**Artificial Intelligence in Human Resource Reinventing in India- Opportunities and Challenges**

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**Abstract**

Artificial intelligence is a machine learning application. It is a software or computer based android, which designed to think like human beings. In modern days, Artificial intelligence is still on its initial phase in India where, it is not fully adapted by the Indian society. When we talk about artificial intelligence in Human Resource Management has made a progress over a decade. Artificial intelligence in Human Resource is reforming the way company is able to function in terms of workforce management and make human resource plans, that helps in increasing their productivity making work easier by deal with things related to Human Resource Management such as recruiting, training, data analysis etc. Artificial intelligence can perform tasks and reduce human efforts. Technology has advanced through the need for a machine with smart intelligence. In this generation smart devices and gadgets, there is no one who is not acquainted with the popularity of [Artificial intelligence services](https://www.mobinius.com/blogs/importance-of-artificial-intelligence-technology-in-hr). This article through light on AI in HR and challenges for Indian companies and people of society.

**Key Words:** Artificial Intelligence, Human Resource,Chatbots, challenges, Reinventing

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**Introduction**

AI is artificial intelligence, which is the ability of machines to reproduce human intelligence known to be artificial intelligence. Artificial intelligence in human resource means using computer based or software to deal with things related to Human Resource Management such as recruiting, training, data analysis etc. These machines adapt to the information provided as well as data analytics. AI automates and speeds up lot of administrative tasks. AI helps organizations HR to take some strategic actions. The HR department does not have to spoon-feed the employees with the information they need. AI Chatbots can handle all the queries of the employee and give appropriate solutions to all problems. Human resources is a team of members who operate the administration of each company and handle the recruiting and selection process and also maintain the emotional and mental well beings of the staff and workers in the company.

**Literature Review**

1. **Martincevic and Kozina (2019)**, Paper showed the vital entireness of challenges that AI based recruitment involves are unconscious judgement through hiring procedures by organizations. It was also concluded that companies should be capable of train people and machines to evade these favoritisms.
2. **Buzko, et al., (2016),** Artificial Intelligence is a technologies used in human resource development. The researchers ponder on hurdles of AI technologies in human resource area where authors noted that AI notable to identify the effectiveness of training costs.
3. **Dinesh G. Harkut and Kashmira Kasat (2019),** Artificial Intelligence - Challenges and Applications – In this study based on open access – peer reviewed it has concluded that building trust, AI human intervention, Investment, High expectation, Data security are few of the challenges which is faced by the organizations

**Objectives of the Study**

1. To study the complex problems of AI in ways similar to human logic and reasoning.
2. To improve the productivity and efficiency of HR.
3. To study the challenges of Human resource while using artificial intelligence.
4. To improved employee experience at the heart of any successful HR operation.

**Importance of Artificial Intelligence in Human Resources**

The importance of artificial intelligence is to achieve a more sustained and smart environment by AI in HR companies’ domain carries high possible solutions. So that, it can improve the skill set of new and pre-existing employees. It will handle the tasks of HR for them to work on important tasks. AI is most useful in the talent acquisition process of the HR department. It can handle repetitive tasks like resume screening, selecting the most appropriate resumes, scheduling interviews, and answering common questions.

Artificial Intelligence helps HR professionals to save time from routine tasks. They can focus on more valuable tasks like employee engagement, HR marketing, sourcing, and more. Talent acquired through the AI screening process will hire the most appropriate talent with relevant skills and experience that fits the job description. AI chatbots interact with capable candidates that match job requirements. It helps to filter the candidate funnel to the most desirable candidates. It helps to make an interview schedule and recruit the best candidate. Artificial intelligence is capable of making machines and devices generate and imitate human intelligence. This ability permits machines to grasp and modify spontaneously on the basis of the data analytics and hence providing responses that are more rectified.



 **Source:** Up Grade blog: Challenges in AI in Artificial Intelligence

**Opportunities of AI in HR**

1. **HR Reporting Confidence in AI Integration**

Most of HR practitioners welcome the integration of AI into their HR processes, according to Oracle and Future Workplace, 64% of them reported in the 2019 they would trust a robot over their manager for advice. Further, researchers also found:

1. 50% of workers are currently using some form of AI at work force.
2. The majority (65%) of workers are optimistic, excited and grateful about having robot co-workers, and Workers in India (60%) and China (56%) are the most excited about AI, followed by the UAE (44%), Singapore (41%), Brazil (32%), Australia/New Zealand (26%), Japan (25%), US (22%), UK (20%) and France (8%).
3. Men have a more positive view of AI at work than women do with 32% of men optimistic vs. 23% of women.
4. Over the past two years, we have found that workers become more optimistic as they have adopted AI in the workplace and HR is leading the way of life.
5. The 2019 study shows that AI is redefining not only the relationship between worker and manager, but also the role of a manager in an AI-driven workplace.
6. **Candidate Resumes on Smart Digital Forms**

