHER MAY REMOVE MY CONTENT FROM THE JOURNAL WEBSITE. FOR THE REASON OF CONTENT AMENDMENT/ OR ANY TECHNICAL ISSUE WITH NO VISIBILITY ON WEBSITE/UPDATES, I HAVE RESUBMITTED THIS PAPER FOR THE PUBLICATION. FOR ANY PUBLICATION MATTERS OR ANY INFORMATION INTENTIONALLY HIDDEN BY ME OR OTHERWISE, I SHALL BE LEGALLY RESPONSIBLE. (COMPLETE DECLARATION OF THE AUTHOR AT THE LAST PAGE OF THIS PAPER/ARTICLE)

### ABSTRACT

**Introduction** – In the market, the HR department is far ahead of the competition. Today's HR professionals are primarily concerned with increasing the integration of human and automated work in order to achieve a simple, seamless, and flexible work environment at the workplace. The effective use of AI employment eliminates the ethical discrimination and misunderstandings that can occur during any human interaction. When looking for a Logical intake, eliminating bias can be extremely beneficial to an organization.

**Aim of the study**– The primary goal of this research is to discuss the technologies and implementation of current artificial intelligence in HRM practices with reference to the information and communication sector research methodology. - The study subsequently made use of both primary and secondary data. The current study used a quantitative approach based on a sociological survey method. A total of 100 employees have been chosen for the study. In order to test the hypothesis, ANOVA was used.

**Data analysis** – In this paper, an in-depth study was conducted to identify the various AI technologies being used in the IT sector and to understand their perception of AI technologies in HRM practices. The data were analyzed using statistical tools such as percentages, mean, T test, and one-way ANOVA test.

**Conclusion** - The study examined HR employees' attitudes toward AI technologies in HRM. According to the findings of the study, employees have a completely positive attitude toward AI technologies, and they do not see AI as a threat.

**Keywords** – Technology, implementation, artificial intelligence, Human resource, Information and Communication sector etc.

## 1. INTRODUCTION

### 1.1 Introduction

Artificial intelligence is a true breakthrough in business management that will have a profound impact on how employees work, particularly in human resources and employment departments. Artificial intelligence (AI) technologies have a different impact on human way management. For example, create training and development plans for each employee based on background processes and big data or data analytics related to real-time employment practices. Artificial intelligence is a term that refers to technology that is used to perform a task that requires some level of intelligence to complete. In other words a tool has been trained to perform tasks of human. The practical and effective application of artificial intelligence leads to improved achievement of human resource management work tasks, whether in the field of employment, evaluation and performance measurement, HR planning, employee training needs, job evaluation, or even forecasting the labor market and its needs and indicators. According to a review by the industry-leading provider of cloud-based applications for industry-specific applications, with the rapid change of technologies, we are already beginning to see a case of creative use of AI in ways that can add more positive benefits to the workflow. It is concerning the work of employees in the human resources and recruitment departments. Several companies and organizations have already demonstrated how AI can help to improve care quality while also lowering costs. In about 20 years, half of all jobs will be obsolete or no longer required, and healthcare is no exception. Understanding the benefits and drawbacks of various methods is just as important as developing the right algorithms and data infrastructure.

## 1.2 Artificial intelligence

Artificial intelligence is a tool that uses human intelligence to improve performance in a variety of fields. Brouwer (2015) defines It's a new technology that's being used in a variety of

industries to boost production and performance. AI has the incredible ability to function in the same way as a human brain, and it does so with complete efficiency. It uses various inputs to produce outputs in human resource management. Robotics is an artificial intelligence that primarily deals with every aspect of the industry. Artificial intelligence is simply intelligence performed by machines. I work in speech recognition, problem solving, and so on.

Artificial intelligence employs algorithms and executes its actions in accordance with the algorithms. Alan turning devises a test to determine whether machines can exhibit intelligent Behaviour similar to humans (computing machinery and intelligence in 1950) the turning test involves three participants: a computer, a human interrogator, and a human foil. To distinguish between computer and human, the interrogator asks the two participants (computer and human foil) several questions. All of this communication takes place via a display screen and a keyboard. The computer will answer all questions in such a way that incorrect identification occurs. The human foil will attempt to provide answers to assist the interrogator in making correct identifications. According to proponents of the Turing test, if a human interrogator is unable to distinguish between a computer and a human being, the computer is considered intelligent.

