AI agents in human resources

What are AI agents for HR?

AI agents for HR are artificial intelligence (AI)-powered tools designed to automate and enhance various human resources functions. These agents use the advanced natural language processing techniques of large language models (LLMs) to respond to user inputs, autonomously execute HR-related workflows and perform real-time data analysis.

Increasingly, they are used to support HR teams in tasks such as talent acquisition, employee experience, compliance, payroll management, performance management and other day-to-day tasks.

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Why are AI agents for HR important?

Amid shifting employee expectations, strategically deployed AI agents with advanced conversational AI capabilities can function as partners in an enterprise, transforming HR.

HR leaders across the globe are confronting a variety of factors changing the nature of work: labor shortages, increasing skills gaps and the accelerating rate of technological change require new talent management strategies. Employees and managers alike need to become more agile, doing more with less. AI agents and their associated technologies can optimize HR workflows and provide much-needed employee support while reducing the amount of time HR teams spend on administrative tasks.

Deploying these technologies can have tangible results on employee satisfaction and a business' bottom line. Business experts and researchers believe investing in employees' wellbeing and professional development to be a major factor in an organization's success.[1] Satisfied employees who are continuously learning make an enterprise vastly more productive overall. As the IBM Institute for Business Value has found, organizations that deliver top employee experiences outperform on revenue growth by 31% compared to other organizations.[2]

Additionally, according to internal research from IBM Consulting, when employees adopt self-service options for routine tasks and manual HR tasks are reduced, the increased capacity across an enterprise can result in 50% to 60% savings in HR service delivery costs. With key technological interventions that reduce administrative burdens and improve user experience for HR professionals and other employees, enterprises can vastly improve performance while reducing overhead. They can also transform an HR department from an administrative department to a champion of the employee experience overall.

How HR AI agents work

Agentic AI technology exists along a spectrum. Some AI agents exercise limited agency, performing specific tasks or integrating select external data to reach a single goal. Others, like learning agents, continuously respond to new inputs to autonomously track and respond to user preferences. Agentic chatbots—in contrast to non-agentic AI chatbots—not only respond to user prompts but personalize their responses over time, drawing on available resources to provide more comprehensive services and consider the most effective course of action.

In enterprise applications, a range of AI agents are used in tandem to fully or partially automate select HR functions. For instance, an agentic chatbot might provide personalized, relevant information to an employee requesting information on company leave policies, while task-based agents perform a series of autonomous interconnected jobs such as filing relevant paperwork and managing time off requests.

Often, AI agents are integrated into existing systems, working seamlessly with human capital management (HCM) platforms, enterprise resource management software, communication and ticketing tools, directories or other HR systems. Critically, AI agents can autonomously perform complex and multi-step tasks, making them more agile than previous chatbot or automation technologies.

Benefits of using AI agents for HR

Integrating AI agents into an HR department can have multiple, interlocking benefits that save enterprises time, money and wasted effort. For example, IBM's AskHR tool, a purpose-built platform automating over 80 common HR processes, has generated impressive results. Today AskHR resolves 10.1 million interactions a year on behalf of the HR department, saving 50,000 hours and USD 5 million a year. Simultaneously, the HR department's customer satisfaction score (CSAT) has improved dramatically since the tool's rollout.

Enhanced employee experience

Agentic AI can empower workers with instant access to personalized HR-related information, reducing wait times and improving response accuracy. Individualized AI-driven learning and development programs also help employees grow in their careers, leading to greater job satisfaction. When HR managers spend less time performing time-consuming repetitive tasks, they're free to focus on relationship-building along with more creative strategic initiatives.

Improved, highly specific decision-making

HR departments receive massive amounts of highly specific information about prospects, employees and performance—along with third-party data like compliance requirements. Whether analyzing

resumes or providing HR professionals with performance insights, agentic AI can help ingest metrics and data points and help organizations make informed decisions about hiring, promotion and retention strategies.

Increased productivity

AI agents automate repetitive HR tasks such as payroll processing, benefits administration and candidate screenings, freeing up HR professionals to focus on more valuable and human-centric roles. Additionally, when routine HR tasks are easily accessible to employees in real-time, they're less likely to spend a significant portion of the workday on frustrating and time-consuming personnel issues.

Reduced overhead costs

Automating HR processes reduces administrative costs by minimizing the need for manual data entry, paperwork and other time-consuming tasks. AI-driven efficiencies lead to cost savings in recruitment, the onboarding process and other HR operations.

Scalability

AI agents enable HR departments to handle increasing workloads without the need for additional resources. Whether a company is growing or managing a large workforce, AI agents are instantly scalable, providing high-touch service to large and global enterprises.

