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CHATBOT 15:1
OK

CONVERSATIONS WITH YOUR USER INTERFACE

Customer experience is paramount to success for all companies. Today, enterprises must respond to a wide range of customer needs and concerns. Although, chatbots have been used to meet this need, early implementations fall short. This article offers a perspective on why chatbots have failed and how to improve automated customer service to deliver the promise of better experience.

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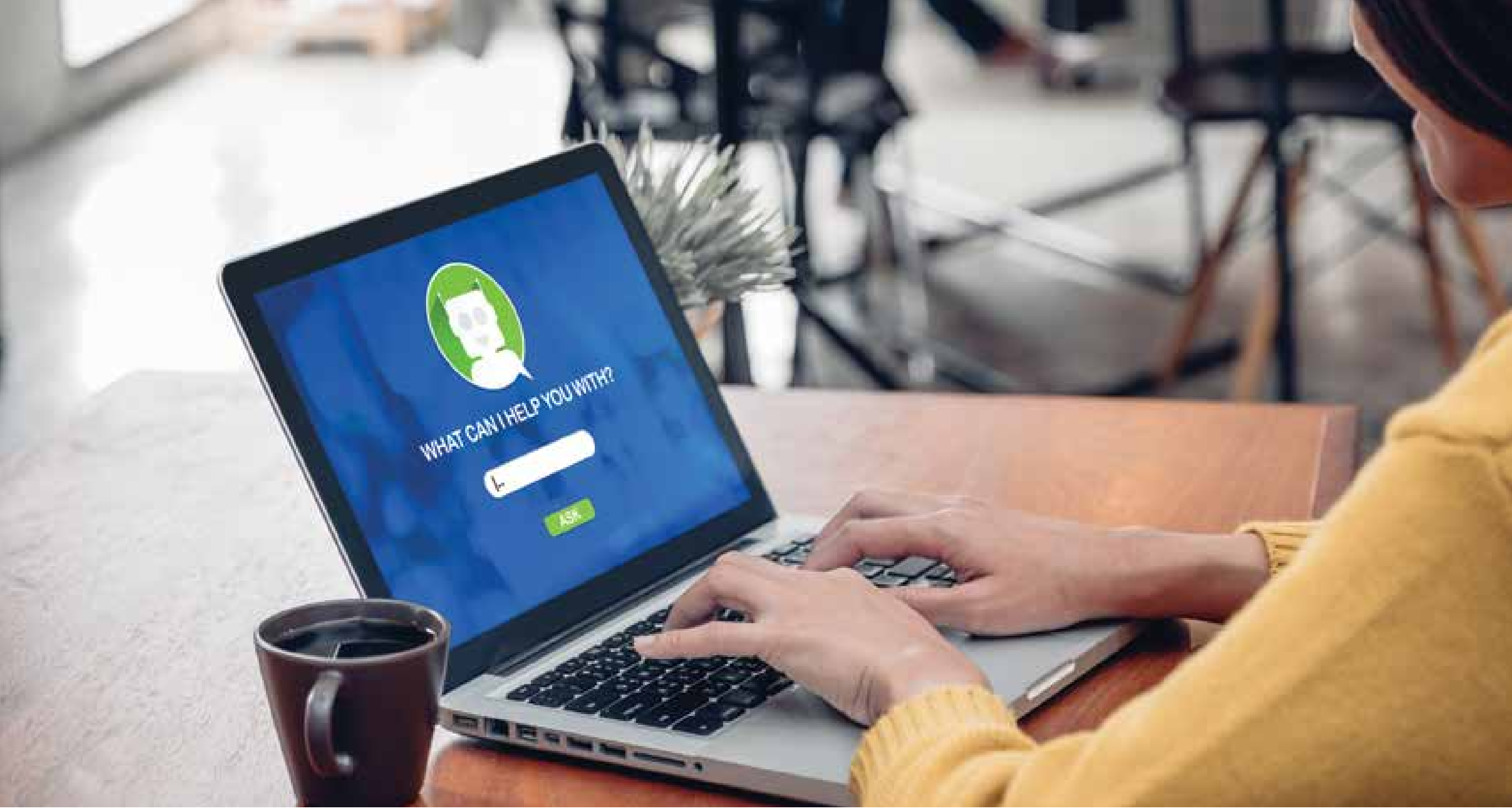
WHAT CAN I HELP YOU WITH?
ASK

Conversations with your user interface

Enterprises face a daily challenge in responding to a wide range of queries and requests from customers, employees, suppliers, and partners. One potential solution is chatbots, software-driven interactive agents that are now appearing on customer-facing websites. Unfortunately, many early chatbot implementations have been disappointing, satisfying neither the enterprise nor its users. The question is why — as well as what can be done to boost chatbot performance and improve customer experience?