## 1.3 HRM

All of the actions of any firm are begun and determined by the people who make up the institution, plant, or office, and everything else that makes a modern shape is unproductive save for human effort and management of all duties.

Human resources are the most complicated and unpredictable in their Behaviour. There is no recipe for teaching a manager how to motivate his employees. A manager can buy his

employee's time, his physical presence in a specific location, and a certain number of skillful muscle actions each hour or day, but he cannot buy his employee's passion, initiative, loyalty, or commitment. Each person comes from a unique background. As a result, each individual's psychological frames are unique. As a result, they cannot be interchanged, let alone standardized. This means that no two people in an organization may be treated the same. In hiring and managing employees, as well as attempting to motivate them, a manager must take a tailored approach based on his awareness of the worker's actions, attitudes, requirements, and desires. This is a formidable and difficult endeavor.

HRM is involved with managing people in order to rank employees at work. Such persons or personnel include not only rank and the employees or unionized labor, but also higher personnel and non-unionized labor. In other words, it applies to all levels of staff, including blue-collar employees (craftsmen, foremen, operatives, and laborers) as well as white-collar employees (professional, technical and kindred workers, managers, officials and proprietors, clerical workers and sales workers).

Personnel administrative activity, on the other hand, can vary widely from company to company, and in order to be effective, it must be adjusted to the unique demands of each organization.

#### **1.4 The Role of AI in Human Resources**

Nowadays, artificial intelligence has permeated the overall structure of the enterprise, and one of the fields is the Human Resources Division, which uses the AI human system to replace people and other roles in the Human Resources Department, such as applicant selection, recruiting, coordination of human resource operations, and success improvement, among others. Humans and intelligent algorithms

collaborate to generate an ever-increasing volume of HR data in the cloud, and the use of artificial intelligence analyses provides a more in-depth understanding of how to operate and run. AI can aid in the effective simplification of a variety of back-office processes for efficient HR transfers and service delivery.

AI differs from traditional applications in three ways: high-speed processing, accurate data, and a large number of clever algorithms. With an algorithm that integrates data quality with rapid processing resources; key AI systems improve the precision and dependability of everyday processes.

Human resources are widely regarded as one of the most valuable assets of any business, and as a result, efficiently managing this asset is regarded as a basic managerial task.

Human resource management encompasses a wide range of particular operations, such as recruiting, workplace success monitoring, professional training and job advancement, and employee contribution benefits.

The success of any organization is determined by how well it intelligently blends employees, processes, and equipment to achieve change efficiency at a lower cost. Through the usage of numerous AIs, artificial intelligence provides the foundation for a new era of digital transformation across multiple channels. HRM tools include hiring, placement, training and development, performance management, benefits, and reward management. Artificial intelligence improves intellectual resources by modifying existing business systems and making it easier for task forces to compete with artificial intelligence. This has not only streamlined human thinking, but it has also introduced strong corporate development and has proven extremely effective in improving workplace relationships and raising employee satisfaction.

Most businesses' primary goal is to improve market efficiency. In today's market, finding new technologies and approaches to construct better systems is an ongoing concern. Improving human Behaviour has resulted in an increase in the application of AI robotics. Computers and software are required for today's activities. HR technology can be defined as any methodology for the recruitment, utilization, preservation, and management of human resources, as well as HR help and HR outsourcing. HR technology has been given a name. HR technologies are gradually being adopted by small, medium-sized, and large organizations in order to meet the demands of their clients.

