

A Study Regarding How AI Technology Helps in HR Practices

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Abstract:

We consider the gap between the promise and reality of artificial intelligence in human resource management and suggest how progress might be made. We identify four challenges in using data science techniques in HR practices:

- complexity of HR phenomena
- constraints imposed by small data sets
- ethical questions associated with fairness and legal constraints and
- employee reaction to management via data based algorithms. We propose practical responses to these challenges and converge on three overlapping principles - causal reasoning, randomization, and process formalization— that could be both economically efficient and socially appropriate for using data analytics in the management of employees.

The use of AI in HR is a growing trend that is transforming the way organizations manage their workforce. AI can be used to streamline HR processes, automate administrative tasks, and provide valuable insights into employee behaviour and performance.

Some of the most common applications of AI in HR include talent acquisition, performance management, and employee engagement. By leveraging AI, organizations can improve efficiency, reduce costs, and make more informed decisions about their workforce. However, the use of AI in HR also raises concerns about privacy, bias, and the ethical implications of using AI to make decisions about employees. To maximize the benefits of AI in HR while minimizing the risks, organizations must be transparent about how the technology works, establish clear guidelines around its use, and ensure that it is used ethically and responsibly.

Introduction:

The speed with which the business rhetoric in management moved from big data (BD) to machine learning (ML) to artificial intelligence (AI) is staggering. The match between the rhetoric and reality is a different matter, however. Most companies are struggling to make any progress building data analytics capabilities: 41% percent of CEOs report that they are not at all prepared to make use of new data analytic tools, and only 4 percent say that they are “to a large extent” prepared (IBM 2018). “AI” conventionally refers to a broad class of technologies that allow a computer to perform tasks that normally require human cognition, including decision-making. Our discussion here is narrower, focusing on a subclass of algorithms within AI that rely principally on the increased availability of data for prediction tasks.

Outcomes are easily measured, are often already collected electronically by the sales process, and the number of observations – sales of a particular item across the country over time, e.g. – is very large, making the application of big data techniques feasible. Although marketing is not without its ethical conundrums, the idea that companies should be trying to sell more of their products is well-accepted as is the idea that business will attempt to influence customers to buy more. The effective application of AI to human resources problems presents very different challenges. They range from practical to conceptual, including the fact that the nature of data science analyses when applied to people has serious conflicts with criteria societies typically see as important for making consequential decisions about individuals.



Consider the following:

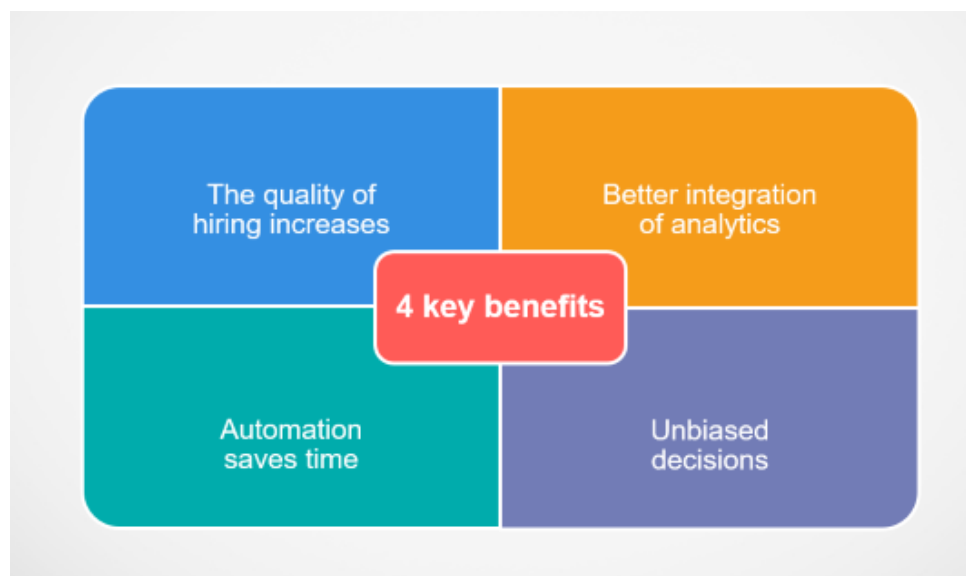
- A first problem is the complexity of HR outcomes, such as what constitutes being a “good employee.” There are many dimensions to that construct, and measuring it with precision for most jobs is quite difficult: performance appraisal scores, the most widely-used metric, have been roundly criticized for problems of validity and reliability as well as for bias, and many employers are giving them up altogether. Any reasonably complex job is interdependent with other jobs and therefore individual performance is hard to disentangle from group performance.
- The data sets in human resources tend to be quite small by the standards of data science. The number of employees that even a large company may have is trivial 3 compared to the number of purchases their customers make, for example. Moreover, many outcomes of interest are rarely observed, such as employees fired for poor performance. Data science techniques perform poorly when predicting relatively rare outcomes.
- The outcomes of human resource decisions (such as who gets hired and fired) have such serious consequences for individuals and society that concerns about fairness – both procedural and distributive justice – are paramount. Elaborate legal frameworks constrain how employers must go about making

