MIT Technology Review Insights

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Generative AI augments human skills to create exceptional experiences.

Humans at the heart of generative AI

Key takeaways

1. The many emerging use cases for generative AI have revolutionary potential for business – if implemented with attention to the technology's strengths and limitations.
2. Generative AI can enhance customer and employee experience by automating the handling of routine and repetitive inquiries while also providing background support to employees tasked with more complex issues.
3. These technologies deliver the most business value when human capabilities such as judgment, creativity, and empathy are used to shape and supervise generative AI outputs.

It's a stormy holiday weekend, and you've just received the last notification you want in the busiest travel week of the year: the first leg of your flight is significantly delayed.

You might expect this means you'll be sitting on hold with airline customer service for half an hour. But this time, the process looks a little different: You have a brief text exchange with the airline's AI chatbot, which quickly assesses your situation and places you in a priority queue. Shortly after, a human agent takes over, confirms the details, and gets you rebooked on an earlier flight so you can make your connection. You'll be home in time to enjoy mom's pot roast.

Generative AI is becoming a key component of business operations and customer service interactions today. According to **Salesforce research**, three out of five workers (61%) either currently use or plan to use generative AI in their roles. A full 68% of these employees are confident that the technology – which can churn out text, video, image, and audio content almost instantaneously – will enable them to provide more enriching customer experiences.

But the technology isn't a complete solution – or a replacement for human workers. Sixty percent of the surveyed employees believe that human oversight is indispensable for effective and trustworthy generative AI.

Generative AI has enormous potential to revolutionize business operations, but how companies decide to employ it will make all the difference. Its full business value will only be achieved when it is used thoughtfully to blend with human empathy and ingenuity.

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Generative AI pilots across industries

Though the technology is still nascent, many generative AI use cases are starting to emerge. In sales and marketing, generative AI can assist with creating targeted ad content, identifying leads, upselling, cross-selling, and providing real-time sales analytics. When used for internal functions like IT, HR, and finance, generative AI can improve help-desk services, simplify recruitment processes, generate job descriptions, assist with onboarding and exit processes, and even write code.

One of AI's great benefits for employees is its ability to take over mundane, rote, and time-consuming tasks. "Anything that's repetitive and low-level can be offloaded to AI," says Ramandeep Randhawa, professor of data sciences and operations at USC Marshall School of Business. This can improve employee satisfaction, he says, since people are less tied down by busywork.

When it comes to customer experience, generative AI offers capabilities including sentiment analysis, language translation, text classification, and summarization – all of which can be used to help deliver highly tailored, contextually aware customer interactions. Generative AI can fuel advanced customer-facing chatbots, like the one that triages your urgent message to your airline, but it can also empower agents behind the scenes, providing context, possible responses, and suggested next actions to the person who takes over handling your rebooking.

While chatbots aren't new, the public release of generative AI technology over the past year means they've improved dramatically in a short time. "Chatbots were around before, but generative AI has further increased their efficacy, as well as the quality of output," notes Vishal Gupta, vice president at Everest Group. "Today's chatbots are significantly more conversational, and they can provide answers to more complex and tougher questions."

Generative AI augments human connections

Working together, generative AI and customer support experts can create a comprehensive customer experience, meeting the demands of clients while cultivating stronger relationships. In an ideal partnership, the AI easily dispatches simple and repetitive work, while also providing background support to humans handling more complex cases.

Ramandeep Randhawa, professor of data sciences and operations at USC Marshall School of Business, gives this example of a task a sophisticated AI could handle solo: A banking customer initiates a chat with an AI bot that asks what the customer needs. When the customer says "late fee," the AI looks at the account, sees this is the customer's first-ever late fee, and credits the amount back to the customer's account instantly.

When conversations do need to transition to a person, the AI can help by supplying relevant customer data and a summary of the interaction so far. That AI-provided conversation summary and interaction history enables a customer support agent to take over the call seamlessly, without requiring the customer to explain their situation all over again.