## 2. REVIEW OF LITERATURE

**M K GaneshanandVethirajan .C (2020)** - In today's world, artificial intelligence is advancing swiftly with new highly developed breakthroughs. It is extremely valuable in applications such as deep learning, machine learning, neural networks, robotics, big data, and bitcoin. In this scenario, computer systems are best suited to do little activities such as facial recognition, automated system, self-driving cars, involvement in dangerous occupations, computerised methods, reduced human efforts, time savings, and other minor presentation duties. The first goal of artificial intelligence is to create increasingly advanced and sophisticated systems. The human output performance, in whatever way it may take in accordance with human knowledge requirements; the increasing difficult activities such as decision-making, solving equations and playing chess with others. Artificial intelligence is the future objective of all ideal human actions and better delivers solutions to challenges that human cannot handle. In the long run, automated systems provide a number of issues. The human can accomplish the work or function and seriously hurt humans once they are utilised to attack in order to avoid the

development of lethal armaments.

**Saeed Aldulaimi - (2020)** The study's goal is to gain a better knowledge of the phenomenon of applying artificial intelligence (AI) in human resources, particularly in the Kingdom of Bahrain. This study project offers a future view on using AI to better understand the attitudes and perspectives of HR practitioners across numerous frameworks. According to the report, the Kingdom of Bahrain's public sector will have a tremendous potential to keep up with the digital revolution if its vision (2030 vision) is implemented. This has resulted in a shift in the worker makeup inside business organisations. It allows men and women to compete in a variety of positions, which will place a new burden on human resource management as a result of the need for gender equality. Furthermore, this allows for a strong incorporation of the feminist element. It is advised that the application of modern artificial intelligence (AI) is a critical method for organisations working in a volatile environment.

**A. Hemalatha, P. Barani Kumari (2019)** - Artificial intelligence is a distinct branch of science and technology that has been used productively in a variety of fields during the last 60 years. While artificial intelligence is making inroads into practically every industry, human resource practises are no exception. Human resource management is a critical aspect in any firm, and it is critical to recognise that personnel involved in human resource management must be conversant with the concept of artificial intelligence. Some HR professionals believe that improved and advanced AI is a threat to the human community, and that in the next decades; AI will dramatically diminish global demand for human resources. Some academics, on the other hand, feel that AI is one of the advanced tools

designed to assist humans and that it will never be able to replace human labour. Keeping the foregoing in mind, the primary goal of this research is to investigate employees' perceptions of Artificial Intelligence technology in human resource practises. The online survey was utilised as a data gathering method, and the questionnaire was employed as a tool. In addition to focusing on the participants' perceptions on AI, the study seeks to comprehend the existing AI technologies being used in Human Resources practises.

**Prasanna Matsa and Kusuma Gullamajji (2019)** in today's competitive business world, human resources (HR) are a necessary asset / resource for increasing organisational performance for every type of firm. To be successful, organisations must strive for higher customer - satisfaction, which is critical to their existence. To achieve this, organisations must employ innovative human resource practises to improve their performance and differentiate themselves from their competitors. In the near future, HRM will shift away from its foundation administrative functions such as recruitment, selection, and appraisal and toward more advanced advancements such as Automation, Augmented Intelligence, Robotics, and Artificial Intelligence, which are completely redefining and reshaping the way their workforce characteristics and organisations operate. To compete with AI and advanced machines, the real issue now lies inside the individual human resources departments in terms of how successfully they train and re-transform their workforce in comprehending AI and collaborating and working with AI & Robots.

**Edge Admin (2017)** the modern world is governed by technological technologies, which scares the global workforce. We can claim that AI is the most revolutionary technology out of all of them. As important as the application of AI in practically every sector, whether banking,

health care insurance, etc., the results produced are outstanding. As most companies around the world use AI, India is no exception. New firms, particularly start-ups, are now integrating their company with AI to stay visible and competitive. ARYA.ai, BOXX.ai, cuddle.ai, Imbibe, Edge networks, and Haptik are just a handful of the Indian start-ups that have integrated AI into their operations.

### 3. OBJECTIVE OF THE STUDY

- To assess the current AI technologies utilized in HRM practices.
- To investigate employee perceptions of AI application in HRM

### 4. RESEARCH METHODOLOGY

#### 4.1 Sources of data collection

- **Primary data**

Following that, primary data were employed in the study. The current study used a quantitative methodology based on a sociological survey method. A systematic questionnaire with 34 questions was created, including 7 personal questions, 4 multiple choice questions, and 23 five-point scale questions. The questionnaire was discussed with a statistician, and improvements were made as a result.

