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Exploring the role of Artificial Intelligence (AI) in transforming HR functions: An Empirical Study in the Indian Context

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Abstract:

The most recent progress in Artificial Intelligence (AI) and machine learning—comprehensively from conversational UIs to blockchain and the Internet of Things—are quickly being encompassed into standard business operations. Today, the organisations are keen in grasping these new advancements, resulting in a significant change between connection of individuals and machines in the work environment. Simultaneously, AI is shaking-up manger-employee dynamics and prospects. As expressed by Banavar [1], AI is presently fragmenting in a large portion of the software's and is being incorporated into huge numbers of the business capacities. One such business capacity where the incorporation of AI is occurring at a much quicker pace is Human Resources (HR). Very soon it will be observed that HRM is going away from its usual established administrative capabilities to further advancements like Automation, Augmented Intelligence, Robotics and Artificial Intelligence that are totally re – characterizing and re – moulding the method of their workforce attributes and associations. At present, AI seems to be the biggest buzzword which has almost penetrated into every sphere of human activity and is totally transforming the HR department of different sectors globally.

The purpose of the study is to understand AI and to investigate the areas of AI implementation in HR practices and its substantial effect on organisations. To validate the study, a small survey was conducted, where few HR professionals initially were interviewed to pursue the feedback. While a few of them expressed concern about potential job losses that could come with greater practice of AI inthe workplace, our study recommends that most employees feel enthusiastic about theseadvancements.
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Keywords **—Artificial Intelligence, Machine learning, HR technology, Human Resource functions**

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I.   INTRODUCTION

Technology has constantly been a part of achieving business results, driving more prominent productivity and advancement. Artificial intelligence (AI) is going to change how people interact with or use the technology for the better.

Before we clarify how, let us characterize some of the important terminologies used in the present study. While AI and machine learning are related technology and are regularly utilized reciprocally, they are still different.

Artificial intelligence (AI) is described as an area of computer science that accentuates the creation of intelligent machines that operate and respond like humans [2].

Machine learning (ML) is described as a subset of AI that is more narrowly focused on how computer programs interpret data and learn [2a]. Rather than turning to an individual to code a program to accomplish an assignment, ML can determinate patterns and inform the AI. For illustration, a ML framework can register employee behaviours to assess whether they may be withdrawing from the company for a new opportunity. In brief, AI includes all measures for a computer program to make intelligent outcomes, whereas ML centers on how AI gathers information that is not especially programmed by an individual. The 2020 State of AI Survey [3] findings revealed that China and India are driving the way with AI implementation, followed by the UAE and Brazil.In the figure below, respondents from the four frontrunner nations report the most noteworthy implementation of AI over a varied list of cases.

We are blessed to be living in an era where technologies like AI are attaining new statures and affecting operation of business functions. One such business function where AI advancements offer exclusive opportunities is improving HR practices, such as recruiting and talent acquisition, payroll, reporting, and Learning & Development.

The present study will be focused on AI implementation in the HR functions and how is AI benefitting the overall organisation. Artificial Intelligence is the buzz word of today. Numerous discussions are taking place about its execution in HRM. Literature review about this topic suggested some AI use cases that have been implemented in different sectors and the impact of AI on different occupations in future. All these are elucidated below:
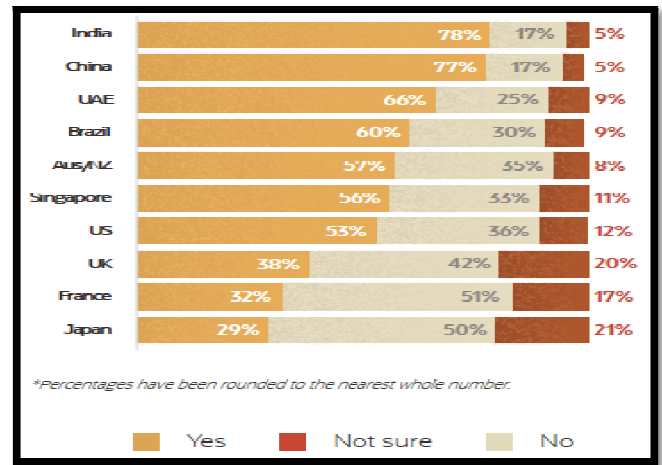

Fig.1. 2020 State of AI Survey

II. REVIEW OF RELATED LITERATURE

Artificial intelligence (AI) refers to a tool trained to do what a human can do. The affluence or the success of any company relies upon how viably it combines individuals, technology and processes to generate pioneering outcomes at an optimal cost. This section will provide insight about application of AI technology in few major industries in India (Table 1) and the effect of it on different occupations as well (Table 2):

TABLE I
IMPACT OF AI ON DIFFERENT INDUSTRIES IN INDIA

AI in Healthcare	AI is foreseen to alleviate India to an incredible level in rendering significantly better healthcare services in few aspects, for example, management of patients: automated prescriptions, customized meds and care, clinical imaging and diagnostic, pregnancy guidance, drug revelation and other medical services [4]. There are barely any new companies like Nirmai,

