

**Course Name: AI in Human Resource Management**

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**Week - 09**

**Lecture - 29**

### **Lecture 29: Emerging Trends of AI Based HRM**

Hello learners, welcome back to the course on AI in human resource management. Today we move to the second lecture of module 9. We'll be looking into emerging trends of AI based HRM. We look into how AI is actually reshaping the world of human resource management. We have touched upon this in the previous few modules. We try to bring in a lot more practical orientation with respect to typical case studies or the organizations which are actually using it and how they are using it, the benefits, the problems, the disadvantages associated with that. We all look into all the emerging trends in AI-based HRM today. I am Dr. Abraham Cyril Issac. I am an Assistant Professor at the School of Business, Indian Institute of Technology, Guwahati. Now, when you look into the AI in human resource management over the past few modules, we have discussed about the possibilities that AI brings into human resource management in general, the domain as such.

But today, we'll like to move into a realm where we look into the positives. Specifically, the critical aspects which typically brings out the relevance of AI technology in human resource management. So let's look into that. Some of these things we have touched upon earlier, but I would like to give a practical orientation towards what is happening with respect to the industry. And that would be the real takeaway from today's lecture. So when you look into AI technology. you know, driven different functions. We have seen with respect to recruitment, you know, onboarding, etc. We touched upon in the previous module.

Let's go into that in a deeper mode. When you look into AI specifically, AI driven onboarding, we understand that automation and efficiency happens to be the key aspect

when it is all about, you know, AI that is coming into picture of onboarding. So when I talk about automation and efficiency, Please understand, AI helps streamline the onboarding process by reducing the need for manual paperwork and allowing new employees to complete the formalities electronically. So when you are part of a system and you're joining an organization, you know, onboarding happens to be one of the most significant factor or significant domain inside the HRM itself.

So if it can be done, if it can be accomplished successfully, in terms of lesser resources, nothing like that. So, by automating routine tasks, AI reduces the administrative burden on HR teams and helps organizations onboard new hires more efficiently. Now, Tasks such as say document submission or something like filling out forms, the form filling or setting up accounts or something like that can be handled automatically through AI powered systems. Then we have AI-enabled chatbots. When you talk about AI-enabled chatbots, especially in the context of onboarding, chatbots are significant AI tools for enhancing the onboarding experience. So these chatbots. Typically, they interact with new hires, providing them with information and answering common queries. For example, let's understand AI-enabled chatbots that can assist in delivering onboarding schedules, providing details about employee benefits, rules and regulations, and even introducing new hires to company culture.

Since these chatbots operate 24/7, They help employees get answers to their questions anytime, which is especially useful for remote employees. Now, this is the significance of AI in terms of onboarding. But when you look into the major trends. With respect to onboarding, there has to be a discussion on NLP as well as personalized experience. NLP, as you know, is natural language processing, a subset of AI, if I can call it like that, and is highlighted as an effective tool. In the onboarding process altogether, NLP allows AI systems to communicate with new hires in natural language, enabling them to ask questions and receive responses as if they were interacting with a typical human resource management representative. So, as you are talking to an HR manager or HR representative, you can get the response accordingly. This interaction Makes the onboarding process more personalized and intuitive. So please note, the ability of NLP

systems to handle both text and speech ensures that the communication feels natural. It is more contributory to a better onboarding experience.

Let's take an example. NLP-based systems can assist employees by explaining company policies, helping them understand their roles, what they have to do, what they should not do, and offering information about team structures. So, it also ensures that there is access to all necessary details without requiring a human HR representative, for that matter, to be involved constantly. So, all those aspects of knowledge sharing—you know, knowledge hiding—everything is taken care of because there is clear-cut access for everyone. When you look into personalized experience, please note AI systems can provide new employees with a personalized onboarding experience based on, let's say, their personality, their role, and their individual career development goals.