- **Secondary Data**

Secondary sources, such as books, websites, journals, and publications, were also used to gather more relevant information and data.

#### 4.2 Data collecting tools

The questionnaire was utilized as a data gathering tool on the Google forms platform (an online survey service). Respondents included both HR employees and HR professionals from



the IT sector in Bangalore.

#### 4.3 Number of samples

The number of samples chosen for the investigation is referred to as the sample size. The sample size for this investigation is set at 50 people. The company's 50 respondents were chosen using a basic random sample method and a convenience sampling method.

#### 4.4 The study's area and scope

- The study may only be applicable to IT organizations based in Bangalore.
- The survey was performed exclusively among 100 HR employees of IT

companies.

- The study's time frame is limited; therefore, it may not be able to cover the complete scope.
- The research is for 2019-2020, and the data was gathered from current employees, thus it may change in the future.

#### 4.5 Cronbach's Alpha Reliability Statistics

SPSS was used to test the reliability of the respondents' primary data. The Cronbach's Alpha test yielded a reliability score of .857, indicating that the questionnaire was reliable.

**Table1:ReliabilityStatistics**

Cronbach's Alpha	Nofitems
.857	50

## 5. DATA ANALYSIS AND INTERPRETATION

An in-depth study was conducted in this chapter to identify the various AI technologies being employed in the IT sector and to understand their perception of AI technologies in HRM practises. For this reason, convenience sampling was used to acquire primary data from 100 respondents. Statistical tools such as percentages, mean, T test, and one-way

ANOVA test were used to examine the data.

### 5.1 Data analysis

It is critical to categories the respondent's demographic profile since it provides a comprehensive picture and aids in the analysis of demographic elements that may influence their impression of AI technology in HRM practices.

**Table2:Demographic Profile of the respondents**

Demographics	%
<b>Age</b>	
22-25years	20
26-30years	22

31-40years	38
Above40years	20
<b>Gender</b>	
Male	38
Female	62
<b>MaritalStatus</b>	
Single	34
Married	66
<b>Work Experience</b>	
Less than 2 years	18
2-5 years	24
6-10 years	22
11-15 years	16
<b>Educational Qualification</b>	
Doctoral Degree	20
Master's Degree	16
Bachelor's Degree	50
Diploma	30
Others	4
<b>Designation</b>	
Administrator	26
Business and Program Analyst	20
Engineer (Automation &Software)	18
Project and HR manager	22
Managing Director	4
Others	10

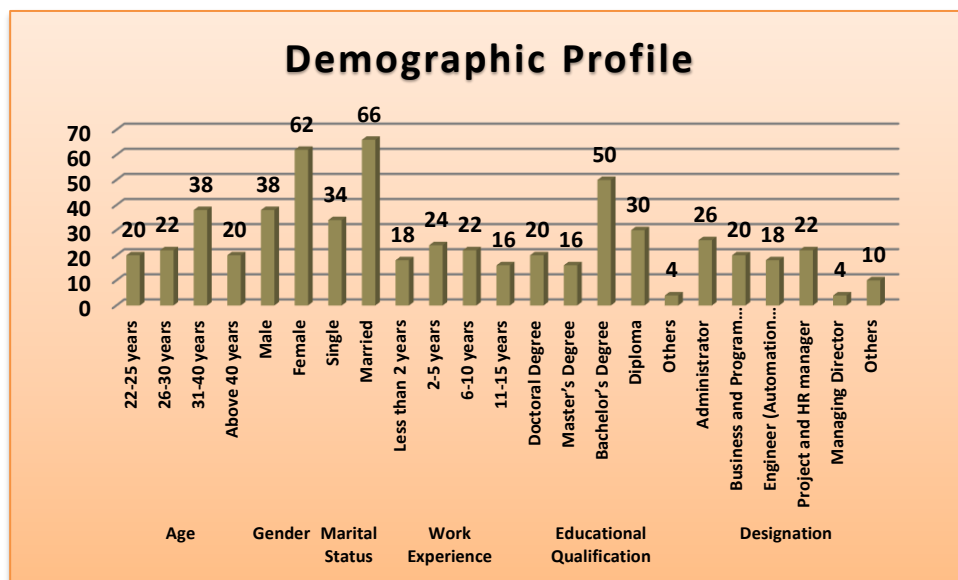


Figure 1: Demographic Profile of the respondents

To have a better understanding of the sample, demographic parameters such as age, gender,