those decisions. Central to those frameworks is the concern with causation, which is typically absent from algorithm-based analyses.

- Employment decisions are also subject to a range of complex socio-psychological concerns that exist among employees, such as personal worth and status, perceived fairness, and contractual and relational expectations, that affect organizational outcomes as well as individual ones. As a result, being able to explain and also to justify the practices one uses is much more important than in other fields.

- Finally, employees are capable of gaming or adversely reacting to algorithmic based decisions. Their actions, in turn, affect organizational outcomes. To illustrate these concerns, consider the use of an algorithm to predict who to hire.

As is typical in problems like these, the application of machine learning techniques would create an algorithm based on the attributes of employees and their job performance in the current workforce. Even if we could demonstrate a causal relationship between sex and job performance, we might well not trust an algorithm that says hire more white men because job performance itself may be a biased indicator, the attributes of the current workforce may be distorted by how we hired in the past (e.g., we hired few women), and both the legal system and social norms would create substantial problems for us if we did act on it.



Benefits of using Artificial intelligence in Human practices:

1. Streamlining hiring and removing biases in recruitment

Hiring new employees is competitive right now. Taking too long to find the right candidate may mean they're off the market before you even reach them.

From screening resumes to scheduling interviews to answering potential candidates' questions, AI can **cut down on the time you spend sifting through data** and doing routine recruitment tasks. It can also eliminate biases to ensure you find the right candidate. Here's how:

- AI-enabled screening can **narrow down your applicant lists** by sorting out those with the most relevant skill sets.
- If programmed right, screening software considers candidates based entirely on qualifications and **eliminates unconscious bias** that can sometimes affect the initial screening process.
- AI can **perform background checks** or other analyses to ensure the candidates you talk to are the most qualified.
- **Chatbots** can answer potential hires' questions, schedule interviews, and communicate key information with them before and after the interview.

All this saves you time and keeps the process fair. And you can focus your efforts on conducting the interviews and choosing the right candidates.

2. Simplifying HR functions

Because AI tech is available 24/7 and able to eliminate human errors from everyday processes, it can create a better HR experience for employees and managers.

For instance, you can automate your PTO request procedure so employees don't have to check in directly with HR to plan out their time off. They can enter their request directly into a system that checks the dates against other employees' approved PTO. The system can let the employee know right away whether they're likely to get it approved.

Reducing the time managers and HR spend away from work to coordinate schedules frees them up for more important tasks. And employees aren't left waiting as they try to make plans.

3. Improving onboarding processes

A new employee's onboarding experience has a big impact on their job satisfaction and performance, and subsequently, on retention rates.

AI can simplify things by streamlining and automating a lot of the work involved. For example, it can:

- Automatically verify employment documentation
- Manage employee requests for hardware or account access
- Answer FAQs at key points in the process
- Deliver company policies and procedures
- Inform new hires about the team they're joining or specific tasks they're assigned

4. Developing a more useful training strategy

AI in your training programs can tailor the learning experience to employee needs. You can implement it in your courses to assess employees' knowledge and recommend specific training programs to bring them up to speed.