	Lybrate, MeraMedicare in India reforming Healthcare industry with AI.
AI in Education	Capital and skilled labour are the 2 principle elements that are fundamental for the foundation and advancement of any industry. India is home to a noteworthy expertise pool of graduates in Science, Technology, Math and Engineering field. Merchants like Google, Microsoft and Intel have been keen to prepare this kind of technical workforce in AI programming. On the other hand, AICTE- the government body that oversees specialized kind of education or training in India, recently included AI, IoT, Machine Learning alongside a few different subjects as required topics in its curriculum of B.Tech Program [5].
AI in Finance	Finance which is a vital function in any business and industries like banks and insurance companies have implemented AI in billing, robot advisory, credit lending/scoring, expense reporting, etc. The absolute most fantastic business models by FinTech companies in India are: • Digital wallets • Digital insurance for health, travel, and so on. • Digitalfinancial advices simplifying banking [6]
AI in Transportation	Transportation involves both cargo and public transportation which is utilized by the overall population just as by industries. Applying AI in transportation is a critical task of dependability and security. Assessments place AI in transportation market at $10.30 billion by 2030 [7]. One of the significant issues is additionally the talent crunch. As the business turns out to be more information driven and computerized, its talent needs will move as well. More individuals skilled in AI who have the information on transportation innovation would be required.
AI in Retail	Retail, explicitly online shopping gets a lot of information about individual proclivities towards something particular, their spending pattern and favoured channels. Giving this information into AI facilitates organizations to configure customised shopping for mass crowds depending on their inclinations [8]. AI in online shopping helps advertisers' by conveying pertinent commercials, for clients it helps in making ads accordingly and lastly from billing to invoicing and payments, everything are taken care of through automation.

AI in Smart Infrastructure and Mobility	The increasing relocation of the populace towards the urban communities has introduced an extraordinary challenge to India. The urban areas' city frameworks have been battling to bring quality infrastructure and cut down commuter routes hardships in India's enormous city. AI could bring about a huge change in metropolitan cities by helping in decrease blockage on expressways, device urban frameworks in managing resident complaints, suitable fix, and upkeep of the public property, in this manner improving the nature of living of city inhabitants [9].

TABLE 2

IMPACT OF AI ON DIFFERENT INDUSTRIES IN INDIA

Doctors	It's been argued that robots will supplant doctors by the year 2035, and certainly 50% of jobs will be replaced by AI in the coming future. Machines shall substitute 80% of doctors in future by healthcare seen entrepreneurs but not by medical professionals [4a].
Teaching	AI plays a significant role in teaching profession. According to educational, scientific and cultural organization in United Nations, Students learn differently with the help of AI. % of primary and secondary school children that do not attend school is high, this is where digital teachers come into role where they can interest children to learn something with the help of AI [5a].
Blue collar and white-collar jobs	Blue collar and white-collar jobs will be wiped out, almost 20 to 30 million jobs will be eliminated by the year 2030 and it's been argued that it can displace jobs of 800 million people [10].
Drivers	AI uses certain algorithms for driving a car and anticipation of risks and accidents; it is argued that it will replace drivers by mid-2030, while driverless cars are in effect, but it will emerge and transmute within few decades by 30% [7a].
Lawyers	As per Mckinsey Global institute [3a], 23% of jobs can be automated in near future and that AI can envisage better legal outcomes than humans. The pace with which the AI application and machine learning is emerging, by the year 2036, the way of dealing cases will be transformed and 1 lakh legal roles will be automated.

From the Literature reviews, it is understood that Artificial Intelligence technology is changing the relationship between people and technology across industries. According to the 2nd Annual study conducted by Oracle and Future Workplace

on 8,370 employees, managers, and HR leaders across 10 countries [11], it was found that people have more trust in robots than their managers. However, there is very few research-based studies done on AI and HR, hence to fill this gap, the current study through quantitative research aims at bringing out the HR areas in which AI has a crucial role to play in, especially in the Indian context.

III.   OBJECTIVES OF THE STUDY

The present study is undertaken to:

- Explore the areas of highest potential in different HR functions through implementation of AI

- Explore the extent of AI implementation inHR functions in Indian companies and study what is preventing them from using AI at workplace as a whole

- Explore the ways AI implementation can be simplified to get the most out of it

- Explore respondent's perceptions of AI implementation

IV.   METHODOLOGY OF THE STUDY

Researchers typically come across this dilemma of choosing appropriate method for the study. This study is one of its kind. It is exploratory in nature, as not much information is available on AI and its implementation on HR functions. Primary data and secondary data have been subsequently used in this study. The present study was done through a quantitative approach, based on the sociological survey method. A structured questionnaire was designed as a data collection tool. The respondents included Director-HR, Managers, and IT professionals from different industries in NCR. Sample size denotes the number of samples selected for the study. The sample size for this study is 150. Based on simple random sampling method and convenience sampling method respondents were chosen from across different industries. The other relevant information and data were collected from secondary sources also, such as books, websites, journals, and publications.

All paragraphs must be indented. All paragraphs must be justified, i.e. both left-justified and right-justified.

V. SCOPE OF THE STUDY

This study enables to have reasonable information about the different opportunities that will be accessible within human resource management functions with implementation of AI technologies in the organisations. An attempt is made to explore the extent to which organisations have implemented AI in their HR functions and what is keeping them from applying it organisation wide.

VI. LIMITATIONS

1) The survey has been conducted only among 150 samples across different industries in NCR, due to lack of enough time at hand.
2) The research pertains to 2019-2020 and data have been collected from the present employees, so the findings may vary in the future.

