

Using AI to Bolster Hiring Practices that Meet Rising Human Capital Needs

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PAPER**

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Hiring at Scale, Without Losing the Human

Every leadership team I talk to comes back to the same tension: Talent has never mattered more, yet hiring has never felt more broken. Roles stay open for weeks, recruiters drown in repetitive screening, and qualified people never make it past the inbox. At the same time, candidates are rightly demanding a fairer, faster, and more transparent experience.

Artificial intelligence (AI) is arriving in the middle of that tension. For many organizations, the first instinct is efficiency: how do we fill roles faster and lower cost per hire? Those metrics matter. But if that's where the story stops, we miss the real opportunity.

At Ribbon, we believe AI is most powerful when it makes room for more human judgment, not less. Conversations remain the richest signal in hiring: how someone thinks through a problem, what motivates them, how they communicate under a bit of pressure. Historically, those signals have been limited by human capacity. There are only so many phone screens a recruiter can run in a day.

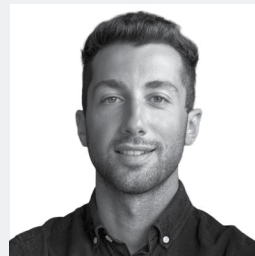
Voice-based AI agents change that equation. They make it possible to interview every interested candidate, around the clock, in their preferred language and time zone, and to do it with a consistent, structured approach.

Instead of spending their days scheduling and screening, recruiters can focus on what they do best: building relationships, advising hiring managers, and making nuanced decisions about fit.

Done well, this isn't just about speed. Standardizing the first-round conversation, capturing richer data from each interaction, and making the process more auditable can all contribute to fairer and more defensible hiring practices. The same capabilities that help organizations move quickly—clear criteria, consistent questions, objective scoring—also help them reduce noise, spot patterns, and improve retention over time.

That is why Ribbon sponsored this Harvard Business Review Analytic Services report on using AI to bolster hiring practices. It brings independent research and real-world experience to questions we think every leadership team should be asking: Where should AI sit in the hiring journey? How do we balance automation with accountability? What guardrails do we need so that “faster” also means “fairer” and “better”?

Our mission is simple: make it possible for organizations to talk to every candidate who raises their hand, and to do it in a way that is scalable, respectful,



Arsham Ghahramani
Chief Executive Officer
Ribbon

and insight-rich. If this report helps even a few leaders reimagine how they hire—so they can meet rising human capital needs without sacrificing the human experience—we will consider that a success.

Using AI to Bolster Hiring Practices that Meet Rising Human Capital Needs

Talent is most organizations' most important asset, but human capital can be an elusive commodity. Attracting and retaining the right people in the right positions are especially acute challenges in today's hypercompetitive global economy, making talent recruitment an expensive exercise in terms of time and money. "Good employees have options," says Julie Kniseley, leader for HR solutions at James Moore & Co., a Gainesville, Fla.-based consulting firm, "so if a company is not paying attention to why they stay, they risk the revolving door and expense that goes with it."

KNISELEY SAYS talent is critical for organizations, noting that the cost of turnover can be anywhere from 40% to 200% or more of annual salary, depending on the role, as a result of lost productivity, overtime, and recruiting and training costs. She adds that those costs could be even higher depending on industry, skill shortages and mismatches, and generational differences in expectations of work.

Despite the importance of talent, organizations all too often seek suitable job candidates in a haphazard, time-consuming manner or depend heavily on outside agencies for help. In a working paper titled "Better Together: Quantifying the Benefits of AI-Assisted Recruitment," submitted for publication in July 2025, authors Ada Aka, Emil Palikot, Ali Ansari, and

Nima Yazdani write that "traditional recruitment processes suffer from identifiable bottlenecks, as human recruiters often have to review hundreds or thousands of applications for an individual position manually, resulting in a substantial time investment and potential oversight of qualified candidates."¹

Meanwhile, attempts in such an environment to reduce recruitment time and expense may only hurt talent acquisition and worker retention because of the sheer amount of labor required. As a result, HR executives are increasingly using artificial intelligence (AI) to improve recruiting performance, especially in high-volume enterprise hiring. According to an April 2024 survey by Boston-based Boston Consulting Group, 70% of

HIGHLIGHTS

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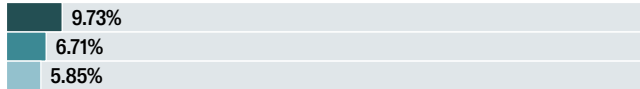
FIGURE 1

Artificial Intelligence Versus Humans in Recruitment

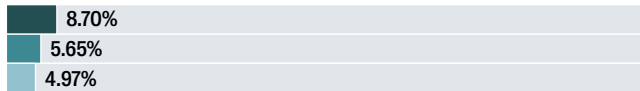
More job applicants respond positively when interviewed by voice AI agents

Percentage of all applicants who...