HR is all about connecting companies with current and prospective employees on a personal level. For this achieved on a large scale, HR departments need to be leveraging scalable, AI technology. The repetitive, monotonous task can leave them with a poor impression. To alleviate some of the monotony, companies are using AI to help candidates transfer information from their resumes onto smart digital forms and more efficiently complete their applications. AI to help them analyze a candidate’s previous work experience and interests and match them with open roles best suited for them.

1. **Understanding Employee Referrals**

AI is enabling HR teams to better understand employee referrals by looking into the kinds of candidates employees are referring and gaining insight on who refers the most successful ones. AI can also analyze performance data from previous referrals and recognize when candidates similar to successful employees are being recommended for selection.

1. **Data-Backed Resources and Insights**

AI gives HR professionals data-backed resources and insights gathered directly from employees. This allows HR professionals to take action and deliver the employee experience the workforce wants and asks for, which as a result boosts engagement and lowers turnover. The world’s [COVID-19](https://www.cdc.gov/coronavirus/2019-ncov/index.html) response has altered how we work and it is increasing the need for technology to connect workers at all levels of an organization. It is also critical that leadership listen to employees and respond with action.

1. **AI-Backed Chatbots keep engagement conversation going**

Employee engagement is also a science, and part of that science is measuring and analyzing employee sentiment on a day-to-day basis. AI-backed Chatbots empower both the employee and HR professionals to keep the engagement conversation going all the yearlong. Chatbots can provide a natural, human-like and always-on communication tool that engages the user in personalized conversations. These conversations than analyzed and leveraged to address the specific concerns, wants and needs of the employee.

1. **Boosting Learning and Development Programs**

The future learning and development of departments using AI will increase tremendously over the next couple of years. Expect these departments to create responsive and adaptable learning programs that are able to meet the individual needs of employees. Learning and development has to not only teach people AI skills and digital handiness and prepare employees for new roles in human skill sets, analytical, strategic, critical thinking, cultural awareness, emotional intelligence.

1. Personalizing the learning journey based on job role, existing skill sets development plan and future goals, and proactively addressing any skills gaps that exist.
2. Assigning stretch assignments and cross-functional projects based on employee skill sets and projects listed across the organization through social learning channels.
3. Content matching and recommendations based on relevancy to the individual employee needs.
4. Real-time responses to frequently asked questions via Chatbots accessible to all employees to type in questions and quickly receive an automated response.
5. Coaching Chatbots accessible to leaders needing additional support in their roles.
6. **Leveraging Transactional Workforce Data**

HR teams can use AI to leverage transactional workforce data to predict employee potential, fatigue, flight risk and even overall engagement and ensure productive conversations to improve the employee experience, retention and performance. It is now possible to leverage AI to build smarter, personalized schedules and to leverage AI to review time-off and shift-swap requests in real time based on predetermined business rules.

1. **Powering Workforce Analytics**

Organizations are turning to workforce analytics and planning. In these workforce analytics applications, AI and machine learning are becoming even more apparent. AI in HR empowers managers to solve problems and can lead to more informed decisions that affect employee and organizational success. Using real-time analytics, for example, shows managers the impact that absences, open shifts, and unplanned schedule changes will have on key performance indicators, allowing them to make more informed decisions that avoid issues before they arise.

**Research Methodology**

The study based on secondary source of data composed from research papers, printed resources, online websites, HR blogs, and survey reports available by various IT companies and research organization. Top IT companies like – Oracle, Deloitte, EY, IBM, Accenture, Infosys, G2, KPMG and few research organizations have been taken for the study

**Challenges of AI in HR**

**1. Computing Power**

The amount of power these power-hungry algorithms use is a factor keeping most developers away. Machine Learning is the stepping-stone of Artificial Intelligence. There are various domains where have an ideas and knowledge to implement [deep learning frameworks](https://www.upgrad.com/blog/top-deep-learning-frameworks/) such as asteroid tracking, healthcare deployment, tracing of cosmic bodies, and much more

2**. Trust Deficit**

One of the most important factors that are a cause of worry for the AI is the unknown nature of how [deep learning models](https://www.upgrad.com/blog/machine-learning-models-explained/) predict the output. Many people in the world don’t even know the use or existence of [Artificial Intelligence](https://www.upgrad.com/blog/importance-of-artificial-intelligence-post-covid-19-world/), and how it is integrated into everyday items they interact with such as smartphones, Smart TVs, Banking, and even cars (at some level of automation).