VII.   DATA   ANALYSIS   ANDINTERPRETATION

In this section, an in-depth analysis has been conducted to identify the areas of opportunities in different HR functions through implementation of AI and the ways AI implementation can be simplified to get the most out of it. For this purpose, primary data was collected from 150 respondents. Data were collected, categorized, and coded using Microsoft Excel and then analysed using Statistical Package for the Social Sciences. The Cronbach's Alpha test revealed a reliability score of 0 .897 over 11 items and hence the

questionnaire was found to be reliable. Frequencies and percentages were considered for each item, while analysis of variance (ANOVA) was used to test for significant differences between the different demographic variables, if any.

VIII. FINDINGS OF THE STUDY

VIII.I. Potential of AI in different HRM function (1st Objective): The fate of HR is both human and digital, as HR pioneers center around streamlining the combination of human and automated work [12]. This calls for a new priority for HR, one that requires pioneers/leaders and teams to build up a familiarity with Artificial Intelligence at work while not discarding the personal, human, and intuitive feel of it.

To understand the role of AI in HR functions in a more augmented way, we asked the respondents about where they thought AI has the greatest potential to improve HR in coming years. The highly prevalent retorts by a wide margin was- Talent acquisition (32.67%). The other top-rated response items were- Learning and Development (25.33%), Compensation and Payroll (11.33%) and so on. The potential of AI application in top HR functions basis the survey result, has been depicted below in detail:
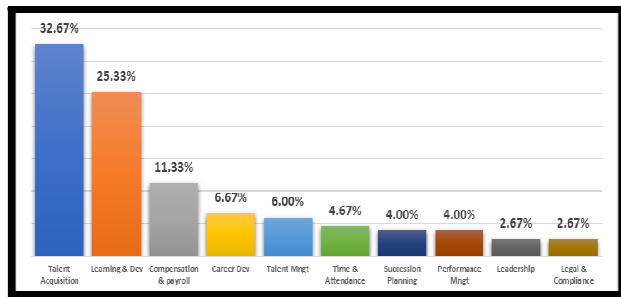

Fig. 2. Potential of AI in different HRM function

VIII.I.I.Talent Acquisition

It is evident that AI is here, and it is here to make an impingement. Nevertheless, like any new technology, it is encircled by deception, hype and blended messages. The potential for AI to make an impact across various domains is colossal. In the below table, we have tried to explain the importance of applications of AI in Talent Acquisition practice, segregating them into 4 major buckets in Table 3:

TABLE 3
POTENTIAL OF AI IN TALENT ACQUISITION

SOURCING	• **To identify the best candidates:** Machine learning is the vital part of AI. Beyond a simple quest for key words/terms, ML algorithms absorbs synonymous words that are frequently used in resumes. At the point applied to the sourcing process, it can recognize active and inactive applicants in seconds of job opening posting [13]. • **To advise jobs to candidates:** The normal way prospective candidates receive suggestions to apply for open job positions is either through a targeted campaign or through organic search operations. AI can here alert the right individuals with the right skill sets to available job positions preceding their posting. • **To predict candidate performance:** When AI has the information it needs, there are an abundance of opportunities for HR. AI based tools uses HR data that can determine a candidate's likelihood to accept a job offer, further find connections between candidate attributes and job performance, job tenure, and varied proportions of work achievement.
SCREENING AND INTERVIEWING	• **To assist candidates become more self-sufficient:** AI in the recruitment world are intended to make life simpler for everyone involved. At the point when job candidates can find the responses and data they need instantly, they will feel more constrained to remain associated with the organisation. It gives them a feel that the whole process from rescheduling or dropping off, to sending updates, and suggesting resources for review is in their control. • **To support hiring managers:** AI helps in keeping the hiring managers updated of forthcoming meetings or interviews and gives all possible minute details of the candidate. It also helps overcome biasness and put greater

	prominence on the candidate's skill set by gathering information/data from former employees in same jobs.
SELECTING AND OFFERING	• **To evaluate candidates against prevailing top performers:** Using AI to compare job seeking candidates with others who have succeeded in similar roles within the organization. • **To generate customized offers:** Considering the listed salaries by competitor for the same job position and to increase recruiting effectiveness, AI can be useful to gauge the odds of whether a candidate will accept by matching a specific job offer with candidate's employment history. • **To anticipate candidate's behaviour:** AI helps in foreseeing a candidate's prospect to accept, execute, and continue in the position being offered.
ONBOARDING	• **To reduce the administrative tasks:** Automation being one of the features of AI helps in tracking the documents that were read, then capturing electronic signatures and once the actions are completed it automatically updates. This way HR need not be required to follow up manually everytime. • **To allow onboarding to occur 24/7:** AI through Digital applications or technologies enhance the onboarding process by directing the new hire across onboarding steps and suggesting subsequent actions to ramp up swiftly in their role. A chatbot is being used to respond against queries related to leave policies, remote-work or pay, vacations, etc. while dismissing contact with HR department on routine issues.