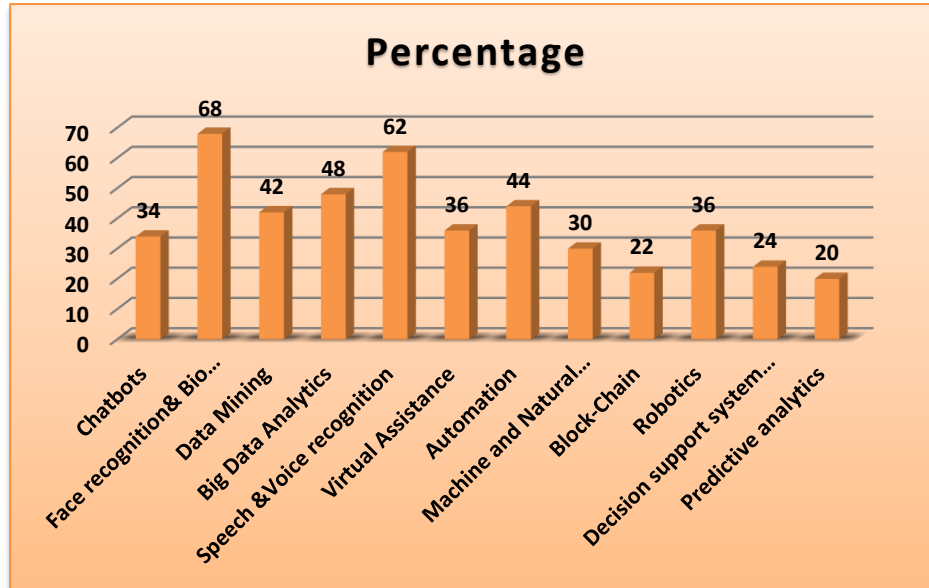
marital status, work experience, educational credentials, and designation will be examined.

Male and female respondents were polled. The respondents were of various ages, the bulk of them were between the ages of 31 and 40 (38%). As a result, those in their forties and fifties were more eager to participate in the poll than those in their twenties and thirties. The participants were literates of all levels, with the

sample (50%) having earned a bachelor's degree or a diploma (30%). The majority of respondents (66 percent) were married, and the most common job titles were administrator (26 percent) and project and HR managers (second and third, respectively) (22%).

**Table 3: Awareness of IT employees regarding AI powered HRM technologies**

AI technologies	Percentage	Ranking
Chatbots	34	VII
Face recognition& Bio metrics	68	I
Data Mining	42	V
Big Data Analytics	48	III
Speech &Voice recognition	62	II
Virtual Assistance	36	VI
Automation	44	IV
Machine and Natural language learning	30	VIII
Block-Chain	22	X
Robotics	36	VI
Decision support system and Expert system	24	IX
Predictive analytics	20	XI



**Figure 2: Awareness of IT employees regarding AI powered HRM technologies**

Out of all AI technologies being applied in HRM practices, firstly, 68% of employees have identified face recognition & Biometric technology, secondly 62% of employees have identified speech & voice recog