Objectives:

- ✓ Assist hiring managers: AI reminds them of upcoming interviews and provides details on candidates. AI can also help overcome subjectivity by gathering data from previous employees in similar roles and preparing targeted questions for hiring managers.
- ✓ AI tools automate away common HR tasks like benefits management and triaging common questions and requests, HR teams will be "free to do more of the creative and strategic work that has a bigger impact on the success of their companies."

Important Findings of the Study:

- When AI is used in HR, there are several important findings that can be observed, including:
 - ❖ **Improved Hiring Process:** AI can automate many of the time-consuming and repetitive tasks associated with recruitment, such as resume screening, pre-employment testing, and even initial interviews. This helps HR teams to identify the most qualified candidates more quickly and efficiently.
 - ❖ **Increased Employee Engagement:** AI can be used to analyse employee data and identify patterns and trends that may indicate issues with employee engagement or satisfaction. This can help HR teams to take proactive measures to address these issues before they escalate.
 - ❖ **Better Talent Development:** AI can be used to identify skill gaps within the workforce and provide personalized training and development opportunities to employees. This can help to improve employee performance and retention.
 - ❖ **Enhanced Diversity and Inclusion:** AI can be used to remove unconscious bias from the hiring process, ensuring that all candidates are evaluated based on their qualifications and experience rather than their demographic characteristics. This can help to increase diversity and inclusion within the workforce.
 - ❖ **Improved Workforce Planning:** AI can be used to analyze workforce data and predict future staffing needs based on business goals and objectives. This can help HR teams to proactively address workforce planning issues and ensure that the organization has the talent it needs to achieve its strategic goals.

Review of the literature:

- ✚ Artificial Intelligence is often understood as a computer-controlled robot which performs the task for human beings intelligently. AI is mostly used for the term is frequently applied to the projects that require extensive data analysis.
- ✚ Over the period the advances in computers have provided speedy solutions and quick responses to business problems, yet they failed to match the flexibility that human beings could provide. However, some AI tools have exceeded in attaining performance level of professionals and human experts in wider aspects of business.
- ✚ AI in HR It is being constantly doubted that inclusion of AI in HR functions will snatch away various jobs from the workforce by replacing them with highly intelligent software. However, it will surely result to enormous reclassification and redesigning of jobs at all the levels. Some industries might face immense scratching out of a bundle of jobs whereas others might witness creation of fresh set of jobs requiring highly digitalized intelligence.
- ✚ The HR department in any organization is the provider of variety of human resource related data. Time and again the scrutiny, analysis, and interpretation of the data is done to facilitate output for many pivotal organizational decisions. Depending on human beings for extremely detailed data analysis is quite time consuming and hence comes the role of AI.

Research Analysis:

- A google form is circulated in the group of people to understand how often people use new ai technology in their life.

- ✚ Several research studies have analyzed the use of AI in HR and have found that it can have a significant impact on various HR functions. Here are some key findings from recent research:
 - ✚ Recruitment: A study conducted by LinkedIn found that companies using AI for recruitment experienced a 71% reduction in cost per hire, a 63% reduction in time to hire, and a 55% increase in the quality of hires. AI-powered recruitment tools were found to be particularly effective in screening resumes, identifying the best candidates, and streamlining the interview process.

 - ✚ Employee Engagement: A study by Accenture found that AI can improve employee engagement by providing personalized recommendations for career development and learning opportunities, as well as enabling real-time feedback and recognition. The study found that employees who received personalized recommendations were 41% more likely to be engaged.

 - ✚ Talent Development: A survey conducted by Deloitte found that 45% of organizations are using AI to identify skill gaps and provide personalized training and development opportunities. The study found that AI-powered talent development tools can significantly improve employee performance and retention.