VIII.I.II. Learning and Development

As we push ahead into the year 2020, HR Technology providers are continually taking a glimpse at bringing AI to the focal point of every Human Resource Capital Management forum. In Table 4, we have tried to explain the importance of application of AI in Learning & Development framework:

TABLE 4
POTENTIAL OF AI IN LEARNING AND DEVELOPMENT

Role of AI applications in Learning and Development (L&D):	**To offer customized learning:** AI can assemble data on an employee's skill interests, learning preferences, work type, and projects and assignments and provide proper recommendations for courses to take up that will augment the employee's efficiency and competency in the workplace.
	To encourage collective learning: Collaborative approach of learning in organisations is very efficient for today's work culture. By adding Augmented Reality and Virtual Reality to micro-learning components of AI, HR Managers can set off a wide range of scope in Learning & Development for workplace collaboration. This promotes long-term learning goals without missing sight of short-term objectives [14].
	To enhance learning administration: AI combines different patterns and models that helps to modify prospectuses based on role, location, and line of business which alleviates the workload of administrators who have to prepare L&D modules for the teams.

VIII.I.III. Compensation & Benefits

AI could help create compensation measurements that reward employee endeavours to propel an organisation's objectives. It can likewise examine extraordinary areas of labour market data to produce authorized compensation rates. Table 5 depicts the importance of implementation of AI in Compensation & Benefits:

TABLE 5
POTENTIAL OF AI IN COMPENSATION & BENEFITS

Fairness	With the help of an authentic and good performance and reward data, the behaviours of superior employees can be distinguished utilizing algorithms to discover connections and patterns between previous compensation programs, the desired practices, and results that characterize a high performer. These components will help in

	removing the human bias, regardless of whether cognizant or oblivious and the employees can be rewarded depending their merit.
Individualization	Artificial intelligence can gather and dissect data about how we think and believe and, can anticipate how we may carry on in our personal and professional lives. By breaking down individual factors of motivation, it is conceivable to customize reward programs. This will assist employees to best match their wants and abilities with the hierarchical needs [15]. Remunerating employees by associating them to their interests and by allowing them the adaptability in choosing the program will keep them exceptionally engaged at work.
Agile Programs	Numerous associations are moving from remunerating their employees once in a year to doing it in small fragments. This may help in increased employee engagement and organisational commitment. Employees need not to hold up till the entire year to get their rewards for their performance. This generation awaits constant rewards and malleability in choosing them which can be commenced via AI.
Reduction in cost	Despite the fact that there will be huge investment in AI technology in coming years, it will decrease the operational expense definitely and it will be facile to deploy and run different programs at the same time covering any location. The enhanced viability of the programs utilizing AI will bring about higher RoI in form of decreased turnover, increased employee engagement and retention. This will make the investment more financially savvy to the organisations

	investing in AI.
Enhanced Employee Experience	Customized Compensation & Benefit programs, timely customized rewards, consistent execution, and simple access to data will prompt enhanced employee experience. Utilizing chatbots in operational exercises will diminish the disappointment of employees towards the execution of benefits and firm resolution of enquiry.

VIII.I.IV. Career Development

When pondering about the future of work and what it implies for one's profession, one cannot ignore subjects like Artificial Intelligence (AI) and Machine Learning (ML). The simplicity of automating different processes in any modern organisations is viewed as one of the main considerations in understanding the future work environment [16]. There are ways AI will change future careers which would assist in honing skills to keep flourishing in one's profession, this is illustrated with the help of the image below (figure 3):
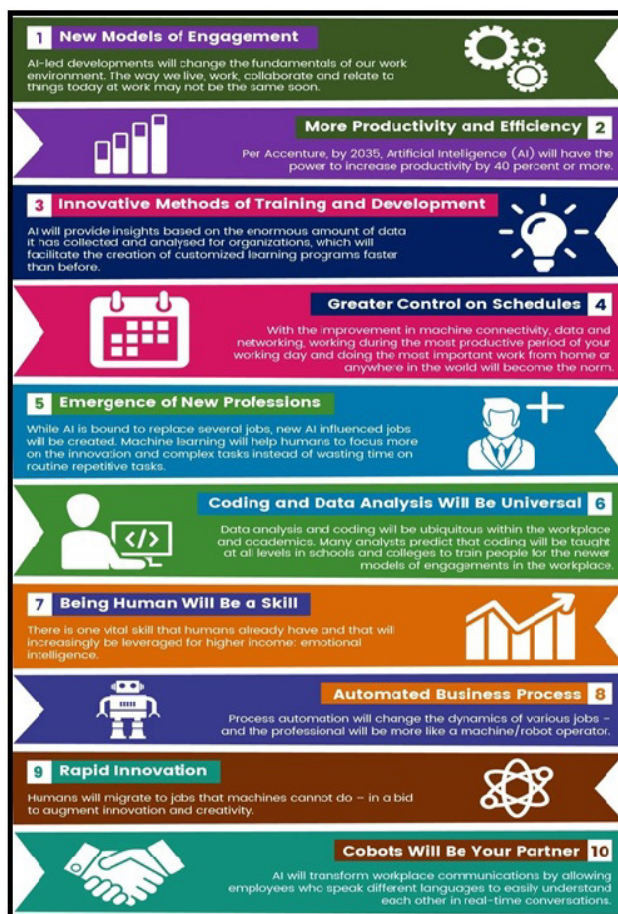
Fig.3. Potential of AI in Career Development

VIII.I.V. Talent Management
Organizations that neglect to perceive the changes brought by the development of HR analytics has the probability of falling behind in a marketplace loaded with vulnerabilities [17]. With that in mind, HR pioneers must consider the capability of AI and how to viably incorporate it into everyday tasks, similar to the resource intense Talent Management process. Table 6 depicts the importance of implementation of AI in Talent Management process:

TABLE 6
POTENTIAL OF AI IN TALENT MANAGEMENT

|	
AI as a talent management necessity	Artificial Intelligence can empower companies to understand the maximum potential of talent management by establishing a domain that addresses employees' needs and elevates retention. This kind of technology can customize career development, streamline skill gaps, and steer reward methodology—supporting Organisational Leaders, managers, and administrators in creating and conveying talent, which would in turn create strategic benefits for the business.
	AI can endow employees with rational suggestions for courses or perusing that will support in daily job responsibilities. Deviating from the traditional one-size-fits-all approach, this will help the employees to feel the variation in the knowledge that accounts for the fulfilment of their personal goals, needs, and well-being

	[18]. Organisations today need a challenger approach, more forward-thinking, and a strong strategy that they can communicate and not just centred on operations.