Generative AI can also enable multilingual customer support and assist agents by providing tools for tone and sentiment detection and by creating conversation summaries at the end of calls. "A lot of customer interactions are done off of scripts to standardize service," explains Randhawa. "This can be frustrating when everybody says the same thing." AI tools for voice analytics would allow customer support teams to keep their scripts, while enabling the AI to make suggestions about bypassing elements or taking an alternative conversational path with an angry or disappointed customer.

Customer support teams can also use generative AI tools to access company knowledge bases in a more intuitive way—instead of having to flip through a 100-page procedure manual while cross-referencing three different spreadsheets, they can type a simple query, as they would in a search engine, to get the targeted answer they need to resolve the customer's query. The result is reduced handling times and more accurate first-contact resolutions. In other words, an enhanced experience for both parties.

"There is not a single industry untouched by generative AI," adds Gupta. "I see the potential in day-to-day work where each and every employee in any organization, in any industry, can use these tools to increase the quality of the work they're doing, and also improve their productivity."

Challenges of generative AI

The transformative power of generative AI is undeniable. Yet, like any technology in its relative infancy, it's not without significant challenges. Gupta outlines four main areas where issues tend to arise: data security and privacy; explainability (understanding how the AI comes up with certain outputs); ownership (who owns outputs generated by models trained on large scraped data sets); and ethicality and bias.

The issue of biased or incomplete training data is a glaring one – if a data set lacks diversity or contains prejudiced information, the AI model might propagate these biases, which could have devastating real-world consequences. "There's a phrase in the AI world: garbage in, garbage out," says Gupta. "This means your AI system is as good as the data it's trained on. If your data is biased, the output will be biased."

There's also the unsettling issue of "hallucinations" – when a generative AI model provides factually incorrect or even completely fabricated information. Such inaccuracies can significantly impact the credibility of AI systems and the enterprises using them, particularly in sensitive applications such as health care or legal advice.

In addition, while AI excels at pattern recognition, it's notably lacking in areas that necessitate a nuanced understanding of human emotions or complex decision-making. As such, it's not well-suited for tasks that require compassion, common sense, and intuition. Herein lies the need for balance: while AI can handle heavy computational lifting, sift through massive data sets in milliseconds, and offer instant solutions in many scenarios, humans must be prepared to step in where the technology falters – providing emotional intelligence and creativity that a machine cannot replicate.

Workers' perceptions of generative AI

Many employees are eager to use generative AI...

61% say they are using or plan to use generative AI at work.

68% say generative AI will help them better serve their customers.

67% say generative AI will help them get more out of their company's other tech investments.

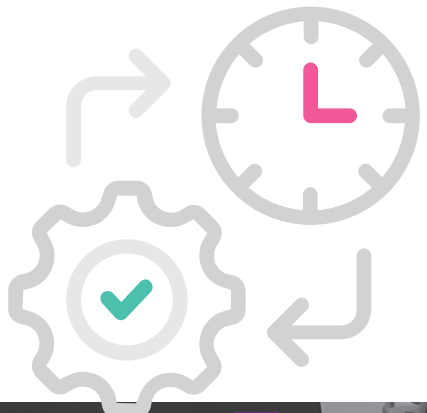
But they also have concerns...

73% believe generative AI introduces new security risks.

59% believe that generative AI outputs are biased.

54% believe that generative AI outputs are inaccurate.

Source: Compiled by MIT Technology Review Insights, based on data from Salesforce, 2023



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This is particularly critical in tense or charged customer interactions – for example, when a bank customer is dealing with a complicated series of fraudulent transactions. In these stressful situations, customers don't want to interact with a chatbot. They require human empathy and creativity to feel heard and cared for.

"Humans like having humans involved," says Randhawa. While AI features like speech and voice analytics can assist agents in providing faster and better-informed service, the true path to a happy customer is paved with empathy and connection.