So, for instance, let's look into AI that can recommend specific training programs or professional development courses. We have seen this in the previous module. Tailored to each individual. So, the system can automatically update the employee's calendar with relevant meetings and courses to help them acclimatize to the organization altogether. It can even suggest people, let's say, to meet and collaborate with potential mentors or important stakeholders, ensuring that new employees build essential networks early in their tenure itself. Now, when you talk about onboarding, we also have to understand the process of remote and hybrid onboarding and how AI is going to facilitate or is facilitating remote and hybrid onboarding. Now, with the rise of hybrid onboarding—especially due to the post-COVID era—AI-driven onboarding has become more and more important. So, new employees... who are onboarded remotely might face challenges in integrating with the company and understanding its culture because they are not there in the first place.

So AI tools such as, let's say, something like chatbots or virtual assistants help bridge this gap by providing collaborative and engaging communication channels that make remote workers feel more connected to the teams and organization altogether. We can also have AI integration in the first few weeks. This is also critical because AI systems can also help new employees throughout their first few weeks by offering ongoing support, continuous support. Let's take an example here. Chatbots can actually continue to answer

questions. They can schedule meetings and provide resources long after the initial onboarding is complete. So many a time what happens is that onboarding is perfect, but the thing is, you are not continuing or the organization is not continuing the camaraderie or the warmth that otherwise was showcased during the onboarding. So the new employers and new recruits, they feel left out. So AI can also monitor the progress of new hires, ensuring they are successfully adjusting to their new roles, completing the necessary training and requirements and integrating with the team.

Also, as I mentioned previously, You have this access, which is very critical. So improved access to all the information is vital. So AI driven onboarding makes it easier for new employees to access the information they need. So whether they want to learn about company policies, benefits or specific tools. AI systems can instantly provide accurate information. So, the self-service approach. This typically reduces the reliance on HR staff and empowers new hires to get the answers they need quickly and efficiently. Then, there is continuous feedback and improvement. When you're looking into AI tools that can also gather feedback from new hires, it is vital, especially during the onboarding process, because that gives a clear direction.

We know whether the organization is doing well in terms of onboarding. So, this data can be analyzed to continually improve the onboarding experience. Tailoring it to the needs and preferences of future employees. So, through automated feedback systems, AI can help organizations understand areas of improvement in their onboarding process and ensure a smoother experience for future hires. Now, we move on to the trends with respect to diversity and inclusion. When we talk about diversity and inclusion, we have time and again discussed the possibility of bias reduction, right from recruitment to onboarding to all possible interactions the organization has with its employees. So, one of the key ways AI promotes diversity and inclusion is by minimizing both conscious and unconscious biases. These biases are often prevalent in traditional recruitment processes. So, AI enables a more objective hiring process. We have discussed this by removing personal identifiers. It could be anything. It could be name. It could be gender. It could be age from the resume, allowing hiring decisions to focus solely on skills and qualification. So there is also a possibility of blind hiring.

So blind hiring specifically is all about AI-powered tools that can strip away identifiable attributes. It could be, as I mentioned, name, gender, age, race from resume, ensuring that hiring managers evaluate candidates solely based on their qualifications and experience. So merit takes the upper hand. So this practice... aims to create a fair and equitable recruitment process by reducing human biases that otherwise often hinder the diversity. AI is also used for monitoring and enhancing the day and I are diversity and inclusion because AI tools, including some of the machine learning and predictive analytics are employed. to monitor the current status of diversity in organization. So what happens is that these tools allow HR managers to assess real-time diversity metrics, such as something related to race, gender, or even ethnicity distribution across various roles and departments, not only within an organization as such, but also within the department, within the different functional entities. So these insights... Provided by AI can be used to implement corrective actions where diversity is lacking.

