

## CHALLENGES, APPLICATIONS, PRIVACY & SECURITY RISKS, AND TRANSFORMATION OF AI IN HUMAN RESOURCE

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### ABSTRACT

*Artificial intelligence is quickly advancing in the modern world, with new highly developed innovations. Deep learning, machine learning, neural networks, robotics, big data, and bit coin are just a few of the applications. In this scenario, computer systems are meant to excel at tiny tasks such as facial recognition, automated transportation systems, self-driving cars, participation in dangerous jobs, computerised procedures, reduced human effort, time-saving, and other presentation-related chores. Artificial intelligence can automate processes and save time for humans. As technology has progressed over time, the demand for a machine with smart intelligence appears to have increased. No one in this generation of smart devices and gadgets is unaware of the growing popularity of artificial intelligence services. Everyone wishes for such applications to be a part of their professional lives. The primary goal of this study is to address the problems, applications, impact, privacy and security risks, and, most importantly, the revolution of artificial intelligence in human resource management. The conclusion is that AI will completely transform the HR department's workflow structure. Companies would like to have a competent team of employees who can handle and maintain cutting-edge software and tools.*

**Keywords** – Artificial intelligence, human resource, challenges, application, privacy, safety, risk, transformation etc.

### 1. INTRODUCTION

Artificial Intelligence (AI) is a cutting-edge innovation and emerging technology that allows machines to have human-like intelligence. AI is a cutting-edge technology that allows robots to learn from data and make recommendations or take actions based on it. AI may be used in a variety of ways in HRM to organise and manage processes and improve organisational efficiency. Because of its ultra-fast calculation capacity, very advanced algorithm, and high-quality data, AI distinguishes itself from other common

software. This software allows us to run our daily operations in a consistent and accurate manner. In the field of human resources, AI has enormous potential to improve HR tasks such as recruitment, salary computation, employee self-service, self-access to pay stubs, and a variety of other services. AI training devices and software engineers are collaborating to collect a big amount of data, which will then be used by artificial intelligence to create superior working techniques.

Many elements influence the entire development of an industry, including workforce efficiency, technology utilised, and the wise utilisation of all resources at a low cost. With respect to smart automation, this study focuses on the benefits of Artificial Intelligence and the unique aspects of AI for HR via Agnostic Chabot technology. This research is proving at the introduction of new innovations-based technology is the most suited technique to complete HR functions automatically with increased security as AI advances. When AI-based HR technology is implemented in a company, it can give both short- and long-term benefits. During the study, it was discovered that industries benefit from them in a variety of ways. In today's environment, an increasing number of start-ups are developing AI-based technology and providing AI services to HR functions for a variety of purposes. In order to stay competitive in today's rapidly changing global market, businesses are collaborating with AI and HRM in a variety of decision-making processes.

## 2. AI IN HR

Artificial intelligence (AI) refers to technology that performs a task that requires some amount of intelligence to complete — in other words, a tool that has been trained to mimic the abilities of a human. In 1956, the term "artificial intelligence" was first used in academic circles. AI is effective in a variety of business operations, including helping to reduce the strain and job pressure on employees. Rapid changes in the business environment necessitate quick responses. AI was confined to myths, literature, and theory in the 1800s. Classical philosophers imagined citizens interacting with machines. In 1956, a significant milestone in AI was reached. The importance of technology advancement in the overall growth of a business is being

recognised more and more. The simple solutions brought by technology to the tough problems of all organisational activities, including HR, are attracting managers from all levels. On the other hand, some argue that HR is the sole function with a significant human component. Because it is an art to deal with human-related issues, the existence of AI could stifle the humanistic approach to HR-related duties.

Artificial intelligence uses pre-programmed algorithms to make real-time decisions, as well as coherent computing approaches. Artificial intelligence will have an impact on the human resources department. Companies will experience an upgraded and evolved condition for their candidates and employees as a result of the panoptic human aspect of Human Resources combined with the intelligence of technology. Not only that, but AI in HR will also lead to a greater emphasis on the technology of attaining better and faster results. Artificial intelligence is capable of generating and imitating human intelligence in robots and devices. This capability enables robots to understand and adapt information on the fly based on data analytics, resulting in more accurate responses.

AI-enabled applications are already in use in healthcare diagnostics, targeted treatment, transportation, public safety, service robots, education, and entertainment, but they will expand in the next years. AI, like the web, is changing the way people interact with the world and has the potential to replace economic processes. AI has progressed in recent years into a powerful tool that allows machines to think and act like humans. Furthermore, it has attracted the attention of IT businesses all over the world, and it is seen as the next major technological revolution following the rise of mobile and cloud

platforms. It's even been dubbed the "fourth

technological revolution" by some.



