

Transforming Digital Employee Experience with Artificial Intelligence

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Abstract— Employee expectations are changing significantly due to the increased digitalization and remote work in the last couple of years. This study emphasizes the growing role of Artificial Intelligence (AI) in Human Resources (HR) to design enhanced digital employee experience. A set of popular AI applications such as chatbots and virtual assistants in recruitment, career development, and employee engagement are provided along with their definitions. Considerations regarding their organizational implementation, including related concerns and potential benefits, are listed.

Keywords— Artificial Intelligence, Human Resources, Employee Experience, Technology Management

I. INTRODUCTION

Since organizations with positive employee experiences grow significantly faster with higher profit margins [1], employee experience (EX) has been a high-priority item on the Human Resources (HR) agenda in the past couple of years. Employee experience involves a variety of factors, including how employees find meaning in their work as well as how they perceive, interact, and respond to internal practices and the organizational culture during their employment. A great employee experience creates higher employee engagement, and highly engaged and committed employees create a better experience for customers with who they interact with and serve. Today, most organizations consider employee reviews as important as customer feedback. High performing organizations have adopted an ‘employee first’ approach and translated customer experience principles to talent management and development areas in HR [2].

The workforce has changed significantly in the last couple of years due to the increased digitalization and remote work. Consequently, employees’ expectations are changing, and they are looking for easy-to-use and well-designed applications to allow them to make their jobs easier and feel more engaged in the workplace. Therefore, it is the right time to re-think and re-design the employee experience.

II. BACKGROUND

Designing an employee experience involves both human and digital components. Technology is a key enabler for the digital transformation of the user experience. Today, customers receive customized purchase recommendations based on personal and previous preferences, which can be delivered to them at increased speeds. These digital features aim to make consumer lives easier in a growingly complex world. In line with this change in consumer expectations, employees also expect more personalized and consumer-like experiences at their workplace, depicting digital customer-like characteristics. Making available the appropriate technologies to employees is important in improving employee experience, but it alone does not guarantee a high satisfaction. Integrating technology into critical touchpoints of employees and designing a thorough employee life cycle from ‘hiring to learning’ with the right digital steps became the essential focus of related efforts. In the literature, there is a growing focus on successful AI applications in the HR field, especially in talent acquisition field [3] [4] [5] [6]; however, only a limited number of studies investigate the impact of AI in the sole context of employee experience.

III. AI APPLICATIONS

Artificial intelligence (AI) combined with human intelligence, is often employed to design an enriched employee experience. AI helps to automate various repetitive tasks in HR activities and to re-design processes. Contrary to the initial perception of lessening human interaction, digital automation aims at providing HR teams with more time to build relationships with employees, managers, and candidates to better address their needs. Some of the common applications of AI in Human Resources depicted in Figure 1, is provided in the following list.

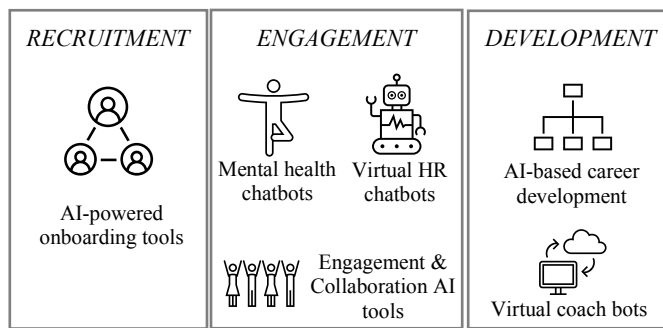


Figure 1. AI Applications to Enhance Employee Experience

- *Virtual HR assistants/Chatbots:* These AI-based intelligent assistants are able to answer employees' basic questions on HR policies regarding benefits, vacation plans, and workplace practices as well as being able to create standard employment letters based on requests from employees. Employees have constant access to these assistants, which helps HR teams to improve productivity by saving a considerable amount of time, which can be utilized to focus on other value-added activities that positively impact overall employee experience [7].
- *Virtual coach bots for managers:* AI-based coach bot prepares managers when they need to have difficult conversations with their employees. Coach bots cannot replace human-human coaching sessions; however, it helps managers to practice and prepare for their discussions involving complicated employee situations.
- *Personalized AI-based career development tools:* AI-based development portals can suggest open internal positions suitable to employees based on their profiles in addition to recommending training programs based on their personal development needs, passions, and interests [8]. These platforms are well integrated with internal talent management, performance management, and talent acquisition systems.
- *Engagement and collaboration AI tools:* AI-based pulse surveys, polls, and collaboration platforms help to generate real-time data regarding employees' moods, reactions, and overall engagement levels. These tools provide a more in-depth understanding of employees' perceptions and expectations for organizations and managers, allowing them to respond on time if there are any issues that need to be addressed.
- *Mental health chatbots:* One of the main root causes of diseases worldwide is mental health [9]. Mental health chatbots are designed to analyze employees' moods, behaviors, and stress levels by asking specific questions to assess their burnout risk. These AI-powered chatbots are built based on natural language processing and sentiment analysis. Depending on the

assessment and needs of employees, some chatbots even suggest personalized mindfulness practices. Research indicated that users feel safe and comfortable to talk to mental health chatbots [10].

