



# Role of Artificial Intelligence in Human Resource Management: A Comprehensive Review

Ilango Kessavane  
Independent Researcher

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## Abstract:

*With the ever-evolving digitalism landscape, Artificial Intelligence (AI) is one such transformational phenomena in Human Resource Management (HRM). Therefore, this thorough study describes all about the multidimensional role of AI in HRM focusing its applications, advantages, and obstacles. This study provides insights into how AI improves recruitment, employee engagement, performance management, and talent development by exploring AI-enabled tools and technologies. The review also explores ethical and potential biases with AI in HR. This paper offers to illustrate asset project on academic literatures and case studies in ahead of time. Taken together, this paper adds to the literature the effect of AI on HR by providing recommendations on how to leverage AI for a sustainable competitive advantage.*

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## I. Introduction:

To attain the status of a market leader within the contemporary economy, it is imperative for organizations to accord precedence to innovation and to implement automation to enhance impact and empower their workforce. To realize differentiation within the evolving market landscape, organizations and employers are required to reconceptualize work by establishing new regulations, imposing new constraints, and devising novel methods of utilizing insights. Automation shall assume a pivotal role in this endeavor.

Ten years ago, several studies pointed to a pessimistic future of work due to the anticipated impact of automation. An estimated 47% of US jobs were deemed to be “at risk” because of automation. More than a decade later, the labor market continues to defy those predictions despite the widespread adoption of AI and automation.

Employers have discovered that instead of decimating jobs, automation changes the nature of work by giving employees more time to be creative, think strategically, and improve work/life balance. What does this mean for human resources? Today’s chief human resource officers (CHROs) have an opportunity to leverage automation to uplift the entire organization—from analytics to engagement to talent development. Automation accelerates the hiring process, minimizes business disruption, and creates a better working environment for employees. It is now a powerful tool for achieving market leadership.

## The progression of strategic human resource management:

The market for AI in Human Resources is projected to expand by 35% over the forthcoming years, escalating from \$3.89 billion in 2022 to \$17.61 billion by 2027. This growth reflects recognition among corporate boards and executive leadership of AI and automation as pivotal tools for attaining competitive leverage. HR professionals are increasingly seeking AI-driven solutions to adopt a more strategic orientation. Their objective is to redesign the organizational framework to enhance agility and expedite execution amidst talent shortages. Automation serves to enable HR leaders to utilize internal talent and its capabilities more effectively through improved data analytics. Moreover, it can optimize the hiring and onboarding processes, allowing new employees to contribute meaningfully at an earlier stage. Organizations anticipating substantial growth are contemplating strategies to identify necessary talent and accelerate time-to-value via expedited onboarding. Intelligent automation provides critical insights to HR in addressing these challenges.



### **Securing a competitive advantage in the acquisition of skilled personnel.**

The contest for skilled professionals has markedly escalated in a landscape where candidates possess considerable leverage. Human Resource executives are acutely aware that exceptional talent remains perpetually scarce. Even amid a labor market brimming with job seekers, distinguished candidates are often elusive. It is imperative for organizations to minimize the duration of the recruitment-to-hiring process, as outstanding candidates invariably have multiple alternatives. Automation facilitates leaders in the continuous sourcing of candidates, thereby establishing "ready to hire" talent pools for imminent role vacancies. It expedites the interview process by optimizing interview scheduling and enhancing candidate communications, which include application confirmations, status updates, interview reminders, and background verification requests. From a comprehensive hiring cycle perspective, there are various platform & application provides process mining capabilities, which can be leveraged to uncover obstacles and inefficiencies within the recruitment cycle, aiding in the reduction of overall time to fill positions and enhancing the candidate experience.

Resume sourcing and screening to assist recruiters in identifying proficient candidates already present within the applicant tracking system. An automated system that proactively sources candidates from online job boards and aligns their competencies with open positions. User Interface/Application Programming Interface connectors to facilitate the integration of recruitment platforms with the Human Resource Information System, thereby ensuring smooth and effective workflows that enhance onboarding experience. Generation of offer letters for recruiters to evaluate and authorize prior to dispatching them to the candidate. Digital recruiting assistants that consistently inform hiring managers with requisition analytics and metrics concerning the status of the recruitment funnel, providing a consolidated overview of candidates associated with each requisition.