**Figure 1: AI in HR**

In the HR industry, artificial intelligence (AI) refers to technology that is utilised to perform a work that requires some level of intelligence, primarily to assist humans in performing routine activities. AI is unlike any other software in that it requires three fundamental components to function: high-speed computation, a large volume of high-quality data, and sophisticated algorithms. Using an approach that integrates quality data with quick calculation services, core AI technologies improve the accuracy and reliability of common procedures. Self-service transactions, recruiting and talent acquisition, payroll, reporting, and access regulations and procedures are just a few of the HR areas that AI may help. AI integration into HR administration operations, according to HR experts, will benefit and improve the entire employee experience. More capacity, time and budget, as well as precise information, will be available for effective people management.

### 3. ARTIFICIAL INTELLIGENCE WORK FOR HUMAN RESOURCE

The unemployment rate in the United States is low, and technology can help businesses identify the finest personnel in a competitive market—but artificial intelligence can be used by HR in a variety of ways beyond hiring. AI and automation have the potential to transform the workplace and HR management. Artificial intelligence is generally used in HR to refer to data that is processed by algorithms to make choices. Machine learning can be used to continuously improve the quality of decision-making.

- Make judgments on employee management and strategic planning.
- Examine workplace policies
- Automate tasks that were previously performed by employees.

It's encouraging to see businesses begin to recognise the many advantages of big data in terms of managing their most valuable asset; their employees.

- ✓ **Litigation Approach:** The fact-based nature of employment-related disputes necessitates the acquisition of papers and other facts. However, according to Littler's poll, only 5% of respondents use advanced analytics to influence their litigation strategy. Employers may be unaware of the advantages of utilising analytics in this situation. "It's revolutionary to be able to use data early in a case to eke out ideas before taking a deposition or analysing the reliability of witnesses." GPS data from work trucks, routing instructions, conversations concerning the technicians' assignments, invoices, and cell phone and login information might all be gathered by the company.
- ✓ **Pay Equity:** Pay equity can also be assessed using data analytics. At the state and local levels, legislation in this area is rapidly changing. At least 12 states, for example, have established legislation forbidding employers from asking job seekers about their previous pay. The goal of such legislation is to put an end to long-standing pay disparities based on gender, race, and ethnicity.
- ✓ **Chatbots:** Chatbots are a type of technology that allows employees to access vital policy and procedure information from anywhere and at any time. Chatbots are text-based chatbots that can answer frequent employee questions. Employees, they feel, are more comfortable utilising chatbots for transactional questions regarding paid-time-off policy, open enrolment, and leaves of absence than they are with other kinds of engagement. Employers who utilise chatbots must ensure that they are in compliance

with federal and state data security, disability, and other employment laws.

- ✓ **Legal Pitfalls:** When utilising AI to guide HR strategy, HR professionals must keep an eye on systems for bias. They must be on the lookout for disparate impact, which occurs when an apparently fair or neutral criterion is discriminatory in practise. A recruiting tool, for example, may clear out candidates who live more than 10 miles from the job site. What if the surrounding communities are primarily made up of affluent white families? These employment criteria may have a racially and ethnically uneven impact.

HR professionals should be:

- Aware of the legal theories that could be used against firms who use technology to reduce legal risks.
- When evaluating products, talk to technology vendors about potential legal pitfalls.
- Examine systems for inconsistencies in impact, security, and other legal issues.

#### 4. CHALLENGES OF ARTIFICIAL INTELLIGENCE IN HR

As a result of AI's integration into the human resource department, workers now need a specific set of skills. Most of the time, workers find it tough to adapt and use AI tools, as well as to be proficient in the field of digital technologies (Jain S., 2017). Human resource management is the most important aspect of any firm, and introducing an AI system will have an impact on management levels,

allowing employees to be courageous. Finding the right person to manage AI tools is a major challenge for the industry, and it is often challenging for the HR department. Another constraint and problem is that the HR department is limited in its ability to make judgments in day-to-day operations since technology undermines HR's authority and involvement in corporate decision-making.

- ✓ **On boarding:** As soon as a new employee is on boarded, a set of repeated tasks must be completed. Handling freshly hired employee's one-on-one will take a lot of time and effort for HR professionals. As a result, businesses employ user-friendly software that contains all of the necessary information for new hires. Its fundamental responses to the most basic inquiries posed by new hires. The HR manager can save time by getting new hires involved later in the on boarding process. It's also been suggested that AI's role in human resources is more of a facilitator, assisting human resources in completing tasks in less time and thus freeing up time for them to focus on learning and developing key roles such as "creative thinking," "design skills," "psychological understanding," and "critical decision-making."
- ✓ **Instruction & Training:** According to Jain (2016), utilising AI-enabled tools to design learning and development opportunities for employees will improve job satisfaction. Creating career development programmes that are tailored to the needs of employees leads to lower absenteeism and more productivity. Getting recommendations from Alexa and Siri

is essentially a form of learning. We are currently in the paradigm of learning through flows rather than instructions via a digital experience. As a result of AI's ability to focus learning through experience, design and critical thinking have become more crucial. Individual employee maps for workers could be a new type of AI-enabled learning and development approach.