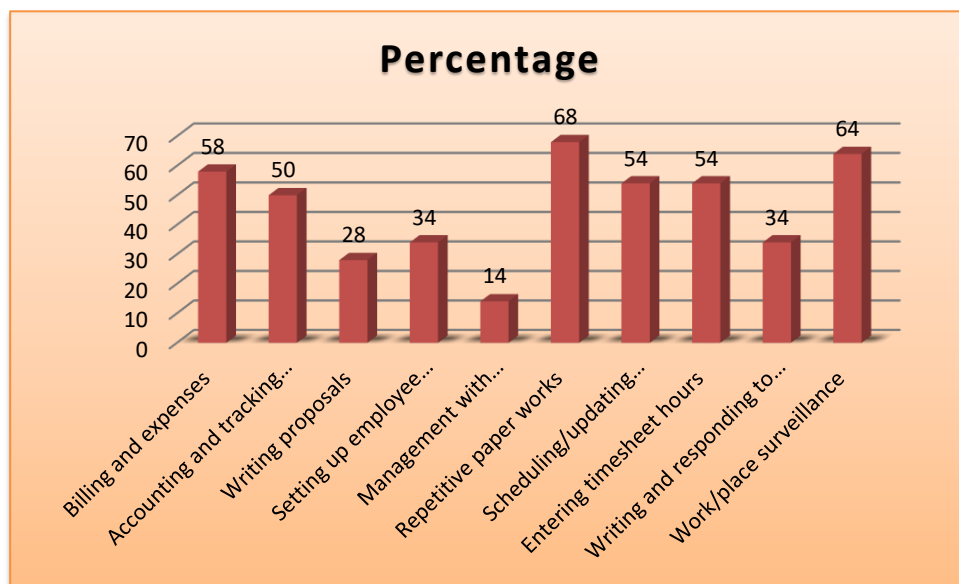
nition technology, thirdly big data analytics with 48%, followed by automation, data mining, virtual assistance, robotics, Machine & Natural language learning, DSS and Expert system, Block-chain and finally



Predictive analytics. It is very clear from the above analysis that awareness towards AI technologies in HRM is limited.

**Table 4: Factors regarding job in AI-powered digital assistants**

Job Elements	Percentage	Ranking
Billing and expenses	58	III
Accounting and tracking financials	50	V
Writing proposals	28	VII
Setting up employee benefits	34	VI
Management with employees	14	VIII
Repetitive paper works	68	I
Scheduling/updating Calendar	54	IV
Entering timesheet hours	54	IV
Writing and responding to emails	34	VI
Work/place surveillance	64	II



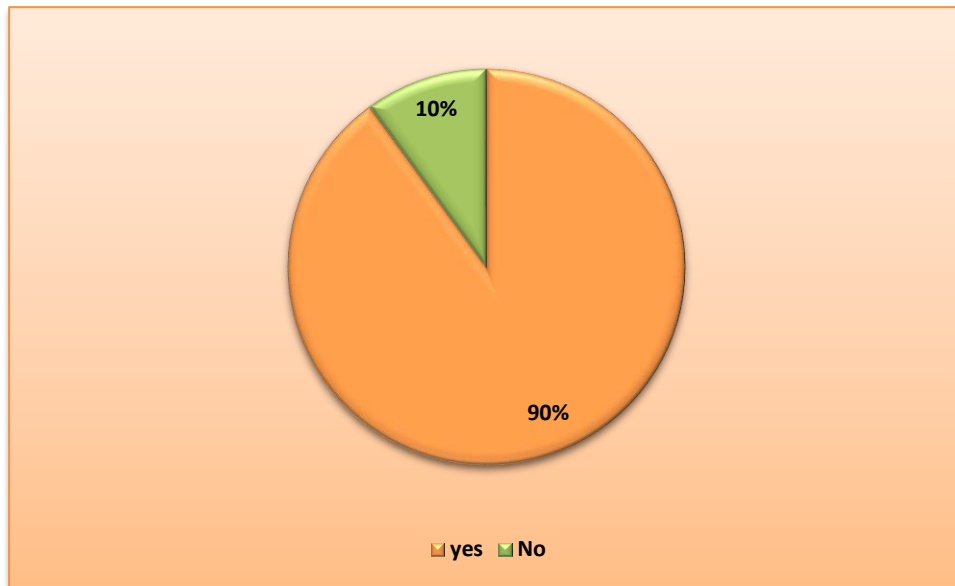
**Figure 3: Factors regarding job in AI-powered digital assistants**

The factors preventing business leaders from successfully integrating AI technology in their organizations are listed in the table above. The

biggest and most important factor, according to 72 percent of respondents, is its exorbitant cost, followed by a lack of technical skill (62 percent), and privacy concerns (44 percent).