■ Receive job offer ■ Start job ■ Retain job after one month



When interviewed by voice AI



When interviewed by humans

Source: University of Chicago and Erasmus University study, August 2025

companies experimenting with AI or generative AI were doing so within HR, with talent acquisition the use case they cited most frequently.

HR leadership in various industries is using voice AI agents—systems that use voice recognition and natural language processing to conduct and record humanlike conversations and collate data from those conversations—to shorten time to hire, raise candidate quality, and reduce costs, increasing the productivity and quality of their recruiting efforts. AI can more carefully and consistently evaluate candidate experience and suitability, including qualitative factors such as interest, motivation, and enthusiasm, while adjusting for language or accent barriers.

The use of voice AI agents has already proved successful in recruiting efforts. The use of voice AI agents increased job offers by 12%, job starts by 18%, and 30-day retention by 17% among job applicants, according to an August 2025 study of more than 70,000 job interviews for a working paper titled “Voice AI in Firms: A Natural Experiment on Automated Job Interviews” by the University of Chicago’s Brian Jabarian and Rotterdam-based Erasmus University’s Luca Henkel that has been submitted for publication.² **FIGURE 1**

The use of AI can also enable organizations to improve their recruitment compliance and fairness, as evaluations become more consistent, equitable, and auditable. Improved speed in filling jobs is a significant benefit in today’s scramble for talent, too, notes Elena McGuire, director of people

and special projects at Thrive Career Wellness Inc., a Toronto-based software platform that helps place individuals seeking jobs and undergoing career transitions primarily in customer service, sales, and software development. McGuire reports that Thrive lost potential new hires to competitors when it depended on a completely unautomated system. “Other companies were just moving faster,” she says.

This paper will demonstrate how AI interview platforms can best be integrated into human efforts to improve recruiter workflows and organizations’ hiring efforts. The paper will also identify how to best implement AI in recruitment, ultimately helping organizations attract and retain talent and strengthen their human capital.

Faster Applicant Screening

The search for talent has long been a struggle for organizations, and that challenge is only deepening as labor shortages, competition within industries and across borders, and wage and price pressures grow more prevalent. As a result, talent searches are becoming increasingly expensive in terms of time and money, if only because of the need for humans to screen résumés and schedule and conduct interviews.

McGuire says the use of voice AI has mitigated these problems with its ability to process candidates more expeditiously, reducing time to hire. Voice AI also gives Thrive greater ability to cross borders, she notes. Simple time zone differences, for example, can slow recruitment efforts as organizations seek to interview candidates at hours that are either extremely early or late for one of the parties. Thrive hires in Europe and Australia as well as in the U.S. and Canada, so a voice AI platform enables the company to conduct interviews at any time that’s convenient for a candidate. And voice AI can conduct interviews in most any language, overcoming linguistic or accent barriers. “We at the very least better understand candidates,” McGuire says, adding that such understanding has helped Thrive process more international applications and make more international hires.

After implementing voice AI in late 2024, Propel Impact found that it no longer had to spend an average of 150 hours after a 25-minute screening interview to vet a single candidate and is now able to recruit four times as many participants as it was before.

Voice AI's ability to streamline the interview process also improves hiring speed. McGuire explains that Thrive's process typically involves three interviews, one each with an HR leader, a hiring manager, and a subject specialist, which she describes as a potential gauntlet. Prior to implementing voice AI about a year ago for interviews after screening résumés by hand, she notes, such interviews could take weeks to complete. But with the platform in use, "those three people can watch the same video [of each interview]," McGuire says, saving Thrive "days and days" of scheduling and conducting individual interviews.

Cheralyn Chok, co-founder and executive director of Propel Impact, a nonprofit organization based in Ottawa, Ontario, that operates internships for socially conscious organizations, reports that voice AI similarly expedites its recruitment efforts. The nonprofit receives inquiries from 1,000 applicants for these positions annually, all of who have to be vetted. Chok says Propel Impact finds that the ability for applicants to schedule interviews via voice AI alone represents "a huge upgrade from what we were doing previously."

Before voice AI, Propel Impact used a team of five full-time people to interview 300 to 400 candidates as part of the screening process to fill 40 to 50 roles at a time. "We didn't have the capacity to conduct those screening interviews," says Chok. After implementing voice AI in late 2024, Propel Impact found that it no longer had to spend an average of 150 hours after a 25-minute screening interview to vet a single candidate and is now able to recruit four times as many participants as it was before. The five full-timers are still on staff but now spend more time focused on program development, enabling the organization to expand its operations.