- ✓ **Mentoring and coaching services:** Another important HR role that is unlikely to be supplanted by AI is coaching and mentoring. Unlike popular opinion, software such as "mobile coach" helps employees assess their needs and construct customised learning and development programmes. As a result, software can evaluate a worker's employment requirements and direct them toward their desired career path. Team development; various types of minicourses provide workers with ready-to-use chances for coaching and mentoring. Some delicate issues involving employee conduct and attitudes, on the other hand, still necessitate the intervention of a person to provide interpretation.

#### 4.1 Key challenges

- It would improve the quality of life and access to choose for a substantial portion of the country by increasing access to quality health services and resolving locational access constraints.
- Financial inclusion for vast segments of the population who have previously been denied access to formal financial instruments.

- Providing real-time advice to farmers and assisting them in addressing unforeseen variables in order to boost productivity.
- Developing smart and efficient cities and infrastructure to satisfy the needs of an urbanising population

## 5. USES OR APPLICATIONS OF AI IN HR

Among the many AI applications in the human resources sector, HR professionals should anticipate to see changes in recruitment and on boarding, employee experience, process optimization, and administrative work automation.

### 5.1 Talent Acquisition process (TA)

- The most prominent application of artificial intelligence in HR can be found in talent acquisition. From screening candidates to maintaining databases, organising interviews, and addressing and resolving contestant questions, AI reduces the time and effort required to complete these and other routine jobs.
- It significantly reduces the hiring process and time, allowing the HR team to focus on more critical tasks like sourcing, personnel management, recruitment marketing, and other productive activities.
- The AI-assisted recruiting will aid in the selection of a candidate that meets the majority of the company's needs. As a result, the screening procedure is simple, quick, and deserving.
- Chatbots powered by AI may communicate with high-potential

individuals and assign them jobs and positions depending on their qualifications. This procedure will identify the best and most deserving individual who perfectly matches the job description. As a result, the best candidates will be booked for hiring interviews.

### 5.2 On boarding of New Recruits

- Following the hiring of appropriate applicants, AI consolidated systems will on the first day expose newly hired employees to company knowledge and regulations.
- New employees will receive all necessary information, such as job profile details, corporate policies, task assignments, team member information, and so on, via a mobile application or structured information on their laptop. On boarding is the term for this procedure.
- On boarding is a critical procedure for improving the HR team's capacity to remember and efficiency. Candidates that go through a well-organized and informative on boarding process are more likely to stay with the organisation in the long run.
- Artificial intelligence for HR allows for the customization of processes to require the separation of employees and their respective positions.
  - Answering various FAQs by new employees are some examples of AI in HR.

- Explaining the employment profile, responsibilities, and benefits
- Obtaining pertinent and crucial contact information within the organisation, as well as verifying legal documents, etc

### 5.3 Learning and Training programs

- Employees will be able to learn and teach themselves about the relevant positions and needs using AI development services.
- It will also assist them in staying current by providing information on current technologies and software advances in the market.
- By evaluating the documents and exams, the AI will automatically comprehend and assign appropriate training to the employee. Relevant skill set information will be assigned based on their job description for improved growth.
- Based on last year's data, AI in HR technology can analyse the data and advise the HR team about the employees' training needs. This clever strategy will boost employees' productivity and thinking, as well as teach them more quickly and effectively.

They can also teach specialised programmes and teaching abilities so that employees can self-learn and execute according to the needs of the company.

### 5.4 Phrenic Decision Support

- We've all heard about how AI in HR improves applications' ability to think and make real-time judgments with more evolved outcomes.
- The impact of AI on the HR team's cognitive computing has been well documented. The AI has been designed to create a strong sense of encouragement to help and support one's phrenic skills.
- The mental and emotional well-being of employees is critical in the workplace, and HR has a critical role to play in this area. AI will assist them in gaining insight into the minds of their co-workers and analysing their moods and mental states.

### 5.5 Leadership

- Because AI will assist and improve trainees, it will also improve the working techniques of trainers and project leaders in a company. The AI will analyse the structure of the leader's qualities and provide them with the abilities they lack, or the qualities they need to adapt, by asking questions of their respective teams.
- Secondly, the leaders can self-assess by looking at the dashboard and improve their skill sets according to the needs of the working manner.