**Table 5: Perception in implementation of HRM**

Opinion	Percent
yes	90.0
No	10.0
Total	100.0



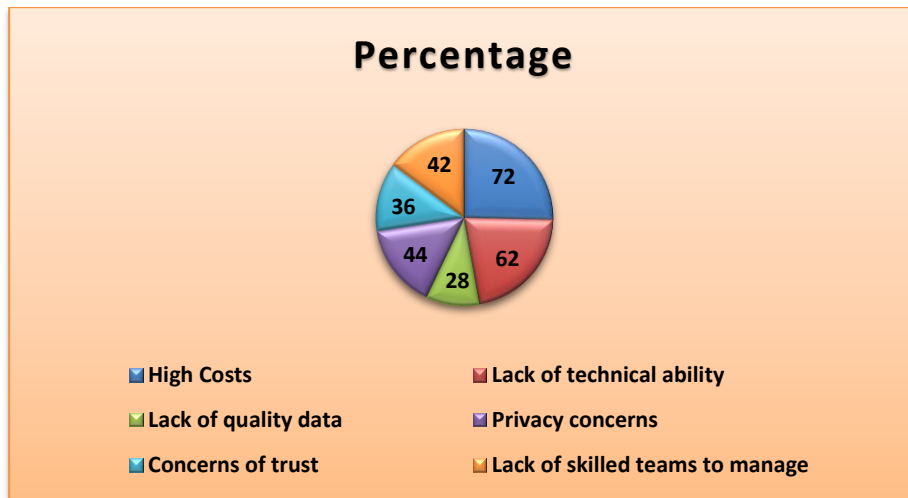
**Figure 4: Perception in implementation of AI in HRM**

The work parts that can be outsourced to AI-powered digital assistants are shown in the table above. The use of AI digital assistants for repetitive paper work is favoured by 68 percent

of respondents, 64 percent for workplace monitoring, 58 percent for billing and expenses, and 54 percent for scheduling/ updating calendar and inputting timesheet hours.

**Table 6: Factors holding back in AI implementation systems in IT sector**

Factors holding back AI	Percentage	Ranking
High Costs	72	I
Lack of technical ability	62	II
Lack of quality data	28	VI
Privacy concerns	44	III
Concerns of trust	36	V
Lack of skilled teams to manage	42	IV



**Figure 5: Factors Holding back in AI implementation systems in IT sector**

Finally, when asked if they had implemented AI in their HR practices, respondents agreed that the future of HR will most likely be man-

machine collaboration. Only 10% of respondents are opposed to AI technology, with 90% of respondents responding positively and supporting AI technologies in HR practices.

## 5.2 Hypothesis testing

**Table 7: Gender wise Perception towards current AI technologies used in implementation of Human resource practices-ANOVA**

HR factor/Age groups	Male	Female	F	P
Planning&DM	16.57	16.19	.749	.391
Recruitment	18.21	19.35	.413	.523
Training & Development	19.42	20.48	4.562	.038
Performance Analysis	19.84	19.80	.497	.484
Work-life Balance	15.00	15.74	.564	.456

Because the P values in the above table are greater than 0.05, it can be concluded that there is no significant mean difference between gender and employee perceptions of AI in HR practices. There is no significant variation in employee perceptions of AI technologies based on gender, and all genders had similar employees.

## 6. FINDINGS AND CONCLUSION

Humans and intelligent algorithms work to generate an ever-increasing volume of HR data in the cloud, and artificial intelligence analyses provide a deeper application of how to operate and function. For effective HR transfers and service delivery, AI can help to streamline a range of back-office activities. Artificial intelligence (AI) is the foundation for a new era of digital transformation across several channels using a variety of AIs. Recruiting, placement, training and development,

performance administration, benefits and reward management are all HRM tools. Artificial intelligence improves intellectual resources by modifying existing business methods and making it easier for the task force to become more competitive.