### **Expediting the Onboarding process**

An effective onboarding process holds significant strategic implications for the competitive stance of an organization. The initial phases of employment are particularly pivotal. Empirical studies indicate that as much as 20% of employee attrition transpires within the initial 45 days of employment. Furthermore, over the long haul, a robust onboarding framework enhances the retention rate of new hires by 82%. Digital assistants can facilitate this process by automating the submission of new hire requests, disseminating orientation itineraries, and generating a welcome email for the new employee. Additionally, they can collect post-hire feedback that offers insights into the onboarding experience and identifies areas for enhancement. The bot utilized at an enterprise application exemplifies this concept well. It supplies new employees with a checklist on their inaugural day, guiding them through essential tasks and providing pertinent information to aid in their seamless integration. Following the onboarding phase, the bot will continue to deliver updates via Slack and commemorate employee achievements.

In the background, automation serves to dismantle the functional silos that may impede the onboarding process. It facilitates communication among stakeholders and guarantees that crucial information does not go unnoticed. Onboarding activities that are particularly suitable for automation comprise: the creation of new hire packets tailored to job code and location, continuous reminders for the completion of the new hire verification procedure, evaluation of legal documents and their resubmission to candidates for outstanding tasks, tracking of new hire probation periods, and the assignment of an onboarding "buddy" to support new hires during their initial 90 days.

### **Establishing a context informed by data to facilitate enhanced strategic decision-making.**

The market research suggests that 75% of corporate leaders lack a significant degree of confidence in the integrity of their data. Discrepancies among human resources systems can pose a substantial risk to the organization. The implementation of automation may effectively reconcile these disparities, thereby establishing a unified repository of accurate information for HR—one that generates novel insights and offers a framework for the predictive analytics necessary for HR to foresee trends and initiate corrective measures more promptly.

Progressive human resource executives are leveraging automation to acquire dependable data that underpins the prioritization of strategic objectives. Notable applications include: Developing a consolidated overview of internal talent to fulfill essential positions and facilitate succession planning Enhancing diversity, equity, and inclusion (DEI) initiatives through comprehensive analyses of promotions, terminations, and candidate demographics Streamlining the generation of cross-system reports and establishing a unified human resources information system (HRIS) as the singular source of truth Implementing access controls on reporting requests Enabling a weekly data auditing bot to guarantee data consistency throughout the HR technology ecosystem.

### **Building the skillsets for an unpredictable future**

Volatility has become the prevailing condition. A strategic framework for Human Resources must consider the unavoidable—yet unpredictable—disruptions stemming from market fluctuations, the emergence of competitive threats, technological upheaval, and unforeseen events such as pandemics. To effectively respond to these occurrences and maneuver through uncertainty, organizations require personnel equipped with the competencies to address a new array of challenges and the adaptability to thrive in a rapidly evolving landscape. Nevertheless, a recent study indicates that 98% of organizations acknowledge a skills deficit within their workforce. While recruiting new talent may provide part of the solution, in numerous instances, enhancing and re-educating the current workforce may offer a more expedient pathway.

Automation possesses the capacity to address skills deficiencies by synchronizing educational endeavors with developmental strategies specific to each role. The utilization of artificial intelligence to propose learning opportunities informed by feedback and performance evaluations facilitates the alignment of individuals with the appropriate competencies for designated positions. Furthermore, the digitalization of monitoring training advancement and completion statistics can enhance the efficacy of your educational and developmental programs. Recommendations for how automation may contribute to the objectives of HR's learning and development initiatives encompass: A digital assistant that delivers tailored learning materials and course suggestions to each employee, based on historical learning engagements, performance metrics, and individual preferences; Expediting the approval process for external courses, training, and certifications not included in the learning management system; Automatically generated notifications for impending training events, deadlines for course completion, and regular assessments.

### **Enabling employee engagement**

Employee engagement is poised to remain a paramount concern for human resource executives worldwide. A robust engagement strategy can enhance employee allegiance and elevate retention rates; moreover, it exerts a major influence on organizational profitability. Empirical studies indicate that engaged employees are responsible for 18% more sales, exhibit 14% greater productivity, and contribute to a 10% increase in customer satisfaction. To bolster engagement, strategic HR leaders will architect the workplace environment to cultivate and retain the talent essential for long-term success, employing a comprehensive career trajectory framework. The integration of automation will be pivotal, as it alleviates the repetitive tasks that monopolize considerable time and focus during the workday. This technology facilitates faster productivity for new hires through expedited recruitment and onboarding processes. Additionally, it enables the provision of timely, tailored communications concerning issues pertinent to individual employees.