## 5.6 Directorial Tasks

- Recurring administrative and directing responsibilities can be pre-programmed by AI. It has the ability to evolve HR strategy, manage employees, assess corporate policies, and handle each employee's salary.
- It can make use of the space and equipment in the facilities to free up HR personnel to focus on the most critical tasks.

## 6. PRIVACY & SECURITY RISKS RELATED TO ARTIFICIAL INTELLIGENCE IN HR

- While cyber security has long been considered a part of IT, the privacy of HR data offers a number of issues for AI development in the workplace. With the rise in cyber-related incidents, cyber security has moved from the tech department to the front lines of business, with HR serving as a business front door.
- Employee data protection awareness is critical, and suitable governance procedures must be established when working with AI. Not only should such standards include the entire technical and data entry processes, but they should also cover a number of legal and ethical considerations. Due to the intricacies of AI and the training data involved, organisations must obtain sufficient consent to avoid further complications.
- Give employees a privacy notice outlining why their data is needed for the AI solution to achieve the intended results. IT security departments should

have policies in place to make it obvious to employees what data is permitted to collect for the AI solution and what data is not permissible.

- During the processing of an employee request, the chatbot solution should not keep any personally identifiable information (PII) or confidential information. Personal information and confidential data should be sent through a secure internet or intranet protocol.
- Training data should be secure for machine learning purposes, with no HR PII or private information.
- There is the potential for a large amount of personally identifiable information (PII) to be collected. Masking features should be included in machine-learning solutions so that observers do not discover specifics about other users.
- During conversational AI transactions, HR systems should only release permitted information to employees. Companies must ensure that proper controls over HR data are in place. If they don't, the algorithm's output will be flawed, leading to a series of incorrect conclusions.

## 7. IMPACT OF ARTIFICIAL INTELLIGENCE ON HR

- It would improve the quality of life and access to choose for a substantial portion of the country by increasing access to quality health services and resolving locational access constraints.



- Financial inclusion for vast segments of the population who have previously been denied access to formal financial instruments
- Providing real-time advice to farmers and assisting them in addressing unforeseen variables in order to boost productivity.
- Developing smart and efficient cities and infrastructure to satisfy the needs of an urbanising population

## 8. TRANSFORMATION OF AI IN HUMAN RESOURCES?

- The importance of AI in HR departments affirmed their belief in AI-assisted techniques. Working with AI devices and robots around them is more useful and advantageous to them.
- Candidates' resumes are stored on digital platforms using smart devices and gadgets.
- In the United States, AI development firms have honed their understanding of personnel recruiting and recommendations.
- It has concentrated on preserving and organising data, as well as backing it up, in order to get additional knowledge and insights into the resources.
- The most fun yet helpful effect of AI in the world of HR is that it will allow employees to communicate with chatbots and have interesting conversations without hesitation.

- As previously said, it will foster a learning environment and increase worker confidence.
- By studying and powering the data, the AI agency will improve the workforce.

## 9. CONCLUSION

Indeed, AI has allowed for very methodical and precise HR business solutions. AI aided in the completion of complex activities such as personnel record maintenance, talent management, employee development, employee assessments, and employee benefit allocation, among others. There were numerous benefits to using AI technology for human resources and recruiting purposes, but nothing in life is flawless. One important feature of AI technology that it lacks is empathy and human interaction, or the ability to handpick a candidate and get to know them personally during the recruitment process, which is simply not possible at this moment if you rely entirely on AI technology to do all of your work. Humans experience emotion, whereas AI sees data, and this will not change in the near future. To function properly, AI development businesses in India must invest in proper data storage management. The HR department's workflow structure will be completely transformed by AI. Companies would like to have a competent team of employees who can handle and maintain cutting-edge software and tools.

Artificial intelligence replaces much of the laborious analysis and difficult planning that go into developing people programmes with data-driven recommendations rather than gut reactions. As a result, artificial intelligence has the potential to assist HR departments and managers in making better, less biased decisions and taking more effective measures.

Artificial intelligence has significantly enhanced people's lives in a variety of ways, and individuals are no longer the same as they were before artificial intelligence was introduced. It has resulted in time savings, which has resulted in higher output from enterprises and daily human activities. The advancement of artificial intelligence has led to a reduction in human effort, computerised procedures, automated transportation systems, and involvement in dangerous vocations. It has a procedure that automates practically all of their actions. Artificial intelligence has a daily impact on all of our lives. Artificial Intelligence is influencing our choices in one way or another, whether we are using our smartphone, surfing the internet, buying items online, using navigation, wasting time on social media, or listening to songs on our favourite music streaming service. Artificial intelligence has a number of advantages, including reduced risk of error, improved decision-making, the ability to work in a continuous manner, the ability to handle complexities, and optimal resource use.

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