When we look into data analytics specifically, AI can analyze workforce demographics to offer insights into how diverse an organization is, monitoring diversity levels across job functions, career levels, and various criteria. Then there is this AI-driven performance specific to appraisal and promotion. When we talk about this, please understand that fair compensation and appraisal are critical factors for a successful career life, and employees do value that. So, AI can track and evaluate employee performance. Based on predefined criteria, ensuring that pay and promotion decisions are typically data-driven. This prevents any bias that may otherwise influence performance reviews and salary adjustments. Fostering greater inclusion and equity within the workforce. Then we look into diversity in terms of something like job advertisements. From the beginning itself, AI tools can be used to review job advertisements before they are even posted. Checked for gendered or biased language that could discourage diverse candidates from applying, ensuring that job postings appeal to a broader audience, companies can attract a more diverse set of applicants. So, it could be anything based on, let's say, language.

Bias detection based on that. AI can identify and flag language that might unintentionally deter certain demographics from applying. Let's take an example. AI can highlight words or phrases in job postings that may carry some gender biases, allowing HR teams to

reword them to attract a wider range of candidates. Then there is the possibility of improving diversity and inclusion with AI-backed interviews. Now, this is interesting because AI-driven interviews are gaining traction as a way to reduce interviewer bias. Tools like NLP, which we have seen, are used to evaluate candidates' responses based solely on the content, without taking into account the background or physical appearances. Many a time, when you look into an interview board, there are certain inherent biases, and these biases are typically reflected in the decision-making, and there is no doubt about it.

But the introduction of AI into the system will actually try to prevent this. AI can conduct and analyze interviews without any human intervention, ensuring that judgments are made purely on responses. Rather than appearance or personality traits, reducing biases during the selection process, this makes the recruitment process more inclusive. Now we also look into AI's role in enhancing organizational inclusivity. Now, AI helps organizations not just in hiring—don't make the mistake that when we discuss diversity too deeply, it's only about hiring diversity or hiring diverse candidates. But it also fosters or helps in fostering an inclusive work environment. How? Let's look into that. AI tools can analyze employee interactions to ensure a more inclusive culture, by monitoring how employees engage with each other, identifying potential issues like discrimination or exclusion, and offering suggestions for improving workplace inclusivity. When you talk about inclusivity, we also have to talk about the organizational culture. AI can monitor the inclusivity of an organization by analyzing the communication patterns, the engagement levels the organization or the individuals are having within the organization.

Collaborative behavior among employees. So, it can flag potential issues of exclusion or bias in daily interactions, allowing HR managers to intervene promptly. And we also look into Similarly, we can understand that AI has a lot of potential in terms of diversity and inclusion aspects. So, it can have an impact on real-time D&I metrics also. AI can track diversity and inclusion efforts over time, providing real-time feedback to HR managers about how well the organization is adhering to its diversity goals. This typically helps in maintaining a dynamic and evolving approach toward inclusivity. Now, let's look into work engagement. When we look into work engagement, we have to start with

communication—the clarity in communication. AI enhances communication, especially in remote work environments—no doubt about it—where traditional in-person communication channels are very limited.

With the increased reliance on virtual work post-pandemic, especially chat boards integrated with AI are used to answer frequently asked questions (FAQs). They facilitate real-time communication and provide quick automated responses. Now, this is the beauty of what we understand by enhancing communication. This ensures employees stay connected with their colleagues and managers, thereby reducing the feeling of isolation. AI tools can also auto-schedule meetings. They can ensure that communication is collaborative and inclusive, even across different time zones. Now, this was not at all a possibility before the advent of AI or before its introduction. But since then, we see that many such interactions and clarity in communication are possible across different time zones. AI can also be used for sentiment analysis to monitor employees' emotions and engagement levels based on text-based conversations, helping managers identify and address engagement issues before they escalate. Then there is the possibility of feedback mechanisms.