 **Source:** Up Grade blog: Challenges in AI in Artificial Intelligence

**3. Limited Knowledge**

Artificial Intelligence as a better alternative to the traditional systems. The real problem is the knowledge of Artificial Intelligence. Apart from technology enthusiasts, college students, and researchers, there are only a limited number of people who are aware of the potential of AI.

**4. Human-level**

One of the most [important challenges in AI](https://www.upgrad.com/blog/importance-of-artificial-intelligence-post-covid-19-world/), one that has kept researchers on edge for AI services in companies and start-ups. These companies might be boasting of above 90% accuracy, but humans can do better in all of these scenarios. For a deep learning model to perform a similar performance would require unprecedented fine tuning, hyper parameter optimization, large dataset, and a well-defined and accurate algorithm, along with robust computing power, uninterrupted training on train data and testing on test data.

**5. Data Privacy and Security**

All the deep and [machine learning models](https://www.upgrad.com/blog/machine-learning-models-explained/) are based on is the availability of data and resources to train them. When we have data, but as this data generated from millions of users around the globe, there are chances this data can be used for bad purposes. Some companies have already started working innovatively to bypass these barriers. It trains the data on smart devices, and hence it has not sent back to the servers, only the trained model sent back to the organization.

**6. The Bias Problem**

The good or bad nature of an AI system really depends on the amount of data they are trained on. Hence, the ability to gain good data is the solution to good AI systems in the future. AI are biased, and only somehow define the nature and specifications of a limited number of people with common interests based on religion, ethnicity, gender, community, and other racial biases and problems.
**7. Data Scarcity**

With major companies such as Google, Facebook, and Apple facing charges regarding unethical use of user data generated, various countries such as India are using stringent IT rules to restrict the flow. Thus, these companies now face the problem of using local data for developing applications for the world, and that would result in bias. The data is a very important aspect of AI, and labeled data used to train machines to learn and make predictions.

[**Artificial Intelligence**](https://www.analyticsinsight.net/what-does-integration-of-artificial-intelligence-and-advanced-analytics-mean-in-business/) **in India**

In order to solve social problems, Indian start-ups are growing and developing AI solutions in the area of education, health, financial services, and other fields. [Artificial Intelligence](https://www.analyticsinsight.net/what-does-integration-of-artificial-intelligence-and-advanced-analytics-mean-in-business/) is bringing a dramatic shift in the world of technology where it can be applied for more productivity and success in order to simplify the system. AI is being used in many fields, offering high-performance and precise device operation with quality. In every area and not just [technology](https://www.analyticsinsight.net/understanding-what-disruptive-technology-actually-means/)**,** it has proven to be a path-breaking technology. As the fastest growing economy with the world’s second-largest population, India has a big stake holdings in the [AI revolution](https://www.analyticsinsight.net/how-is-ai-revolutionizing-iot-through-enhanced-battery-performance/). The leading technology institutions in the country, such as IITs, NITs, and IIITs, have the ability to be the cradle of AI researchers and start-ups. In order to solve social problems.

**Artificial Intelligence’s prospects in India**

* + - Digital assistants used by several highly advanced organizations to communicate with customers, saving the need for human resources.
		- Together with other innovations, organizations can use AI to make machines take decisions faster than an individual and perform actions faster.
		- In almost every area, AI powers several inventions that will help humans overcome the majority of complex issues.
		- Trade and Development agreement to operate together to leverage the power of cutting-edge technology to improve and expand trade, such as AI and block chain.

**Challenges of AI in HR in India**

The companies like Google, Microsoft, Amazon are trying to achieve the government’s needs of cloud computing and machine learning. Private companies will rush to win big contracts, add to the stream of funds to create innovative technology, and establish new AI and data scientific startups as the Indian government pushes for digital transformation and introduces more AI initiatives. However, some of AI’s major adoption challenges are:

* India has a comparatively small number of researchers in the field of machine learning and research production.
* India has very little local awareness of the latest knowledge that is being generated by others each day.
* Given the existing and potential possibilities, Indian businesses have been reluctant to accept AI.
* Despite the number of available standard packages, India does not have sufficient qualified personnel to apply machine learning to its own challenges and data.
* In its capacity to handle challenges, current AI strategies are minimal, and they will have to develop to deal with the complexity of life in India.