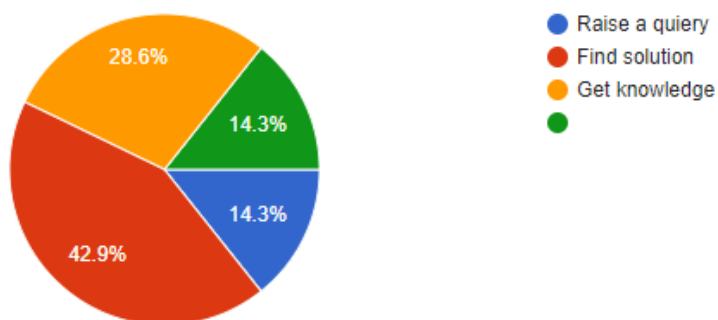
 - ✚ Diversity and Inclusion: A study by Harvard Business Review found that AI can help to remove unconscious bias from the hiring process and increase diversity and inclusion. The study found that AI-powered recruitment tools can significantly improve the diversity of the candidate pool and reduce bias in the screening process.

✚ **Workforce Planning:** A survey conducted by PwC found that 64% of HR leaders are using AI for workforce planning. AI-powered workforce planning tools were found to be particularly effective in predicting future staffing needs, identifying potential skills gaps, and developing proactive talent strategies.

✚ Overall, the research suggests that AI can be a valuable tool for HR professionals, enabling them to streamline processes, improve decision-making, and enhance the employee experience. However, it is important to note that AI should be used in conjunction with human expertise and judgment, rather than as a replacement for it.

What is the purpose of your interaction with the virtual assistant?

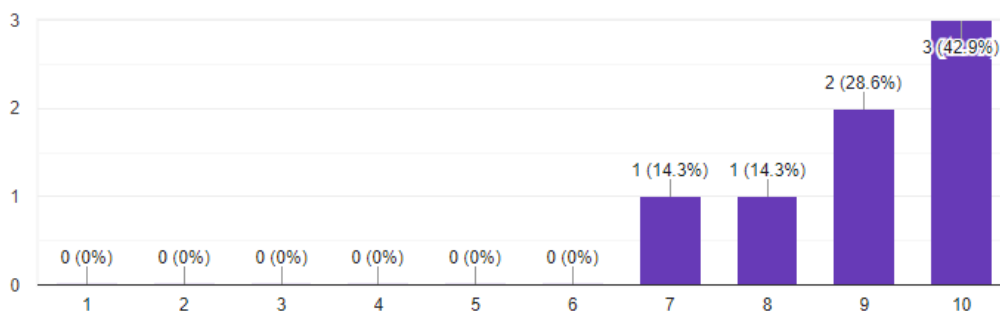
7 responses



How satisfied are you with the virtual assistant's response to your request?

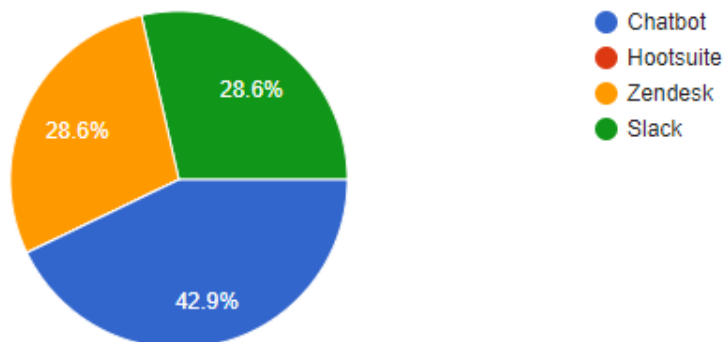
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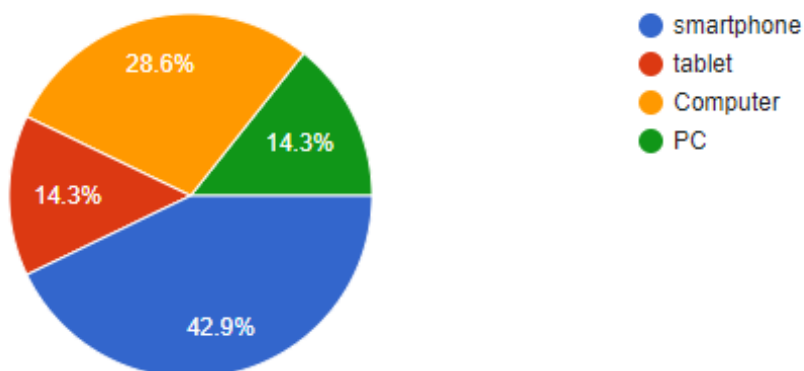
which tool is used by employees to manage customer query?