Enterprises are deploying chatbots to meet important challenges. These organizations receive a large number of queries and requests daily, but creating useful answers is difficult and complicated. Requested information may reside across enterprise knowledge repositories, transaction-based systems, and business intelligence systems. This data may be stored in different, possibly incompatible formats. And the groups that own the data may be unaccustomed to working together and sharing information.

At many organizations, front-line employees responsible for answering these requests are poorly equipped. They lack direct and easy access to the systems that contain answers to incoming queries. Even when they do have this access, these workers may feel uncomfortable using IT applications for their day-to-day needs.

Finally, the cost of answering all these inquiries can be high. That's especially frustrating given that many of the same inquiries are made over and over — and over again.

Chatbot — or not?

Taken together, these factors create a situation ripe for automated intervention, especially one that uses chatbots. Enterprises have previously implemented chatbots for this application, but the results have been mixed at best. One reason: many have failed to focus on modeling end-user experience and engagement. As a result, their users find the chatbot experience unsatisfactory and decide not to use them again.

Another challenge: to implement effective chatbot solutions, organizations often need to hire professionals with new, highly specialized skills. For these organizations, having good developers is only the starting point. They also need user-interaction experts, data analysts, conversation modelers, natural-language experts, and others. Unfortunately, such professionals are both difficult to find and expensive to hire.

Chatbot technology itself is another part of the problem. While today's chatbots can handle most simple, transactional queries, they are challenged by more complex scenarios. This frustrates users, leaving their most important queries unanswered.

In addition, chatbot technology is too frequently oversold. That leaves enterprise managers with unrealistic expectations about what chatbots can — and can't — actually do. The fact is that chatbot technology is still evolving. True disruption in this area is still to come.

For example, people think chatbots can answer every query, even though that's not proven to be the case. For example, in IT operations companies wanted to use chatbots for knowledge reporting and sharing. But many were disappointed because early chatbots couldn't do that. Another frequently oversold feature is known as conversation management. When people send an email or make a phone call, they're careful to be complete and accurate. But chatbots cannot handle or understand these longer email-type messages. Users need to be given special guidance to send chatbot-length messages.

Another challenge involves giving chatbots access to enterprise data services. Gaining this access is vital to answering more advanced queries. Yet it typically requires developers to work cooperatively with multiple corporate functions that in many instances are not used to working together, and perhaps unwilling to do so.

Yet another hurdle is determining the right or best questions to train a chatbot. Because this can be difficult, many organizations leave the questions open-ended and this task incomplete. But by taking this path of least resistance, enterprises risk frustrating employees, vendors, and customers. Chatbot answers such as, "I don't understand your question" or "Sorry, I can't help with that" will not improve anyone's satisfaction and may do more harm than good to customer, employee, and partner relationships.

Finally, implementing chatbots can take much longer than expected. For example, one of our clients estimated that a recent chatbot project would be completed in two months; it ended up taking eight months to finish. This wasn't the client's fault. Getting the technology to work was simply more complicated than anyone had anticipated.

One smart bot

To overcome these limitations, enterprises can use more powerful, AI-driven chatbots. With AI technology, chatbots can realize the promise of true conversational platforms for enterprise applications.

The next generation of chatbots will integrate data across diverse enterprise applications and databases, while also supporting a wide range of channels, including social media and mobile. Ideally, these chatbots will be just one piece of a complete end-to-end solution, one that combines chatbots, human interaction, and knowledge bases. Chatbots will also be empowered to handle inputs and outputs in either text or voice, using APIs that connect them with third-party speech-to-text and text-to-speech converters. These chatbots will also be based on open-source components for machine learning, rather than on proprietary technology stacks constrained by enterprise product roadmaps and integration complexity.

Chatbots that use deep learning are increasingly affordable and available. These smarter chatbots can take on increasingly complex queries, such as what's permitted under an organization's travel policies. A manager who wants to know whether they can fly business class between New York and London can simply ask the AI chatbot. They don't have to painstakingly search the company's travel documentation for an answer.