When you talk about feedback mechanisms, I've just introduced them in the previous slide. AI is used to generate and manage real-time feedback, which is crucial for work engagement. This immediate feedback helps employees feel recognized and appreciated, leading to higher engagement. So, additionally, AI helps in creating climate services that assess employee experiences and sentiments, which are analyzed to give organizations insights on how to improve engagement and retention. We also have a clear role of AI in training and development. When we look into training and development, we had clear discussions on that based on our understanding of the learning and development vertical itself. So when you look into the training and development part specifically, AI helps in training and development by offering personalized learning experiences. AI-based systems can track employees' learning behavior.

We have looked into personalized learning experiences or training programs tailored to their needs that can be provided. So, what essentially happens is that This continuous learning and skill enhancement keep employees engaged by making them feel invested in

their growth. So, AI-backed tools like VR, virtual reality simulators, and autonomous agent chatbots provide interactive, on-demand training that is both engaging and cost-effective. Now, we look into the compensation part. There should be fair compensation that is achieved through the introduction of AI. Fair compensation is typically... Understood as another factor directly linked to work engagement. So, if you are not fairly compensated, what engagement are you talking about? This is as simple as that. And AI tools are used to ensure fairness in pay decisions. So, AI systems assess employee performance, make compensation recommendations based on performance metrics, and ensure that employees are fairly rewarded. So, this transparent and data-driven approach to compensation helps build confidence, trust, and engagement among employees. We also have the most interesting virtual personal assistants, VPS. So when you talk about this VPS specifically, AI enabled virtual personal assistants are using the NLP to process the verbal commands and analyze employees emotions and typically their their sentiments. So these assistants can provide personalized interactions that enhance user experiences, making work more enjoyable and emotionally satisfying. So by tapping into the particular employee's emotional needs and providing responses that align with the current moods, VPAs play a significant role in maintaining high levels of engagement. Then we look into the Emotional intelligence part.

What are the different trends associated with that vis-a-vis AI? When you are looking into the critical aspect of understanding and decoding emotions, one key aspect of emotional intelligence should be or would be the ability to recognize and interpret emotions from facial expressions, voices and cultural signals. So AI systems typically help us here, particularly those powered by emotion AI or effective computing can be trained to capture and process these emotional cues from employees. There's something like machine vision. AI can analyze visible signals, signs of emotional states like stress, anxiety or fatigue, which can appear on employees faces. So these these typical systems can detect when an employee is experiencing negative emotions. Let's say something like frustration or exhaustion and alert the HR professionals to intervene accordingly. voice recognition is another significant factor when we look into voice recognition ai can interpret tonal variations in speech please note that which helps it understand and employs emotional state such as happiness or distress. When you look into emotion ai as

an everyday tool please understand ai driven tools that incorporate emotional sensing are used to enhance every single day hr interaction so something like what we have already seen vpas virtual personal assistants vpas these assistants which uses nlp and natural language understanding nlu are able to understand and process employees verbal commands so beyond just completing tasks VPAs can access the emotional tone of conversations and adjust their typical responses based on the emotional cues, creating more personalized and emotionally intelligent interactions.

We also have chatbots. Chat boards equipped with emotional sensing capabilities, which can monitor and respond to employees' moods during interactions, helping create an empathetic support system for employee queries and concerns. We also do have personal assistant robots. We call them PARs. Personal assistant robots, which are AI-powered personal assistant robots that can engage with employees in emotionally intelligent ways. These robots are designed specifically to adapt to the emotional states of individual. Whoever they are interacting with, they are enabled to do that. How? Let's take an example. Something like adaptive behavior or adaptive responses is vital output of these particular powers. So as powers have more interactions with people, they can better gauge emotional context and tailor their responses accordingly. So this can range from offering empathetic responses when detecting signs of stress to providing encouragement during difficult tasks. So let's say, as an example, companies like IBM and startups like Emoshape are working on developing robots that can actually simulate emotional responses to human behavior. So these robots can discern between emotional states such as, say, disappointment, happiness or frustration, and even can react accordingly.