7 responses



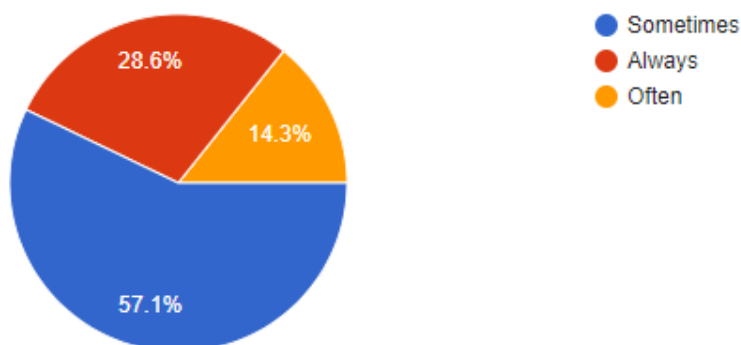
What type of device are you using to interact with the virtual assistant?

7 responses



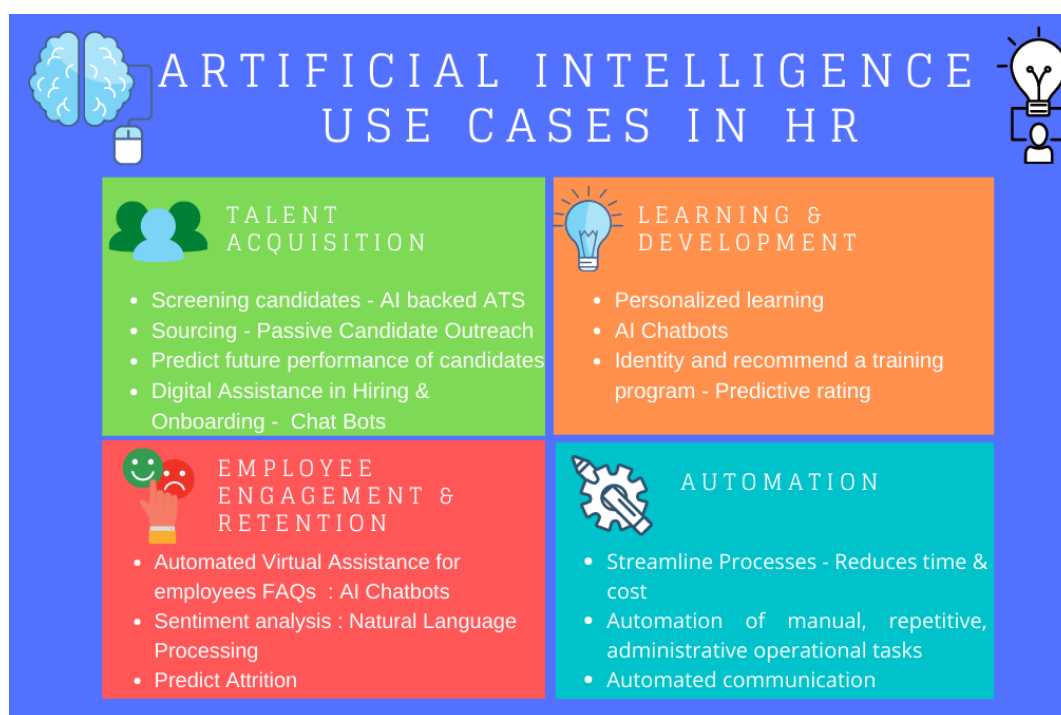
How often you use virtual assistance ?