*VIII.II. Extent of AI implementation in HR functions in Indian companies and what is preventing them from using AI at workplace as a whole (2nd Objective):*The use of AI technologies to enhance productivity is anticipated to be one of the prominent trends in India's HR industry this year. With employees gradually working remotely due to the COVID-19 outbreak, IT and automation tools will come in handy as they support in streamlining communication at workplace, including conducting meetings, managing schedules, marking attendance, monitoring employee performance, and working on team projects. Nevertheless, while pursuing these developments, it is also crucial to realize the awareness towards AI technologies by different Organisations in India and to what extent it is being executed in different HR functions. For this purpose, we tried to find out through the questionnaire that what percent of respondents actually understand the basic concept of AI, Machine learning, etc. and what percent of respondents think their Organisation will start using AI for all HR purposes in near future.

Figure 4 shows 42% have heard about the AI technology but do not really understand the technicality part of it or for that matter how it functions. 37 % of all respondents assertively said that they understand the concept- Artificial Intelligence. However, the study reveals that 21% did not even understand AI's most simple tenets. This instantly raises some caution signs for companies. A knowledge gap like this can certainly shape how customers perceive AI, which is clearly not in a good way. In the absence of real knowledge and where media stories and contemporary culture out there are collectively foreseeing the growth of the machines, panic and doubts can easily fill in the gaps [19]. This calls for a well thought strategy to introduce about the benefits of AI to the unknown world.
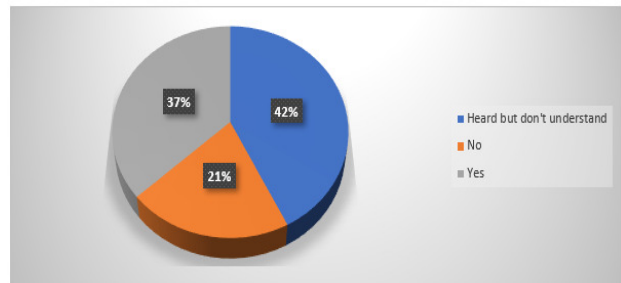

Fig.4. What % of respondents understand the basic concept of AI, ML, etc.

AI being one of the most advanced technologies that the world has seen in the last decade has completely changed the way organizations conduct their businesses. Today, a human's normal life, their networking and performance revolve around AI based applications. An extensive number of companies are consolidating their AI resources to mechanise their business functions and connect profoundly with both clients and employees.

The upswing of new technologies, agility, and transforming workforce models will radically impact the businesses soon. In anticipating this future, we tried to find out from the respondents that what did they think of their Organisation starting to use AI for all HR purposes in near future half of all respondents feel confident that their technical skills can enable a successful transition going forward. Figure 5 shows that 39% of respondents believe that their Organisation will start using AI for all HR purposes in near future, followed by 25% respondents who believe their organisation might start using AI in coming 6-10 years. By 2025, it is believed that there will be more than a fivefold rise in the ratio of organisations that use AI. The findings of the study suggest that the organizations are now starting to comprehend the massive inferences for redesigning skillset, job design, job reinvention that involves incorporating people and robotics more comprehensively across the workforce.
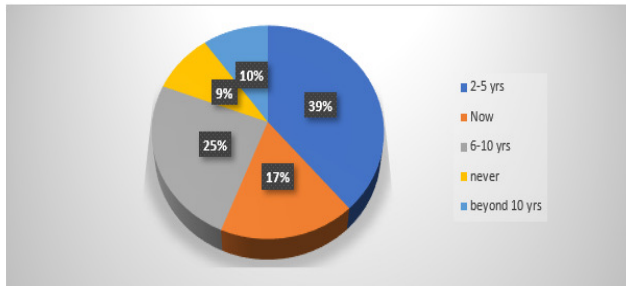

Fig. 5. What % of respondents think their Organisation will start using AI for all HR purposes in near future

Though AI has augmented as a competitive instrument in sales & Marketing, manufacturing, business analytics and numerous other domains of trade, it's impact in Human Assets (HR) domain has been one of the foremost debated subjects within the commercial world [20]. There is a solid reason behind this. A report emphasizes that in coming years AI will displace 1.8 million employments around the world, but it'll produce $2.9 trillion in trade value and recoup 6.2 billion hours of employees' efficiency by 2021 and generate 2.3 million employments by 2025 [21]. On one hand, AI is perceived as a job executioner and on the other hand, it is touted that it will re-evaluate HR and make a solid business case for HR. A wide range of articles have shown that advantages of AI exceed its drawbacks and all the more

along these lines, when it is supported with different other technologies, for example, ML, Internet of Things, etc. it is very close to reshape the technological trend across the world.