Already, powerful AI-driven chatbots are improving the user experience for one popular use case: IT operations and tech support. One of our clients now uses AI chatbots to assist its IT help desk. The chatbot helps employees resolve technology issues, raise trouble tickets, retrieve lost or forgotten passwords, even troubleshoot servers — all tasks traditionally done via email. The chatbot's conversational user interface operates at the edge, and it's both guided and easy to use. Incidentally, this use case is considered low-hanging fruit for chatbot implementers, in part because it is practical, low risk, and if something goes wrong, it won't do too much damage.

Vendor management is another good candidate for an AI chatbot. Here, the chatbot can answer questions from enterprise suppliers about purchase orders, invoices, and payments. That's the case for one of our clients, a global financial services provider. They operate a big support center that fields supplier and vendor inquiries via both email and phone calls. Typical queries include, "Where's my purchase order?" and "When will I be paid?"

While chatbots seemed a good solution for this client, we knew getting useful answers would be complicated, because this organization purchases goods in more than 20 markets worldwide. The company also stored and used data on several different IT systems. How could the chatbot know which source to pull data from to answer specific queries?

The solution analyzed an archive of the company's past email inquiries. These archived inquiries were then categorized by type. Finally, using this historical information, the team programmed the chatbot to answer the company's most frequently asked questions with ease and accuracy.

In addition, the company's chatbot has become a data entry channel. For example, when a supplier enters their invoice number, the chatbot can give them an update. Suppliers can also use the company's chatbots to submit and modify invoices. The chatbot automates these updates by communicating directly with the appropriate systems, eliminating the need for human intervention.

The first phase of the company's chatbot solution, in place since 2018, improved the user experience dramatically. Turnaround time for answered queries has been reduced from two days to a matter of seconds. The response time to the first vendor contact is now under one second. Blink, and you've missed it.

Additional client use cases

- **Product selection.** A major bank wanted to automate financial consultant and advisor services to help customers select financial products from the bank's website. With the objectives of minimal transaction time and great user experience, the bank deployed a chatbot and provided customers anonymous access. This chatbot also integrated with the bank's internal systems, with a direct connection to fetch the best available solution to a customer query.
- **Customer service automation.** A major telecom company had human agents answering customer calls and emails, even though many of these questions were basic and repetitive. To help its human agents focus on higher-order issues, we analyzed the service calls and looked for inquiry and service patterns. Five reasons accounted for seventy percent of all calls. With this information, the company used these call logs as the foundation to train chatbots in the customer-service desk function.
- **Internal help desk.** Relationship managers at a major bank answered employee operations queries and resolved issues reported by employees to the help desk. The bank deployed a chatbot on the internal help-desk to automate this process and shorten the time needed to answer the queries. This chatbot was integrated with the bank's knowledge-management and ticketing systems, giving it the ability to answer employee queries quickly and accurately.

15:20
CHATBOT 15:19
OK

Better chatbots

Chatbot technology is not mature, meaning adoption can be difficult, and too often the return on investment can fall short of expectations. We recommend organizations take these four actions:

- **Use open-source components.** By avoiding proprietary technology for chatbot machine learning, this enables development of multiple competencies. Organizations can use different open-source modules for different applications. This provides flexibility and no vendor lock-in.
- **Use an open database model.** This technology can give the organization control over its chatbot data. Training and audit data can be exported to other apps. And this keeps open the option of moving to another model in the future.
- **Deploy domain-specific chatbots.** When used selectively and for intended purpose, these chatbots simplify and accelerate the implementation process. These narrow, deep chatbots can also be combined with more generic chatbots. Repetitive functions are good fits for this type of chatbot.
- **Proactively discuss privacy issues with suppliers.** Chatbot text and speech conversion happen in the cloud, and incoming data is typically recorded and stored by the cloud provider. However, that's a possible privacy concern, especially in Europe, given the new GDPR rules and regulation in discussion in several states across the US as well. Large enterprise customer may have sufficient clout to persuade cloud suppliers to modify data practices and delete chatbot content or store on premise.

Now's the time to start using chatbots for low-hanging fruit applications such as IT support and vendor management. Today's chatbots can handle these tasks more quickly and accurately than ever, freeing human agents to focus on higher-value work.

But also monitor chatbot technology for further developments. New chatbots should soon be able to affordably use deep learning and other AI approaches, enabling true knowledge reporting and sharing. These advances will make tomorrow's chatbots more powerful and more practical. They should also deliver benefits to organization and finally achieve those long-promised returns on chatbot investments.

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