7 responses



Results:

- Artificial intelligence's impact on society is widely debated. Many argue that AI improves the quality of everyday life by doing routine and even complicated tasks better than humans can, making life simpler, safer, and more efficient. Others argue that AI poses dangerous privacy risks, exacerbates racism by standardizing people, and costs workers their jobs, leading to greater unemployment. For more on the debate over artificial intelligence.
- AI relieves HR of its repetitive, time-consuming tasks, meaning that HR staff, as well as other teams and managers, can focus on more complex assignments.
- The research shows AI systems are now a day-to-day business also company relation.



Discussion:

- The study's findings will be interpreted in the thesis discussion section, where they will also be compared to other research on use of AI tools in HR. The talk will also cover the findings' useful business applications and offer suggestions for enhancing future plans.
- Automatic attendance tracking using AI is a technology that is gaining popularity in the HR world. This technology uses cameras or sensors to detect when employees enter or exit the workplace, eliminating the need for manual timekeeping methods such as punch cards or sign-in sheets. While the technology offers several benefits, it also raises concerns about privacy and potential misuse.
- One of the primary benefits of automatic attendance AI in HR is increased accuracy and efficiency. The technology ensures that employees are accurately and fairly compensated for their work hours, and eliminates errors that can occur with manual timekeeping methods. Additionally, it streamlines the attendance tracking process, freeing up HR personnel to focus on other important tasks.
- There are a variety of software programs used in HR to manage different aspects of the employee lifecycle.

Here are some of the most common HR software programs:

1. **Applicant Tracking Systems (ATS)**: ATS software is used to manage the hiring process by tracking job applicants and organizing resumes, cover letters, and other application materials. ATS can also be used to automate candidate communication and scheduling.
2. **Human Resource Information Systems (HRIS)**: HRIS software is used to manage employee data, such as personal information, employment history, and benefits information. HRIS can also automate processes such as onboarding, performance management, and payroll.
3. **Learning Management Systems (LMS)**: LMS software is used to manage employee training and development. LMS can deliver online courses and training modules, track employee progress and completion, and generate reports on employee training history.
4. **Performance Management Systems (PMS)**: PMS software is used to manage employee performance by tracking goals, providing feedback, and conducting performance reviews. PMS can also be used to set performance targets, monitor progress, and create development plans.
5. **Time and Attendance Systems**: Time and attendance software is used to manage employee attendance, scheduling, and leave requests. It can track time worked, calculate overtime, and manage paid time off requests.
6. **Payroll Systems**: Payroll software is used to manage employee compensation and benefits, such as salary, bonuses, and retirement plans. Payroll software can also calculate taxes, deductions, and withholdings.

Overall, the use of HR software can streamline processes, increase efficiency, and improve data accuracy. By implementing the right software programs, organizations can better manage the employee lifecycle and support the needs of their workforce.

Limitations:

- While there are many potential benefits to using AI in HR, there are also several limitations and disadvantages to consider. Here are some of the most significant:
 - ✚ **Bias and discrimination:** AI algorithms may perpetuate existing biases in hiring and promotion decisions, leading to discrimination against certain groups. This can occur if the data used to train the algorithms is biased or if the algorithms are not designed to account for all relevant factors.
 - ✚ **Lack of transparency:** Some AI systems are considered "black boxes," meaning that their decision-making processes are not transparent or understandable to human users. This can create distrust and limit accountability.
 - ✚ **Data privacy and security:** The use of AI in HR requires the collection and processing of large amounts of personal data, which can raise privacy and security concerns. Organizations must ensure that they are collecting and storing data in compliance with relevant regulations, such as GDPR and CCPA.
 - ✚ **Employee resistance:** Some employees may be resistant to the use of AI in HR, particularly if it is perceived as a threat to job security or as a replacement for human interaction.
 - ✚ **Technical limitations:** AI is not infallible and may make mistakes, particularly if the data used to train the algorithms is flawed or incomplete. Additionally, some HR tasks may require human judgement and expertise that cannot be replicated by machines.

Overall, the limitations and disadvantages of using AI in HR highlight the importance of using the technology ethically and responsibly, and of carefully considering its potential impact on employees and organizational culture. It is important for organizations to evaluate the benefits and drawbacks of AI in HR and to implement the technology in a way that maximizes its potential while minimizing its risks.