This need for humans to steer and supervise AI tools is precisely why Gupta believes the most extreme concerns about generative AI eliminating human jobs are overblown – similar to past fears about emerging technologies. "People are always asking, 'Will AI replace a lot of jobs?' The same question was posed 10 to 15 years back when the whole conversation around robotic process automation started," he says. "But today, that industry has led to net new jobs in the market. I think the same thing will happen with generative AI."

That said, helping employees learn and collaborate with the new technology will be paramount for a smooth workforce transition. In the future, basic skill and experience working with AI tools may become an expectation for customer support roles.

Best practices for human-AI interaction

For companies seeking to integrate generative AI into their workflows, a thoughtful and human-centered approach is necessary. The following recommendations will help ensure that generative AI technology serves as an effective copilot to both employees and customers.

Implement human safeguards for accuracy of training data and outputs. Human reviewers are indispensable for assessing generative AI training data and fact-checking its outputs – and conducting regular audits of both. Gupta notes that some companies are now developing "knowledge packets," or training data sets that have been vetted, annotated, and labeled by human domain experts.

Ensure AI and cybersecurity efforts go hand in hand. Generative AI is still in its Wild West days, but companies must treat their customers' personal information and their own proprietary data as sacrosanct. "There's a lot of data that's being generated, but if you don't have the right safeguards in place, you can get hacked," says Randhawa. "There's a lot of risk for companies in collecting data as well."

To prevent disaster, AI practices should adhere to all relevant legal and privacy regulations. Closed data loops – which use data that's been masked or is otherwise unidentifiable – may also be a tactic for ensuring no proprietary information leaks out of companies using generative AI platforms.

CEOs are bullish on AI

Source: Compiled by MIT Technology Review Insights, based on data from "The CEO Outlook Pulse — July 2023," EY, 2023

"We want to leverage advancements in AI, but we stand to benefit only when humans become comfortable using the technology as a copilot that makes them more productive."

Sidharth Mukherjee, Chief Digital Officer, Teleperformance

Focus on regular and ongoing employee education. Helping employees stop worrying about AI taking their jobs – and instead focus on learning how to apply AI in their day-to-day jobs – will be important. Organizations should ensure that employees understand what AI can do, including the basics of prompt engineering. And in the future, generative AI may be particularly useful in getting new employees up to speed, helping them bridge the knowledge gap more quickly.

It's also critical to foster an understanding of the proper use of AI within internal company policies. "Training for employees is very important in this environment, where it's critical to be able to detect if the AI has gone off the rails," says Randhawa. "The employee needs to be able to have those boundaries to figure this out."

Implement structured, iterative feedback mechanisms. Both customer and employee feedback are invaluable for improving generative AI tools. Feedback loops help ensure AI systems are as effective, ethical, and user-friendly as possible. They also help organizations customize their AI tools to fit specific use cases relevant to their industry and company terminology. Surveys, beta testing, pilot sessions, and dedicated communication channels should be part of this process. "Once the system is created, it's not one and done," says Gupta. "Generative AI systems need continuous feedback – that's where the explainability part will become better."

Consult with third parties and internal experts when implementing generative AI systems. Bringing in third-party consultants – particularly those unaffiliated with a specific AI model – can help ensure that the technology adopted aligns with the company's mission, vision, and values. Internal cross-functional teams, consisting of a mix of AI experts, developers, content creators, and customer service representatives, can help provide diverse perspectives about how to adopt and improve upon AI systems.

While generative AI will assist business operations in many ways, human input remains a critical cornerstone of the technology's long-term success. "Most businesses are striving for the perfect balance between high-tech and high touch," says Sidharth Mukherjee, chief digital officer at Teleperformance. "We want to leverage advancements in AI, but we stand to benefit only when humans become comfortable using the technology as a copilot that makes them more productive."

"Humans at the heart of generative AI" is an executive briefing paper by MIT Technology Review Insights. We would like to thank all participants as well as the sponsor, Teleperformance. MIT Technology Review Insights has collected and reported on all findings contained in this paper independently, regardless of participation or sponsorship. Teresa Elsey was the editor of this report, and Nicola Crepaldi was the publisher.

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