Regardless of the opportunities for the present and future, Indian companies have been slow to adopt AI. There are several reasons why a company may dread AI implementation. Figure 6 shows the findings of our survey concerning AI adoption in different organisations and later summarizes some of the most common factors that hold back further AI implementation. 28% of respondents showed concern towards lack of data availability due to which companies stay behind in adopting AI in their HR functions. This might vary from Company's industry and size. This was followed by 21.33% of respondents who believed scarcity of skilled people to understand the technology is the reason behind not adopting AI in HR function. 17.33% of respondents say that the most important reason they have not further adopted AI is because of their company culture that does not acknowledge the importance of AI. Other reasons include right vendors, integration issues, legal issues and so on. All the major bottlenecks holding back the organisations from using AI in HR functions are described below:
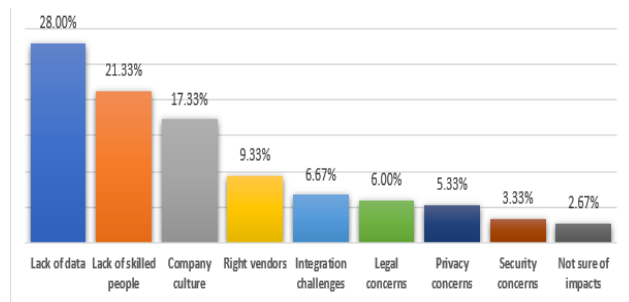
Figure 6. Major bottleneck holding back the organisations from using AI in HR functions

1. **Lack of data**: The data related concerns are presumably the ones most organizations are bothered about. It is a proven actuality that the system one builds is only as good as the data available. If one only uses information openly available, possibilities are that the competitors might be using the same information, as a result it will not give a competitive advantage. In certain industries, the probability is that enough data is not always available. But if one does have the data to prepare a model, one must be doubly sure of its quality. The data sets should be illustrative and balanced, or the probability is that the system might adopt bias from the data sets.

2. **Lack of skilled people**: AI for business is an evolving area but the number of professionals who understand the technology is still limited. Implementation of AI entails the backing of data scientists and other whizzes on the subject matter that may be challenging and costly to hire. Moreover, one is not sure if he is getting the right person for the job, unless one himself is an expert as well, who is aware that the new data scientist is good at his job. With the dearth of availability of experts and the high costs associated with their hiring, it may not be easy to find a vendor for your AI. But with the option available, of outsourcing the AI team, one can go through their portfolio to have an idea on what projects they already delivered and then have them outsourced in the company. As we know that AI implementation is a time-consuming and pricey process, having an external team alleviates the risk and this way one can start off with a small part of the system (PoC) to find out how it is going.

3. **Company Culture**: Many Company culture do not acknowledge the need for AI. Complexities in classifying business use cases are one of the biggest barriers to AI execution, as it requires the business leaders to have a deep comprehension of prospects AI tools, their risks, and shortcomings. Another issue is that some companies leap on the AI trend with too much confidence and no clear strategy. Implementation of AI involves a strategic tactic, identifying KPIs, and pursuing ROI. Else, one will not be able to gauge the results produced by AI and quantify the success / failure of the investment done.

4. **Difficulty assessing right vendors**: it is very important to understand the market before investing into any technology, else in the lack of technical know-how, one can easily be fooled. AI is an emerging field for businesses, and it is especially at risk as various companies overstate their experience whereas in reality, they may not be aware at all about how to use AI in solving actual business issues [22]. One can be cautious of not to fall for such fake vendors in the market by analysing about the companies one is considering have in their portfolio. An alternative approach could be taking a small step one at a time, such as asking for a workshop with the vendor, to see what they have different from other vendors in the market. And that, they understand your business, and have the right skills.

5. **Integration Challenges**: Assimilation of AI into your current business systems is more convoluted than just adding a plugin to your browser. There are so many things that needs to be considered for integration of AI such as- interfaces, data infrastructure needs, data storage, feeding the data into the system etc. A feedback loop also needs to be created to constantly enhance models based on people's actions. To reduce the amount of data stored and run simulations more promptly to produce accurate outcomes, it needs a good data sampling. One must have a good knowledge about how it is working and if it is worth your money at all. To make sure that everyone has a clear-cut knowledge of the process and that any possible integration challenges could be surmounted, the responsible person from the organisation will have to join efforts with the vendor to have broader expertise. The risk of failure can only be lessened when AI implementation is carried out in a strategic manner. Once AI is integrated in the system, training people on how to use the model, interpret the results, etc. is another vital task. An expert vendor should be able to instruct on everyday use of the model and recommend on further development of AI if needed.

6. **Legal issues**: With the implementation of AI comes few concerns too. One of them being, what if AI causes any kind of damage to someone? Who will be accountable then? The ordering party or the company who built the AI? Here comes the role of GDPR (General Data Protection Regulation). GDPR very clearly states on how data being treated as a commodity needs to be handled with care and if the big data is being treated in a GDPR-compliant way? Data being a very sensitive element, so be seriously taken care of, as any kind of leakage may threaten the position of the organisation, its image and maybe to its employees too.