LEARNINGS:

- New technology in HR can offer several benefits for both organizations and employees. Here are some of the things we can learn from new HR technology:
- ✚ **Improve employee experience:** New HR technology can help organizations better understand employee needs and preferences. For example, employee surveys conducted through technology can provide valuable feedback on work culture, engagement levels, and job satisfaction. This feedback can help organizations make changes that improve the overall employee experience.
- ✚ **Increase efficiency:** HR technology can automate many processes, freeing up HR personnel to focus on more strategic initiatives. For example, automatic attendance tracking, online performance reviews, and self-service portals for benefits enrollment can save time and reduce administrative workload.
- ✚ **Enhance communication:** HR technology can facilitate communication between employees and their managers, as well as between employees and HR personnel. For example, chatbots and mobile apps can provide quick and easy access to HR information and support.
- ✚ **Support employee development:** New HR technology can help employees identify areas for skill development and provide training opportunities. For example, learning management systems can deliver customized training programs based on individual employee needs.
- ✚ **Increase transparency:** HR technology can provide greater transparency around important HR policies and practices. For example, self-

service portals can provide employees with easy access to information about benefits, compensation, and company policies.

- Overall, the use of new HR technology can offer many benefits for employees, including increased efficiency, better communication, and more opportunities for development. By leveraging the latest HR technology, organizations can support their employees and create a more productive and engaged workforce.
- ❖ One of the primary benefits of automatic attendance AI in HR is increased accuracy and efficiency. The technology ensures that employees are accurately and fairly compensated for their work hours, and eliminates errors that can occur with manual timekeeping methods. Additionally, it streamlines the attendance tracking process, freeing up HR personnel to focus on other important tasks.
- ❖ Another advantage of automatic attendance AI is that it can help organizations better comply with labor laws and regulations. Many countries have specific requirements around employee work hours and overtime pay, and automatic attendance tracking can help organizations ensure they are in compliance.
- ❖ However, the use of automatic attendance AI also raises privacy concerns. Employees may feel uncomfortable with the idea of being constantly monitored, especially if the technology is recording images or other personal data. To address these concerns, organizations should be transparent about how the technology works, what data is collected, and how it is used.
- ❖ Another concern is the potential for misuse of the technology. Some organizations may use automatic attendance tracking to monitor employees for purposes beyond attendance tracking, such as tracking employee movements or behavior. To prevent misuse, organizations should establish clear guidelines around the use of the technology and ensure that it is used only for its intended purpose.

- ❖ Overall, the use of automatic attendance AI in HR can offer significant benefits, but organizations must also be mindful of potential privacy and misuse concerns. By being transparent about the technology, establishing clear guidelines, and ensuring that it is used only for its intended purpose, organizations can maximize the benefits while minimizing the risks.

Conclusion

- ❖ Indeed, AI has enabled very systematic and accurate business solutions to HR. The complicated tasks like employee record maintenance, talent management, employee development, employee appraisals, employee benefits allocation, employee selection, employee engagement, tracking employee performance and feedback, etc. are being facilitated by AI. The HR managers must establish the level of involvement of technology in HR. Some researchers believe that AI cannot mitigate the valuable input of HR skills while others opine that AI is soon going to wash away the critical role of HR as it has an edge over HR in terms of mistake free and speedy responses. At this juncture where AI and HR are amalgamated the onus lies on HR managers to decide the extent of indulgence of AI in the HR functions.
- ❖ The clear bifurcation of activities ruled by AI and assignments taken care by HR must be done and in all the functions the AI should be augmented by influence of HR. The current study has discussed opinions of various corporate experts on the topic and understood that the successful implementation of HR function is regulated by AI. Despite of providing ease of work and efficiency in various fields of HR, AI is still unable to overpower the importance of human involvement in the implementation of HR functions. The personal connect and crucial behavioural understanding of the human minds is the job of HR department only. If all the tasks are allocated to the robots the organization may never be able to sustain employees or their commitment t

owards the organization. So, the human resources must not stop doing what they earlier used to do but must take assistance from AI to do it in a better manner

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