Propel Impact's efficiency gains have enabled the organization to devote more time to other activities that improve the nonprofit's capacity to supply its foundation and other partners with talent, Chok says. Those partners also conduct interviews with applicants who make it through Propel Impact's process, and the organization's use of AI enables it to spend more time onboarding and training recruits for purposes of recommending them to partners.

James Moore's Kniseley says the benefit of speed is particularly important to industries with high-volume hiring needs, such as hospitality and retail, where she notes that turnover is so high that "time to hire needs to get a lot more compact."

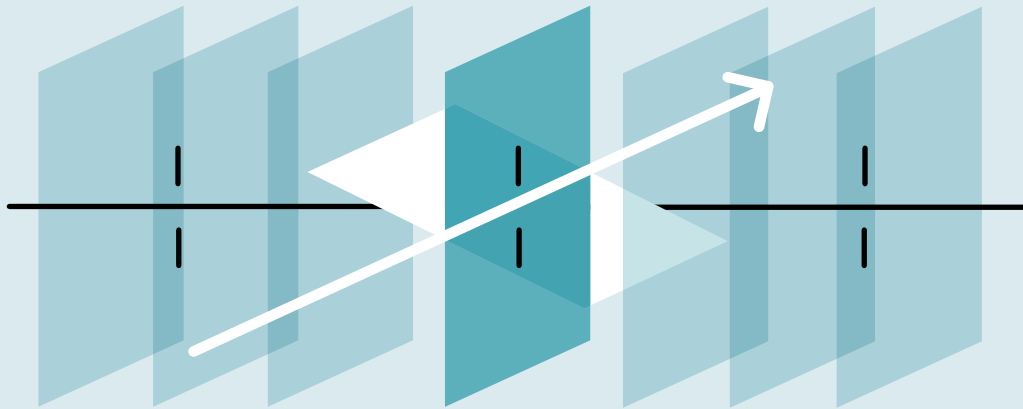
Improved Application Quality

Another benefit to be gleaned from voice AI use in recruitment is more distinctive applications. At Propel Impact, the initial screening process for the internships and fellowships it operates involved written applications prior to the introduction of voice AI, but such applications were becoming less and less meaningful. Propel Impact's Chok notes that the written applications were becoming increasingly similar over time. She suspects the similarities stemmed from the growing use of AI tools such as ChatGPT to prepare them. As a result, says Chok, "it was really hard to gauge the quality of candidates based on written applications."

But by adopting voice AI for screening applicants, Propel Impact was able to reduce its reliance on written application material, and ask for fewer written responses from candidates.

In addition, she notes, the organization had been asking for recorded videos for introduction purposes but found that applicants would record them over and over in order to perfect them. But Chok says such practiced recordings did not provide an accurate representation of whether candidates could think "on their feet." Propel Impact stopped asking for the recorded videos and now just uses the voice AI screening interviews.

Voice AI can improve the quality of applicant interviews in other ways, as well. For example, Thrive's McGuire notes that an interview process conducted entirely by humans can be distorted by their state of mind. "With a manual process, you're meeting with people at all parts of their day," she says, pointing out that human interviewers may not always be at their best. "We don't know what's going on in anyone's day.



“It was really hard to gauge the quality of candidates based on written applications.”

Cheralyn Chok,
Co-founder and executive director,
Propel Impact

“ [Voice AI] can enhance your compliance, though it can never fully replace your process. ”

Elena McGuire, director of people and special projects,
Thrive Career Wellness Inc.

And you could say the same thing is true for the candidate. Your performance could vary dramatically, depending on what kind of day you're having.”

Such variation can easily influence interviewers' judgment and applicants' performances. On the other hand, McGuire asserts, if everyone is passed through the same set of questions and can address them at their convenience, instead of, say, “taking a phone call in the hallway of their current office,” the interview process is clearly fairer. In addition, she notes that candidates can have more time to prepare and don't have to worry about a face-to-face meeting with a recruiter. “It definitely adds ‘comfortability,’” she says. “They're not meeting with someone who might otherwise be intimidating.”

While humans conduct interviews in the more advanced stages of the Thrive application process, “in that first showing at least you get a good shot,” McGuire notes.

To be sure, the Jabarian-Henkel study found that voice AI agents follow interview guidelines more consistently, cover a more uniform set of topics, and reduce interviewer-driven “dispersion,” or variability, while remaining responsive within each conversation. The authors say voice AI “is associated with more hiring-relevant information collected from applicants.”