Five use cases for AI agents in HR

Employee engagement and retention

To retain top talent and continuously engage employees, leading enterprises have turned towards personalization and employee-focused service delivery models. AI agents can proactively address employee needs before they arise, helping to improve workplace culture and reduce friction across an organization.

For example, agentic AI tools can handle time off requests, proactively generate relevant administrative related to major life events such as the birth of a new child or recommend career development opportunities based on an individual's position and goals. By personalizing employee communication and support at scale, agentic AI allows HR professionals to focus on more intimate or urgent matters, ultimately increasing employee satisfaction.

Onboarding and training

AI agents facilitate smooth employee onboarding by automating document verification, preemployment checks and IT request submissions. They also personalize training curriculum and manage user profile creation, ensuring a seamless experience for new hires. AI can personalize learning experiences based on employee roles and skill levels, helping both new employees and veteran team members hone their talents to increase productivity.

Agents also provide real-time answers to common employee questions, offering tailored role-specific information when employees most need it. This can help new hires transition to their roles with less friction, and continuously challenge existing employees to upskill for their next assignment.

Performance management

AI agents have the capacity to create actionable goals and career development plans for employees, suggesting potential internal positions and summarizing skill development opportunities. Given access to employee data, they can also provide real-time feedback and analyze employee productivity, offering recommendations for continuous improvement.

For example, IBM's uses a rules-based digital worker to assist select HR managers through the quarterly promotion process, automating the collection and formatting of data from multiple systems for as many as 17,000 employees. With tools like these, HR departments can gain accurate, fair and timely insights into performance that help managers make critical workforce planning decisions and save tens of thousands of hours.

Streamlining HR management and administration

AI agents automate a wide variety of HR system tasks such as payroll processing, benefits administration, scheduling, interview summarization and compliance monitoring, increasing efficiency and reducing errors. These tools can ensure compliance with company policies by flagging potential risks and suggesting corrective actions. AI self-service portals enable employees to access information and submit requests without human intervention, reducing administrative overhead.

Talent acquisition

AI agents can streamline almost every stage of the talent management and development process, from analyzing resumes to creating offer packages. Agents can filter through large applicant pools, schedule interviews, assist in candidate assessment, and employ generative AI to communicate with prospects.

For example, the interview-as-a-service organization FloCareer uses AI to source diverse candidates from a database of 169 million candidates and deploys the technology to schedule interviews, saving countless hours and increasing the effectiveness of the hiring process. Tools like these help HR departments quickly identify the most valuable candidates for a given position, make more informed decisions and spend more time on improving the overall candidate experience.

Best practices for using AI agents in HR

Combine AI with human oversight

While AI agent are capable of autonomously performing complex tasks, the technology should enhance, rather than replace, human decision-making. Successful organizations generally establish protocols for human review of AI-generated recommendations, particularly for sensitive HR functions such as hiring, promotions and performance evaluations. This helps ensure transparency, maintains ethical standards and fosters a culture of human-machine collaboration.

Connect agentic AI with a wide variety of applications and data

As IBM's research has suggested, employees using AI generally see better results when agents and other AI tools are connected to the systems and workflows they're accustomed too. Additionally, agents with access to more datasets and applications have more problem-solving tools at their own disposal.

It can therefore be critical to integrate AI with a diverse set of HR management systems, communication tools and external databases to maximize their effectiveness. Seamless connectivity across HR operations allows AI to analyze data holistically, providing deeper insights and improving HR functions.

Focus on change management and upskilling employees

Creating new venues for human-machine interaction across the HR process represents a significant change, both for HR professionals and an enterprise at large. As IBM Consulting has found, employees adopt new business technologies and structures 34% more often when employee engagement is at the center of transformational design.

Deploying agentic AI often reveals a skills gap, and successful organizations give significant effort on trainings and change management strategies that help employees work effectively alongside agents. This might mean equipping HR professionals with the necessary tools to use agents, prioritizing transparent executive communication and providing continuous learning initiatives to help HR leaders adapt to evolving AI systems.

Redesign the enterprise operating model

Often, deploying AI ad-hoc to replace a single manual effort generates less value than redesigning departmental workflows to complement AI capabilities. When designing an AI-powered HR strategy, successful enterprises often redefine roles and responsibilities to optimize AI solutions' capabilities, ensuring that employees and technology work together effectively.

Train AI agents on relevant datasets

AI models are only as good as the data they're fed, and task-specific agents should be trained on task-specific data. This might include employee data, such as performance reviews and activity logs, candidate profile information, such as resumes or LinkedIn data, or organizational policies and procedures. Training models with relevant datasets vastly improves an agent's ability to perform a task effectively. Additionally, AI agents should be trained on data that is high-quality, unbiased and diverse, and regularly updated to reflect changes in company policy, industry standards and workforce expectations.