**Role AI in HR Companies**

Human resources HR is one of the most important departments of every company, be it established or start-ups. HR has a major role in the lives of the employees working with them. As they have to deal with the emotional and practical side of the workers and maintain a safe environment while recruiting new members in the company, they certainly need help and deal with all of the rigorous work. Here comes the reason how artificial intelligence will immensely benefit human resources.

**Problems of AI in HR Management**

* 1. Complexity of HR outcomes: measuring performance is difficult and the results unreliable.
	2. Small data, generated by infrequent occurrences such as employee dismissals
	3. Ethical or legal constraints, which generally require that decisions have explanations; and
	4. Employee reactions, which humans can monitor and control, but algorithms have trouble handling.

**Importance of AI in HR**

Artificial intelligence has real-time decision-making, gathered from the pre-programmed algorithms, and comprehensible computing techniques. The human resources department will undergo the influence of artificial intelligence. With the panoptic human factor of Human Resources along with the intelligence of machines. The companies will experience an improved and developed state for their candidates and employees. Not just this, but the [AI technology in HR](https://www.mobinius.com/blogs/advantages-of-ai-as-smart-assistant) will also lead to promoting the value for achieving results better and quicker.

**1. Talent Acquisition Process (TAP):** The most eminent implementation of artificial intelligence in HR noticed in the talent acquisition processes. From examining candidates, sustaining databases, scheduling interviews, and acknowledging the contestant’s questions to resolving them, and benefitting the HR team to concentrate on other important work such as sourcing, employee management, recruitment marketing, and more exercises that are productive. The Chabot based on AI can communicate with the candidates who have the potential, and assign them the jobs and positions as per the profile.

**2. Onboarding of New Recruits:** After the hiring of suitable candidates, the AI consolidated systems will introduce the newly hired employees to the company information and regulations on the first day. New employees will get all the essential information like details of job profile to the company’s policies, task assignment, information of team members, etc. through a mobile application or structured information on their laptop. This process refers to onboarding. Onboarding is a crucial process to enhance the ability to remember and improve the productivity of the HR team. Artificial intelligence for HR permits customizing of the processes to oblige to separate employees and their corresponding positions.

**3. Learning and Training Programs:** The AI development services will also help the employees learn and train themselves about the relevant positions and requirements from their side. It will also help them gain knowledge about the ongoing technologies and software developments in the market to stay up to date and understand the employees based on their job description, relevant set of skill and information employer can allotted for better employee development.

**4. Decision Making:** [AI applications in HR](https://www.mobinius.com/blogs/artificial-intelligence-machine-learning-and-their-smart-applications) enhances the ability to think and take real-time decisions with more evolved output. To aid and support one’s phrenic capabilities, the AI has been structuring to provide a great sense of encouragement. The mental and emotional state to be taken care is very important in the workplace, which is the crucial task of HR to handle.

**5. Leadership:** AI will support and improve the trainees; it can also enhance the working methods of the trainers and leaders of the project in a company. By asking questions to the members of their respective teams, the AI will analyze the structure of the leader’s qualities and provide them with the abilities they lack, or the qualities they need to adapt.

**6. Directorial Tasks:** AI can evolve the HR strategy, manage the employees, analyze the company’s policies, and manage the payrolls of each employee. It can make use of the space and equipment in the buildings, to allow the HR respective to concentrate on the important workload.

**Artificial Intelligence has transformed HR**

* [The importance of AI in HR](https://www.mobinius.com/blogs/importance-of-artificial-intelligence-technology-in-hr) departments professed conviction to the AI integrated techniques. They find it more useful and beneficial to work with AI machines and robots around them.
* The resumes of the candidates are on digital platforms with the help of smart devices and gadgets.
* It has focused on maintaining and organized the data and backing it up to gain more attained knowledge and insights into the resources.
* It will develop a learning experience and boost the confidence of workers.
* The [AI agency](https://www.mobinius.com/)will uplift the workforce by analyzing the data and empowering them.

**Conclusion**

Although these challenges in AI seems very discouraging and devastating for humankind, through the collective effort of people. The latest advancements in machine learning and artificial intelligence are rapidly reaching mainstream. This has resulted in a massive shift in the way people across the world interact with technology and their teams. The relationship between humans and machines being redefined at work, and there is no one-size-fits-all approach to successfully managing this change. Instead, organizations need to collaborate with their HR organization to personalize the approach to implementing AI at work in order to meet the changing expectations of their teams around the world.In general, India’s digital footprint has seen tremendous growth. The government is also moving different programs toward the objective of technical infrastructure. With a little more drive towards resources and frameworks that boost its development, the Indian artificial intelligence market, which is regarded it as emerging, can certainly take a leap.

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