The study also found that, in response to voice AI-led interviews, recruiters score the interview performance of AI-interviewed applicants higher but place greater weight on standardized tests in their hiring decisions. Meanwhile, the study found that applicants accepted job offers from AI-led and human-led interviews with a similar likelihood and rated both the interview quality and the recruiter similarly in a customer experience survey. Even so, when offered the choice of processes, 78% of applicants chose the AI recruiter.

Introducing Less Bias

While Kniseley says that voice AI platforms can train human interviewers to be more consistent in their approach, AI has

nonetheless had mixed results so far on the issue of interview bias. Hiring regulations vary widely around the world and create a challenging legal environment for HR departments. For example, despite the near-universal use of computers and the cloud, Kniseley points out that in some areas of the U.S., hiring rules still require that certain documents be kept in “locked, separate cabinets.”

When it comes to discrimination, McGuire says AI could cut both ways. On the one hand, its consistency may help recruiters avoid running afoul of rules against bias in hiring. But on the other, she says, it could introduce some biases, especially when used for screening résumés or encountering speech impediments such as a stutter. One widely used HR platform is currently facing a class action lawsuit alleging its AI hiring tools systematically discriminate against older, racial, and disabled applicants. “I think there's always going to be biases in this world, and I don't think any system or AI is going to solve that sad truth,” McGuire says.

Still, Kniseley advises companies to have guardrails in place to avoid introducing biases via AI. She points to an AI system that's prompted to look for employment gaps but may have no way of understanding that the reason a gap might appear on a résumé is a pregnancy. “You have to have a human in there to make sure that it is not scrubbing out people that it shouldn't,” she says.

But if an organization uses voice AI as a tool for, or as an adjunct to, human interviews and always operates within proper employment standards, “it can enhance your compliance, though it can never fully replace your process,” McGuire says.

Most platforms can be prompted to ignore stutters and accents, according to Chok. She believes Propel Impact sees voice AI as enabling inclusion and eliminating, or at least reducing, bias in its recruitment process since the platform uses a standardized scoring system.

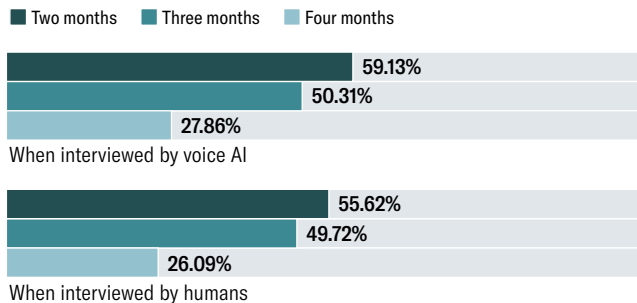
She cites instances of so-called affinity bias, which results from traits that interviews and applicants have in common. For example, if an applicant mentions that they went hiking over the weekend and the human interviewer happens to

FIGURE 2

More AI-Interviewed Hires Stay Put

Retention is higher and longer for those applicants interviewed by voice AI agents

Percentage of applicants receiving job offers who remain after...



Source: University of Chicago and Erasmus University study, August 2025

enjoy the outdoors, the latter may subconsciously favor the applicant without regard for his or her performance. But with voice AI, affinity bias is clearly not an issue.

Gender bias, too, can be reduced, Chok contends. As one example, she cites the risk that a female interviewer will find a strong female applicant a threat to her own position. Chok notes that this sort of bias may apply to racial situations, too, among others.

The good news is that, because voice AI interviews are more readily auditable than those conducted by humans, a more dependable paper trail left by the platforms can help companies identify these situations and comply with regulatory requirements, says Kniseley. “Humans can throw things in the garbage,” she asserts.

As for an applicant’s intangible qualities, voice AI may not be able to fully evaluate the person’s interest in and enthusiasm for a position, but it can go a long way toward that end. Chok explains that Propel Impact can tailor questions it feeds into its AI platform to elicit responses that assess an applicant’s motivation. “If the applicant doesn’t really care about Propel’s mission and just wants a job,” she says. “It can definitely detect that.”

Uncertainty Regarding Retention

Because voice AI can help organizations find and hire more suitable job candidates, the technology can also help

with retaining them, which, of course, is half the recruitment battle.

