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Meet Holmes: Siemens AG's cognitive chatbot for employee support

"Elementary, my dear Watson" is a phrase attributed to the famous literary detective Sherlock Holmes, meaning that something is very easy to understand or solve. Siemens AG named its new chatbot "Holmes" to convey a similar message. "Holmes" is a virtual assistant for user login or system issues and it provides FAQs about the corporate financial closing application. Powered by Microsoft Cognitive Services and Avanade's Conversational AI Accelerator, the cognitive chatbot reads both text and images to help users find quick solutions for their needs. To learn how this chatbot evolved to deliver a more dynamic and innovative workplace experience, we spoke with Stefanie Seibring, IT lead responsible for the Holmes chatbot at Siemens AG.



Q: What triggered the need for a chatbot at Siemens AG?

A: Seibring: The Competence Center takes care of user inquiries regarding the central financial closing application and therefore receives a considerable number of emails per year. It fluctuates depending on how many changes there are in the system and the number of new users due to acquisitions. This is a huge workload. We wanted an augmented workforce to help our team find the answers to user requests because when we analyzed the content of these emails, we found that about 60% of the information is already documented somewhere. The users just aren't able to find it. We thought it could be helpful to have a chatbot that offers 24/7 support ("Holmes never sleeps"). We also found that our younger employees prefer to start their queries with a chat button before contacting someone. So, we said, "Let's try to build a chatbot."

Q: I understand you had some reservations at the beginning about whether a chatbot could solve your specific workplace challenges. How has your view changed?

A: Seibring: I took this job to prove that it wouldn't work because we have domain-specific content. I mean, how could a bot ever understand what the user wants to know? Bots aren't as good as human beings. But sometimes users come to us with a problem and they don't have a lot of time to wait until the problem is solved. The lag disrupts

their productivity. We needed a more automated solution to support our Competence Center. Rather than waiting to see how others solve this issue and then use the products they develop, we preferred to take the lead. I believe there's a lot more to do, but I'm pretty proud of how far we've come.

Q: What makes Holmes unique?

A: Seibring: Anyone who has to wait until they're back into the system will not be able to work. Login issues are very carefully curated in the bot, and it connects to another knowledge source that contains about 300 Wiki pages. If a question is vague or unclear, Holmes can respond with potential interpretations and ask the user to choose which problem might solve theirs. So, rather than making it like a conversation flow, we present possible solutions in a card carousel with images for faster identification. Each option then goes directly to an article that most likely holds the answer to their question. If the chatbot doesn't answer the question on the spot, the user will have to contact the Competence Center anyway. We've sped up the process by establishing a functionality in the chatbot that allows the user to send the whole chatbot conversation directly to the Competence Center so the story doesn't have to be repeated.



Q: Why was image recognition so important?

A: Seibring: We found that a lot of people sent screenshots of their error message to the Competence Center, especially if it was difficult to type out or included cryptic text. But, there were times when those screenshots were not copied correctly. We wanted both text and image recognition. It was not easy to find a technology provider that could do both. We tried out several image recognition tools, but only Microsoft's image recognition capabilities worked for us.

Q: After a few unsuccessful attempts at designing a chatbot with other partners, how did Avanade help you find the right solution?

A: Seibring: Avanade was good at finding out what I wanted. Whatever I wanted them to build, they built. They understood my problem and found a solution, especially when it came to this multi-intent requirement.

Q: How are you using the Holmes chatbot to attract top talent?

A: Seibring: At Siemens, we create value through innovation, and innovation means automation and digitalization. Companies today face the challenge of not having enough people with the right talent in place. We need to do something about attracting people. It's not only about having nice salaries. It's also about having a cool workplace with digital solutions that make people feel like the company is doing something to create a more personalized workplace experience. These improvements have had an impact on customer satisfaction because a more efficient workplace experience doesn't just mean more satisfied users, it means our people can deliver for our customers as well.

About Avanade

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