There's also a possibility of when you look into the trends with respect to emotional intelligence, we also have a possibility in terms of sentiment analysis and employee mood detection. Now, sentiment analysis is vital or important because AI tools can analyze employee communication, be it emails, be it chats, be it feedback to detect emotional trends over time. So this information. allows HR to proactively address issues related to job satisfaction, related to mental well-being. So sentiment detection using AI can provide insights into how employees feel about their work, company culture altogether,

and leadership. So AI tools can essentially predict employees' future performance based on their behavioral patterns, based on their body language altogether, based on their facial gestures even. So these insights allow HR teams to address emotional challenges before they negatively impact productivity or lead to burnout. When you look into, you know, sentiment analysis and especially mood reading, you also have to look into biometric data for emotional insights. So this is one significant insight that every manager can get. And thanks to AI for this, AI can monitor insights.

Employs biometric data such as, let's say, heart rate or stress levels by wearable technologies. Now, we have smart watches. We have all sorts of smart rings, smart devices. These biometric feedback is invaluable for detecting changes in emotional states. Please note that. Employees can track their mood or health using these devices and the data can be analyzed to identify emotional trends, helping both employees and HR understand when actual intervention is needed. Let's take an example of Google, how it uses AI to analyze its employees' interactions and feedback, helping HR assess the employee's satisfaction levels and intervene if at all it is required. We also have emotional AI in enhancing employee well-being, another significant aspect which has to be discussed. AI tools that typically gauge emotional states can play a vital role in preventing burnout, improving mental health and maintaining a positive work environment. AI-backed mental health tools. Typically, AI can assist in managing employees' mental health by providing personalized support based on emotional analysis. So employees may interact with chatbots that can assess their emotional state and recommend mental health resources. I touched upon the wearable technology in the previous slide. So AI-powered wearable devices that can track even emotional health. something like, let's say, stress, something like anxiety.

These things are vital because you get a measure of this, nothing like that. Offering real-time insights and suggestions to both employees and HR can be a game changer altogether. We also have some ai assisted mental health services let's look into that in greater detail ai has made mental health services more accessible and affordable please understand this post covid organizations increasingly adopted this ai for providing mental health support recognizing its capacity and to totally alleviate stress for that matter so for

instance ai can assist employees in managing work-life balance Issues related to that because of remote work, issues like isolation or let's say family conflicts, which can affect psychological well-being without any doubt. So technologies like chatbots, wearable devices, and virtual reality. And even employee pulse surveys have become popular for monitoring and supporting employee well-being altogether. Now, coming to the crux of today's discussion, let's look into this as a conceptual framework. So what are the different AI technologies that are available at the moment? We have NLP, the natural language processing. We have robots, as we have seen in the past. Data analytics is an option. Big data is at its peak. Machine learning is a key aspect. Predictive analytics—we have discussed a lot. VR is again a significant tool. So when you are looking into AI technology, see the different domains of HRM it is aiding and helping. One is onboarding—no doubt about it. Second is diversity and inclusion. Third is work engagement. Four is emotional intelligence. And five is mental well-being. Now, this is specific to our interaction today. I have not taken into consideration what we have discussed previously, like recruitment, different aspects of recruitment, etc., or different processes like performance evaluation, etc. I have not looked into that.

This is only based on today's discussion. A conceptual framework can be made where these are the AI technologies, how they link or how they are used, and what the essential outcomes are. Essential outcomes like one, cost reduction. Two, increased production or efficiency, or simply put, the top line, reduced intention to quit. So all these are the typical conceptual understandings of what we have discussed. So this slide itself would act as a gist or summary of today's discussion altogether. Now let's look into the practical side of AI. IBM's use of AI in HRM. Let's understand the background first. In this case study, IBM, which is a global leader in technology and consulting, as we all know, has been at the forefront of using AI across multiple domains. And that certainly includes human resource management. So the company leverages AI to enhance its HR operations, focusing on recruitment, talent management, employee engagement, and even to a certain extent, performance appraisal. So what are the AI implementation possibilities in HRM at IBM? Let's start with recruitment and talent acquisition. Now, IBM uses AI to streamline its recruitment process by employing Watson Recruitment.