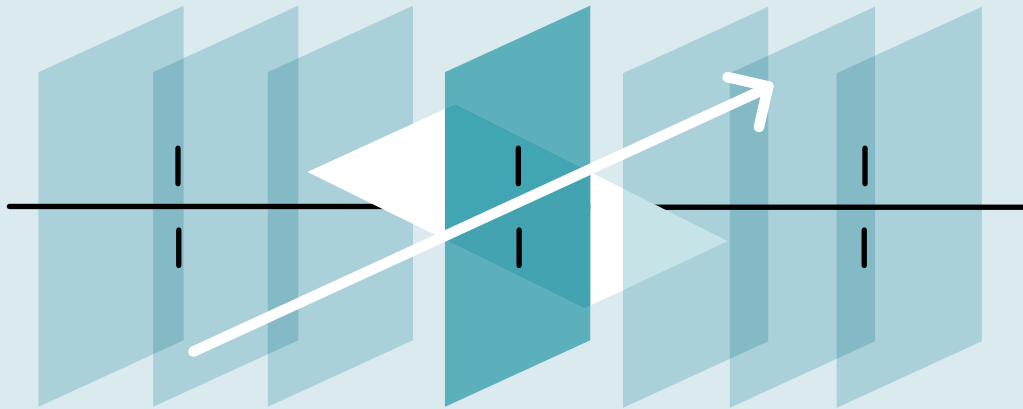
But while some academic research shows that voice AI improves retention rates, the anecdotal evidence isn’t overwhelming. Indeed, Kniseley says it’s too soon to tell whether voice AI improves the rates at which new hires stay in their jobs. “It’s still in its infancy,” she points out.

Chok says the rate at which the interns Propel Impact place are retained after the internship has remained high, at 83%, with no changes since the organization adopted voice AI. As she puts it, the platform “has really helped us out in making sure that we’re continuing to deliver high-quality candidates who are the right fit for the organizations that we work with.”

McGuire reports that she believes Thrive’s retention rate has improved as a result of the technology’s application, simply because the process conducted at least partly through voice AI is perceived as consistent and indicative of a supportive workplace. Though she can’t put an exact number on it, McGuire has observed improved retention, she says, because “incoming employees can see a fairer process, and that may be a reason to stick around.”

The Jabarian-Henkel study found that the likelihood that applicants are still employed after two months is 17% higher with a voice AI interview process versus a human-centric one, 16% higher after three months, and 17% higher after four months. **FIGURE 2**

The use of voice AI in application and interview processes still faces challenges. The Jabarian-Henkel study points out technical challenges in voice AI recruitment that could affect its usage. As with any application of AI, organizations must find ways to minimize instances of “hallucinations,” where large language model-based tools unpredictably generate coherent but factually incorrect or nonsensical output, the study reports. And in recruitment, guardrails need to be in place to prevent the AI from going off topic. The study also cautions that the AI tool needs to be secure against attempts by applicants to game it by parroting buzzwords or reading from a script.



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Chok, Propel Impact	
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“Ultimately, I see [voice AI] as a huge benefit.”

Julie Kniseley, leader for HR solutions, James Moore & Co.

On this latter point, Kniseley warns against the growing practice by applicants of so-called white fonting, in which they doctor their résumés by hiding keywords in white text to fool AI into finding them positions they aren’t qualified for.

Conclusion

The search for talent is a growing challenge for organizations, one that spans industries and crosses borders. Traditional recruitment processes, depending as they do entirely on humans, require rising outlays of money and time as a result. Organizations persistently seek suitable job candidates in a haphazard, time-consuming manner or depend heavily on outside agencies for help.

Yet AI platforms that use voice recognition and natural language processing to have human conversations and collate data can reduce recruitment expense while improving the quality of applicant interviews, the number of job offers extended, and the retention of applicants hired.

By screening applicants more efficiently and effectively, increasing the fairness of the interview process, eliminating biases, and providing an easily auditable paper trail, voice AI can help organizations find and retain the talent they seek while restraining labor costs and complying more readily with widely varying regulatory requirements.

Of course, this technology cannot replace humans entirely, but by augmenting their efforts in such a way as to reduce the cost and improve the recruitment of talent, voice AI can help organizations realize important gains in human capital.

Indeed, organizations, such as Propel Impact and Thrive, that have recently begun to employ voice AI as part of their recruitment process are already realizing significant improvements.

While it’s still early days for the use of voice AI in this critical arena, “Ultimately, I see it as a huge benefit,” Kniseley says.

Endnotes

- 1 Ada Aka, Emil Palikot, Ali Ansari, et al., "Better Together: Quantifying the Benefits of AI-Assisted Recruitment," July 8, 2025. <https://arxiv.org/abs/2507.08029>.
- 2 Brian Jabarian and Luca Henkel, "Voice AI in Firms: A Natural Field Experiment on Automated Job Interviews," August 18, 2025. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5395709.



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