In the domain of professional development, automation can also tailor training and skill enhancement initiatives, while simultaneously creating new prospects for process specialists through citizen developer initiatives. Citizen developer initiatives empower personnel to construct their own automation solutions and assign low-value tasks to their respective digital assistants. The following are some engagement-focused applications: Automating repetitive reports and disseminating them to stakeholders; sending reminders and notifications to assist in organizing workloads; facilitating file uploads; and extracting data from documents for entry into alternative systems.

### **An Innovative methodology pertaining to cultural studies.**

Employees who possess a robust affiliation with their organization's culture exhibit a 55% decreased likelihood of seeking alternative employment, concurrently demonstrating a 3.7-fold increase in workplace engagement. The implementation of automation can facilitate the enhancement of engagement with corporate culture by fostering a more dynamic and less bureaucratic environment. Teams can concentrate on challenges

that necessitate their specialized skills, rather than becoming encumbered by monotonous tasks. Furthermore, employees acknowledge the necessity of continually advancing their competencies and are dedicated to honing their skills to align with the evolving demands of their employer. Automation contributes to a more interconnected employee experience in various manners. Organizational leaders can utilize communication analytics to amplify the perspectives of their workforce. Instead of merely evaluating engagement through pulse surveys, they are analyzing trends in human resources inquiries, Slack communications, and collaborative inboxes. An additional illustration involves transforming HR services by employing bots to promptly address level I and II inquiries within minutes of their submission, potentially decreasing response times by at least 30%.

Sectors in which automation can enhance organizational culture include: AI-based career trajectory planning for all personnel, automated platforms for internal acknowledgment initiatives, chatbots facilitating responses to employee inquiries regarding compensation, leave entitlements, and other welfare schemes, the compilation and dissemination of metrics related to diversity and inclusion to ensure organizational accountability for advancement, the distribution and evaluation of employee engagement analytics, as well as the regular issuance of corporate updates, newsletters, and invitations to events.

#### **Here are several effective strategies that have become known:**

Gather ideas from both the top and bottom - Out of the 72+ HR-specific initiatives at Enterprise application, some stem from the company's Center of Excellence, while over 30 have been generated by citizen developers and HR process specialists. The HR team utilizes Automation Hub to gather proposals, assess their viability and strategic relevance, and establish if they align with any ongoing projects or initiatives. Empower the citizen developer - The Enterprise application HR team has discovered that integrating automation development into a citizen developer's main responsibilities, rather than treating it as an occasional task, yields better results. Those who have the deepest understanding of a process often provide the most valuable insights on enhancements. Consider the qualitative aspect - Like many organizations, Enterprise application aims to evaluate and track the effects of automation. However, the Enterprise application HR team believes it is equally crucial to recognize the qualitative benefits that may not always be reflected in straightforward metrics. Key factors to evaluate include the enhancement of employee experience and the opportunity to think and act with greater creativity.

Avoid overthinking - The Enterprise application HR team has discovered that it is more effective to focus on a large-scale process where automation can create a significant difference and act. There is a set cost associated with mastering Enterprise application technology, so aim for a process with substantial potential, and swiftly proceed to the next one to build momentum and maintain concentration. Refine before you automate - Automating an inefficiently designed process may enhance its productivity, but it is wiser to leverage the automation initiative as a catalyst for broader transformation and reshape a clumsy process into a more effective one prior to automation. Innovate through automation - The Enterprise application HR team has observed that some organizations confine themselves to automating existing tasks. Nevertheless, the scope for innovation through automation is boundless. Organizations should not limit themselves to their current knowledge.

#### **Get ready for HR's AI-powered revolution.**

Artificial intelligence and automation are reshaping the landscape for both employers and employees. Automation is facilitating connections between employers and the talent they require, while fostering a more vibrant and rewarding environment for employees. Recruitment timelines are decreasing, onboarding processes are speeding up, workplace cultures are evolving to be more diverse and inclusive, and employee retention is improving.

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