- *AI-powered onboarding tools:* AI manages some of the routine manual tasks of HR, such as sending paperwork, scheduling onboarding meetings, and responding to some basic questions of new employees during the employee onboarding process. Through this mechanism, new employees do not face any delay during their onboarding process while obtaining timely responses to their inquiries. Onboarding chatbots can improve the onboarding experience of new employees by providing a better communication flow and critical information on-demand [11].

IV. PROS AND CONS OF AI APPLICATIONS

Well-designed and easy-to-use AI tools help a lot to improve employee experience in general. To give a broader view of some pros and cons in using them at the workplace are listed in Table 1, both perspectives from HR teams and employees.

Table 1. Pros and Cons of AI Tools from Perspectives of HR Team and Employees

Perspectives	PROS	CONS
HR TEAM	Gaining more insights about employees' behaviors and engagement through AI tools	Lack of skilled HR professionals in big data analysis and technology management
	Personalized solutions for employees with a faster response time	The risk of having biased people/HR decisions if AI tools generate biased results
	Saving time and improving productivity for HR teams	Possible data confidentiality and security problems
EMPLOYEE	More streamlined, personalized and modern experience for employees	Lack of human touch might hinder employee engagement in using AI tools
	Faster response time to some basic questions and problems	Some employees might not be tech-savvy, and AI tools might not create a positive experience for them

V. IMPLEMENTATION SUCCESS AND RISK FACTORS

These AI-based tools considered as game-changers with their ability to achieve digital transformation of employee experience. However, there are some potential concerns and risk factors in their organizational implementations.

Both success and risk factors of AI-based tools in creating an enhanced employee experience are analyzed, as indicated in Table 2.

Table 2. Success and Risk Factors in Using AI Tools in Enhancing Employee Experience

Success Factors	Risks Factors
Linkage to the business and HR strategy	Lack of trust and transparency
Supportive organizational culture	Data privacy and security
Data management capability and expertise within HR teams	Potentially biased data entry to the system
Perceived ease of use in AI tools	The feeling of less-human touch for employees

A. Success Factors

Linkage to the business and HR strategy: There are many AI tools that are used in improving employee engagement and experience. However, organizations should select or design appropriate AI tools based on their business strategy and needs. Otherwise, investing in unnecessary or nice-to-have AI tools create additional administrative burden and cost for organizations, and they do not help to improve the employee experience.

Supportive organizational culture: Most AI solutions are considered as plug-and-play technologies by organizations [12]. However, managing the change and preparing the organization based on the corporate culture is critical for the successful adoption of the technology. On the other hand, AI solutions can also help organizations create a more inclusive and happier internal culture.

Data management capability and expertise within HR teams: AI tools that are used in enhancing employee experience generate big data in which HR teams may not have the right skills to analyze and make informed decisions. Therefore, HR teams should create a people analytics team that consists of data scientists, developers, and specialists who have quantitative and technical expertise [13].

Perceived ease of use in AI tools: When employees use AI tools without any technical difficulty, they tend to be willing to use them more [14]. AI tools should be designed as user-friendly for better user experience.

B. Risk Factors

Lack of trust and transparency: Trust and transparency in data management are also essential factors since employees must be comfortable enough to use these applications [15] [16]. When employees trust AI applications and benefits of AI applications' outcome, they will be less reluctant to utilize them.

Data privacy and security: AI tools have access to personal and private employee data as they interact with metadata through communication and engagement tools. In most of the cases, employees may not be aware of this data collection [17]. Data security is a critical factor in building trust in AI applications [18]. Organizations should build secure data governance models based on local legal regulations.

Potentially biased-data entry to the system: AI can learn continuously and use the previous data to make predictions regarding the future. In the case of biased-data entry to the AI system, the outcome from the system will be biased as well. Organizations should test their AI algorithms in real-life scenarios to ensure results from AI systems are not biased [19].

The feeling of less-human touch for employees: Automation helps HR teams to save time and increase productivity. However, there might be a negative perception among some employees about using AI-based technological solutions in HR-related processes [1]. For example, virtual HR chatbots may not answer all basic questions that employees have at once, which eventually affects employee experience negatively.

VI. CONCLUSION

AI tools help to improve digital employee experience in organizations. However, successful implementation of such AI-based tools heavily relies on the compatibility with the organizational culture, the right design of AI tools, and the effectiveness of data management activities. The majority of these tools generate large volumes of people analytics data for organizations to process, understand, draw conclusions, and utilize in decision making. HR teams should have the right data management skills to analyze them and contribute to decision-making successfully. Additional employee concerns that include data privacy and other ethical considerations should be considered and addressed for the successful adoption of AI technologies by organizations. Some companies got excited to implement new AI tools quickly for the sake of being innovative. However, this digital transformation does not happen overnight, and it requires detailed planning and incremental change management. Also, companies need to make sure that these tools serve a purpose and are well adapted based on organizational needs. In the future, as there will be more organizations that adopt AI solutions in engaging and

empowering employees, negative perceptions about AI would end up decreasing by the time [2].

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