With reference to IT firms in Bangalore; the study has presented and assessed the numerous AI technologies that are now being employed in human resource management practices. The survey looked into HR employees' attitudes about AI technology in HRM. Employees have a completely positive system toward AI technologies, according to the report, and AI systems are not seen as a treat by employees. The study emphasized the importance of AI technologies in improving the department of HR departments and gaining a competitive advantage in the market. The study also identifies the numerous constraints that are preventing AI systems from being implemented in HR practices. In conclusion, the research shows that employees are fully confident in AI technology and feel that AI will augment HR workforce in all ways conceivable. The survey also found that organizations should focus on adopting AI technology in human resource management practices such as planning and decision-making, recruitment, training and development, performance analysis, and work-life balance on a constant basis.

## REFERENCES

1. Ganeshan, M K & .C, Vethirajan. (2020). Positive Impact of Artificial Intelligence on Human Resource Management Practice.
2. Aldulaimi, Saeed. (2020). Trends And Opportunities of Artificial Intelligence in Human Resource Management: Aspirations for Public Sector in Bahrain. International Journal of Scientific and Technology Research. 9.
3. P. Barani Kumari, A. Hemalatha (2019). Perception towards Artificial Intelligence in Human Resources Management Practices –with Reference to IT Companies in Bangalore. International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-8 Issue-4S3, December 2019
4. Prasanna Matsa, KusumaGullamajji (2019). To Study Impact of Artificial Intelligence on Human Resource Management. International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056, p-ISSN: 2395-0072, Volume: 06 Issue: 08 | Aug 2019
5. Edge Admin (2017) Artificial Intelligence in HR, Published in Analytic India Magazine, July 17th, 2017.
6. Meghan M. Biro, CEO, TalentCulture (2017) The Impact of Technology on HR and wha's Ahead [https://www.huffpost.com/entry/the-impact-of-technology\\_b\\_9294208](https://www.huffpost.com/entry/the-impact-of-technology_b_9294208)
7. Jessica Miller-Merrell (2019) How Artificial Intelligence (AI) is Changing Human Resources <https://www.risesmart.com/blog/how-artificial-intelligence-ai-changing-human-resources>
8. R. Charlier and S. Kloppenburg, "Artificial Intelligence in HR: a No-brainer," PWC, 2017.
9. Jeanne Meister, "Ten HR Trends in The Age of Artificial Intelligence," Forbes. 2019.
10. R. Kramar, "Beyond strategic human resource management: Is sustainable

human resource management the next approach?" Int. J. Hum. Resour.

Manag., 2014.

### **Author's Declaration**

I as an author of the above research paper/article, hereby, declare that the content of this paper is prepared by me and if any person having copyright issue or patent or anything otherwise related to the content, I shall always be legally responsible for any issue. For the reason of invisibility of my research paper on the website/amendments /updates, I have resubmitted my paper for publication on the same date. If any data or information given by me is not correct I shall always be legally responsible. With my whole responsibility legally and formally I have intimated the publisher (Publisher) that my paper has been checked by my guide (if any) or expert to make it sure that paper is technically right and there is no unaccepted plagiarism and the entire content is genuinely mine. If any issue arise related to Plagiarism / Guide Name / Educational Qualification / Designation/Address of my university/college/institution/ Structure or Formatting/ Resubmission / Submission /Copyright / Patent/ Submission for any higher degree or Job/ Primary Data/ Secondary Data Issues, I will be solely/entirely responsible for any legal issues. I have been informed that the most of the data from the website is invisible or shuffled or vanished from the data base due to some technical fault or hacking and therefore the process of resubmission is there for the scholars/students who finds trouble in getting their paper on the website. At the time of resubmission of my paper I take all the legal and formal responsibilities, If I hide or do not submit the copy of my original documents (Aadhar/Driving License/Any Identity Proof and Address Proof and Photo) in spite of demand from the publisher then my paper may be rejected or removed from the website anytime and may not be consider for verification. I accept the fact that as the content of this paper and the resubmission legal responsibilities and reasons are only mine then the Publisher (Airo International Journal/Airo National Research Journal) is never responsible. I also declare that if publisher finds any complication or error or anything hidden or implemented otherwise, my paper may be removed from the website or the watermark of remark/actuality may be mentioned on my paper. Even if anything is found illegal publisher may also take legal action against me.

**Jyothi N**  
**Dr. Aparna Soni**

\*\*\*\*\*