If you read about it, it's an AI-powered tool that helps employees. Hiring managers identify the best candidates. So Watson Recruitment uses machine learning and predictive analytics to analyze large datasets, including resumes and job descriptions, to match candidates with the most suitable positions. This AI tool also reduces biases in hiring by evaluating candidates based on their skills and experience, stripping away identifiable factors like age, gender, or ethnicity that can lead to unconscious bias. Then there is employee retention and, you know, talent management specifically.

When you look into this aspect, IBM uses AI to predict employees. Which employees are likely to leave the company. The tools analyze various data points, such as employee engagement, performance reviews, and career progression, to predict the attrition rate. This allows HR managers to take proactive steps, such as offering development opportunities or salary adjustments, to retain top talent. IBM reported that this AI tool was able to predict employee turnover with almost 95% accuracy, helping the company retain key employees. So when you talk about employee retention, AI is almost there with almost 95% accuracy, as they are reporting. Another significant aspect could be performance management. When we look into performance management, AI is also used in IBM's performance management system. AI tools help managers specifically provide real-time feedback by analyzing employee performance data. Let's take an example. The AI system tracks employee achievements, challenges, the progress they have made, suggestions, personalized coaching tips, and even all possible developmental tools.

So basically, you're looking at a holistic approach towards performance management. This helps employees receive continuous feedback, which undoubtedly enhances engagement and development. We have also seen IBM using this effectively in the realm of diversity and inclusion. And how does it do it? Let us look into that. IBM integrates AI into its efforts to improve diversity and inclusion. The AI tools monitor hiring practices—something we have already discussed previously—but let's see how IBM is practically doing it. It looks into compensation and promotions to ensure fair treatment and removes any unconscious biases if they exist. AI also helps analyze patterns in workforce data to identify any gaps in diversity across teams or departments, enabling HR to implement corrective measures. Now, also, if you ask me, IBM uses these chat

boards to engage with employees. That's what I have seen offering real time answers to HR related queries. So the chatbots are capable of providing personalized responses based on employees role, department and location. So IBM uses this AI tools to track to improve employee wellness. For instance, let's say the wearable technology, which we have seen and the digital biomarkers that are employed to monitor employee stress levels, ensuring safety that employees maintain a very healthy work-life balance now finally what it all sums out to is what we see as reduced bias increased employee retention enhanced productivity and cost efficiency let's quickly detail it further by using ai to evaluate candidates based solely on the skills and qualification ibm has unequivocally reduce the unconscious bias in its hiring practices promoting diversity and inclusion when we look further we see that it uses a predictive analytics and it has helped ibm significantly reduce employee turnover saving millions in recruitment and training costs It has enhanced productivity in real time feedback tools that have improved employee performance and engagement, allowing for continuous learning and development. So employees feel more supported, more motivated, leading to increased productivity. And finally, we see that cost efficiency.

AI automation in HR process such as recruitment, such as performance management and employee engagement has reduced operational costs, enabling HR teams to focus on strategic initiatives, strategic activities. So basically, we have seen that how typically AI is changing the entire HRM domain. Please note, it has certain negatives, which we have seen in the previous module, but I'm not here to talk about that today. It certainly aids and helps the HRM domain in bringing out greater accuracy, in bringing out more authenticity and in increasing the accessibility to everyone. So this accessibility issue itself, if properly taken care of, reduces the biases and increases the fairness of the process. And this is what AI is doing, specifically with respect to the HRM domain and other domains as well. But when you look into the discussions and emerging trends, please note that we have seen every single domain being improved because of the power that AI brings with the technology. It has a certain objectivity associated with it. It has a certain timely completion associated with it.

So all these aspects, if you sum them up together, increase the efficiency of the organization. That's all for today's class. We'll see you with another topic another day. Till then, take care. Bye-bye. Thank you.