7. **Security Concern**: Everyone from CIOs-CISOs-CRO, people with responsibility for corporate security, implementation of AI poses two types of risk. One risk is, that may change the nature of their jobs, like criminals, devious competitors, and inside threats manipulating their companies' amateur AI programs. The second risk can be that muggers will try to use AI in a variety of ways to take advantage of weaknesses in their victims' defences. Companies need to estimate how AI is being used in their products and services and execute a specific security measure to shield against new forms of attack, since the intelligence may be "artificial" however, the threats are all real.

8. **Privacy concern**: With evolving field of AI, it amplifies the ability to use personal information in ways that can infringe on privacy interests too. Hence, to assess the impact of AI on privacy of the individual and organisation, it is necessary to differentiate between data issues that are pervasive to all AI, for example, the occurrence of false positives and negatives or wrong patterns, and those that are identifiable to use of personal information.

VIII.III. Ways AI can be simplified to get the most out of it (3rd Objective): India must adopt AI in a significant way to sustain its excursion of socio-economic upliftment of its people. For the last 30-35 years, Services industry has led to the strong economic growth that has been the vehicle for India's advancement. Those industries were braced up by India's skilled English-speaking people in blend with India's traditional cost advantages. But in this Machine age, a mammoth number of populations is not as competitive. Indian service companies in coming years will be competing with international companies that enhance human workers or just replace them totally with advanced AI algorithms. Very soon the world will be considering India to provide data science facilities in considerably the same way it has provided IT and IT-enabled services in these years [23].

There are some important factors that need to be considered when implementing AI across organisations, that would help in getting the most out of it. Through our study, we tried to figure out in what ways AI can be streamlined to help the organisations to adapt to it and benefit out of it. The findings in Figure 7 depicts that 30% respondents believe understanding the concept of AI is very vital for organisations to benefit the most out of it, followed by 20.67% who believe providing meticulous training across the organisation on how to use it will make AI more simple to use it. The top five factors according to the findings of the study have been described below:
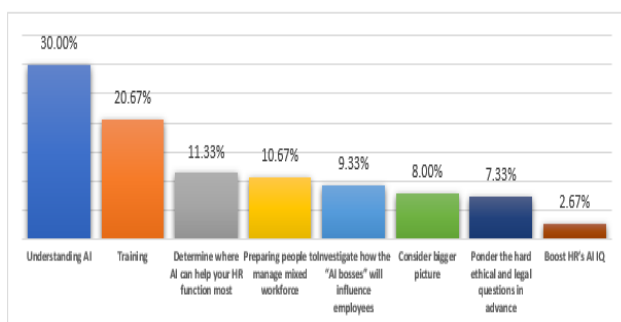
Figure 7. How in your view AI can be simplified to get the most out of it?

1. **Understanding the concept and importance of AI technology**

It is normal for any organisation to wisely think over on accepting any new technology at the workplace, as people are fearful of the lack of its comprehensibility. Same goes with application of AI. Therefore, it becomes very imperative for an organisation to ponder on few points before implementing AI in its system, like the use of AI into which areas, why to employ AI and will the application help balancing between work and personal lives of the employees.

Spending on artificial intelligence includes machine learning, overseeing human interactions and numerous other functions at an extraordinary speed that will offer massive value to one's business and will create a competitive edge. It is difficult but not unfeasible to understand AI but once employees understand the way to use AI, there will be an upsurge in the company's profit.

2. Training the employees to work on an AI

To implement AI in your business, training your employees to work on AI is an essential part of it. No plan can be successful unless the company has the support of its executives. Hence, it is the right and responsibility of every executive to know how an AI works generally, what are the technologies that can go with an AI, understanding Do's and Don'ts of an AI, etc. Few HR professionals think they are well conversant with AI to enhance HR, but the technology is evolving every day and one needs to get up to speed to understand AI application better. This requires reading reports, articles, attending conferences, tracking trends, and eventually rising the AI learning curve.

3. **Determine where AI can help the HR function most**

Use of real-time analytics helps the managers to see the impact that nonattendances, open shifts, and unplanned schedule variations will have on KPIs, letting them to take informed decisions that prevent issues prior to they occur. This will differ consequently according to organizational needs and the development of HR technology itself. Given the actuality of so many HR professionals being neophytes in this area, we must consider this with a grain of salt that for now at least few HR professionals look at the greatest potential in the areas of analytics, talent acquisition, time and attendance, T&D and compensation [24]. There's no necessity for you to procure the latest AI-powered alternative, if your HR functions are running efficiently, but in case your HR operations are unwieldy and unproductive, then it may well be worth to go out and get an AI-powered solution that enhances performance.

4. **HR's role in managing mixed workforce**

Deterrent tales like "one-size-fits all" have an open message to the companies who do not have a vision of the future workforce. These types of companies are not unique when

considering an attempt to become global through evolving technologies. Despite all this, only 8 % of HR leaders in UK consider their organisation has an AI strategy in place [25]. It emphasizes an apparent gap between those HR professionals who are concerned of the AI benefits and those who are vigorously transforming this vision into action. HR professionals are the people responsible for employing tomorrow's workforce, reorienting employees for the future and connecting the value of new initiatives. Hence, it becomes more crucial for them to align at every step of the AI journey to ensure success in their organisation.

5. Explore how the "AI bosses" will impact employees

With projects and daily work being managed by AIs, it will have a big impact on employees in manifold aspects, like establishing of additional work processes, development of new work mindsets or behaviours, difference in the social skills, etc. There will be some employees who will be more suited for AI-management compared to others. Here HR professionals would need to pursue these matters and facilitate with solutions to challenges as they arise [26].

VIII.IV. Participant's perceptions of AI implementation (4th Objective):

In this section, we have tried to explore the perception of AI implementation benefits among employees in the different industries in India.

Table 7 shows the distribution of demographic variables among the questionnaire sample. Most of the sample (84/50, 56%) were female, as the majority of the sample were managers (62/150, 41.3%) and between 29 and 39 years old (55/150, 36.7%) with 42.7% (64/150) who had spent around 4-7 years within the same organisation.

TABLE 7. RESPONDENT DEMOGRAPHICS (N=150)

Demographic and Variable	Frequency	n (%)
Gender		
Female	84	56.0%
Male	66	44.0%
Age(years)		
18-28	30	20.0%
29-39	55	36.7%
40-50	41	27.3%
51-61	24	16.0%
Job role		
DR-HR	19	12.7%
Manager	62	41.3%
IT Professional	45	30.0%
Others	24	16.0%
Tenure in the co.		
1-4yrs	26	17.3%
4-7yrs	64	42.7%
7-10yrs	44	29.3%
10 & above	16	10.7%
Company's Industry		
Small	35	23.3%
Midsize	66	44.0%
Large	30	20.0%
Govt	11	7.3%
non-profit	8	5.3%

Table 8 lists respondents' perception concerning the benefits of implementation of AI to overall Organisation. The response was moderate with a mean of 3.50 (SD 1.14). The belief that "AI can improve and streamline relationships with clients" ranked first with a high level of acceptance (mean 3.70, SD 1.29). The lowest-ranked item was "AI can transform internal communications and support" with a mean of 3.47 (1.12), a moderate level on the Likert scale.

TABLE 8. BENEFITS OF IMPLEMENTATION OF AI (N=150)

Rank	Items	Mean (SD)	n	Approx. agree rate	Level
1	Improved and streamlined relationships with clients	3.70 (1.29)	145	78%	High
3	Encourage employee creativity	3.62 (1.22)	138	72%	High

5	Transform internal communications and support	3.55 (1.19)	130	70%	High
2	Enhancement of services	3.65 (1.25)	140	75%	High
4	Helps with decision-making	3.59(1.20)	135	70%	High
6	Automation of administrative tasks	3.52 (1.17)	128	67%	Moderate
8	Transform internal communications and support	3.47 (1.12)	122	62%	Moderate
7	Minimizes errors	3.50 (1.14)	125	65%	Moderate

Deep learning in form AI and ML will transform every single industry. Across the next decade we will see a revolutionary change in the workplace as we start working in conjunction with AI. AI has the scope to make real-time decisions, based on effective computing technologies. With an HR department comprising the human element plus AI, businesses can provide an augmented experience for their candidates and employees.

In the nearing future, AI is anticipated to continue modifying information to increase benefits for employee engagement strategies, leading to improved productivity, dependability and retention. Where there are time and cost constraints and when it comes to offering guidance to employees on face-to-face basis [27], AI can provide required knowledge to help them keep updated.

Table 9 shows the results of the ANOVA test to find the statistically significant differences between the participants' responses based on the demographic variables. There was no statistical difference observed between variables- gender, age, job tenure or company's industry; however, there were significant differences by job role (P=.007), with significance defined as .05. Overall, IT Professionals tended to have the most beneficial opinions of AI, as they understand the importance of it in today's business scenario.

TABLE 9. ANOVA TEST OF SIGNIFICANCE

Variable	F value (df)	*P* value
Gender	0.947 (1, 234)	.378
Age	1.581 (3, 255)	.36
Job role	8.655 (2, 212)	.007[a]
Tenure	0.942 (2, 117)	.426
Co.'s industry	0.931 (2, 247)	.48

[a]Statistically significant difference

IX. IMPLICATION OF THE STUDY

As per the researcher's knowledge, there is a dearth of academic exploration conducted to unravel the scope of AI integration in HR. This study is one of its kind, as it is based on quantitative methodology that also included questionnaire method to understand and contribute to the concept building of AI and HR functions. In this study, various advantages, and challenges in the implementation of Artificial Intelligence in Human Resources functions have been discussed. Also, some solutions as per the findings and discussion with few HR Leaders have been presented.

The study and viewpoints of current workforce makes it clear that AI is the future of HR and other business functions too. The findings of the study clearly state that practically all functions in HR have prospective applying AI in it. The future has arrived, and HR need to boot itself toa pace with the frenzied speed of modern businessrequirements [28].

X. CONCLUSIONS

AI is said to abide by a standard S-curve pattern, starting off gradually but with swift spurt the technology develops, and companies learn how to control it. Integrating AI based application with HR functions have a greater influence in improving the overall organizational performance. Even though automated technologies like AI applications may not have the skills like humans i.e. the emotional and cognitive abilities, but then these potent AI based HR applications can with its own algorithms and patternsanalyze, predict, diagnose situations and provide practical solutions.

Artificial intelligence for sure is pioneering, yet again, one does not intend to have it just as a swanky add-on to his business. Thus, when establishing an AI implementation approach,

organisations should consider their overall business strategy and develop technology, such as AI, to adhere to the main business concept or vision [29].We have almost certainly only witnessed the tip of the iceberg when it comes to the capability of this intelligent software, and in sequence with our human intelligence, there are great things forward for the HR industry.

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