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Integrating conversational and generative artificial intelligence (AI) to enhance customer support

Introduction

Conversational AI refers to technologies that helps machines understand, process and respond to human language inputs meaningfully and naturally. The technology enables simulation of human conversation and includes voice assistants, chatbots and other voice-activated systems.

Speech recognition: Also known as automatic speech recognition, this technology refers to the process where a programme can capture spoken input and convert it into written text. Speech recognition is capable of accurately processing speech or words spoken by people and convert them to a readable format.

Text-to-speech: Text-to-speech is a module that takes normal text as an input and converts the input to a voice format. It is capable of reading aloud words from different sources such as digital documents, websites or even emails. Users can be capable of directly listening to the contents of a document using a text-to-speech module.

Machine learning (ML): It helps to extract and classify user and to correctly understand the context and ensure output efficiency. ML helps algorithms and data to enable the accurate imitation of the manner in which humans learn. This enables the enhancement of system accuracy.

Dialogue management: Dialogue management ensures that the AI system is capable of responding on the basis of the user input, the content of the conversation and the associated objectives. It is capable of ensuring accurate interpretation of human conversations and contextualising the same.

Natural language processing (NLP): It helps to convert the inputs from the customer to the machine understandable form. It can help the machine to determine the language spoken by humans in order to perform specific tasks like translation automatically.

Conversational AI is capable of improving user experience by providing personalised natural responses to customers. While challenges like difficulty of getting AI system to understand the nuances of human speech and maintaining data security and user privacy exist, conversational AI systems still have immense potential in the customer service sector.

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Combining conversational AI and generative AI

The process of using conversational AI with generative AI involves the utilisation of specific generative models for simulating conversations that can mimic and replicate human behaviour. Conversational AI refers to an AI that can imitate the characteristics of conversations held by humans. Chatbots are good examples of this type of AI. Generative AI is a kind of AI system that can generate content such as images, texts or other types of media. This type of AI is capable of learning the structure and pattern of the input training data for generating new data that possesses traits similar to those training data.

Utilising conversational and generative AI together can be immensely useful for automating various tasks across sectors. The use of these models can help generate text that humans can read and understand. When designed well, these models are also capable of replicating the intricacies and nuances of natural conversations between human beings. These models are responsible for producing responses to user inputs when used in the context of conversational AI. The combination of conversational and generative AI can result in a system that does not rely excessively on predetermined, set answers. Such a combination is capable of generating responses on the basis of the information it was trained on.

Advantages

Using conversational AI with generative AI in a combined system can have several benefits. Some of the advantages are:

Improved scalability: Since the model displays the capability of generating appropriate responses, the necessity of manually programming all possible answers is eliminated. This improves the extent of scalability and helps in saving time and effort.

Consistent initiation of natural interactions: The conversation between the AI and the user with respect to service-related queries and concerns is made natural through the utilisation of this system. Since AI can generate responses that are relevant to the situation and the context, interactions on a natural basis are achievable. For instance, AI-enabled chatbots are capable of effectively engaging with users and respond appropriately in accordance with the nature and tone of the queries.

Enhanced flexibility: In comparison to a regular chatbot which can only deliver static responses, a generative AI-based system is capable of adapting and producing several responses on the basis of the provided input with a more natural response which enhances customer satisfaction.

Benefits of implementing conversational AI with generative AI for customer support

Combining conversational AI with generative capabilities can have tremendous benefits in customer care. By providing personalised solutions to customers, organisations can enhance customer service and increase customer retention. Some of the benefits of this technology in the customer service industry are:

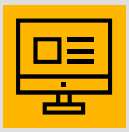
Reduction in costs related to customer service operations: By enabling the efficient completion of query management operations, AI can reduce costs in the long run. AI systems can handle many customer queries, thereby reducing the need for a large number of human agents. This can reduce the costs associated with maintaining a large workforce.

All-time availability: An AI-based chatbot can be available 24X7 without the restrictions of business hours or holidays. This consistent and seamless availability of support can enhance customer satisfaction.

Efficient handling of repetitive questions and queries: Conversational AI and generative AI-based tools can effectively handle repetitive and common queries and reduce the workload of human customer service agents. This can help them utilise their time effectively and deal with complex queries which AI is unable to solve. Furthermore, companies can make simultaneous use of AI systems and human agents to provide the best possible services for their consumers. An effective collaboration between human agents and AI systems can magnify the service delivering capabilities of utilising organisations.

Instantaneous response and enhanced scalability: Conversational AI-based tools can respond to multiple user queries at the same time. This enables quicker resolution of queries and enhances customer satisfaction. AI systems can deal with sudden surges in customer query numbers effectively and peak customer interaction times and special occasions like limited sales events can be handled efficiently.

Learning and training: Specific AI systems like generative AI models are capable of undergoing consistent training. They can be updated with real-time information and trained on the latest data available. New information like latest policies and details of new product data can also be utilised to update AI systems, thereby increasing their capabilities of providing solutions by incorporating the latest trends.



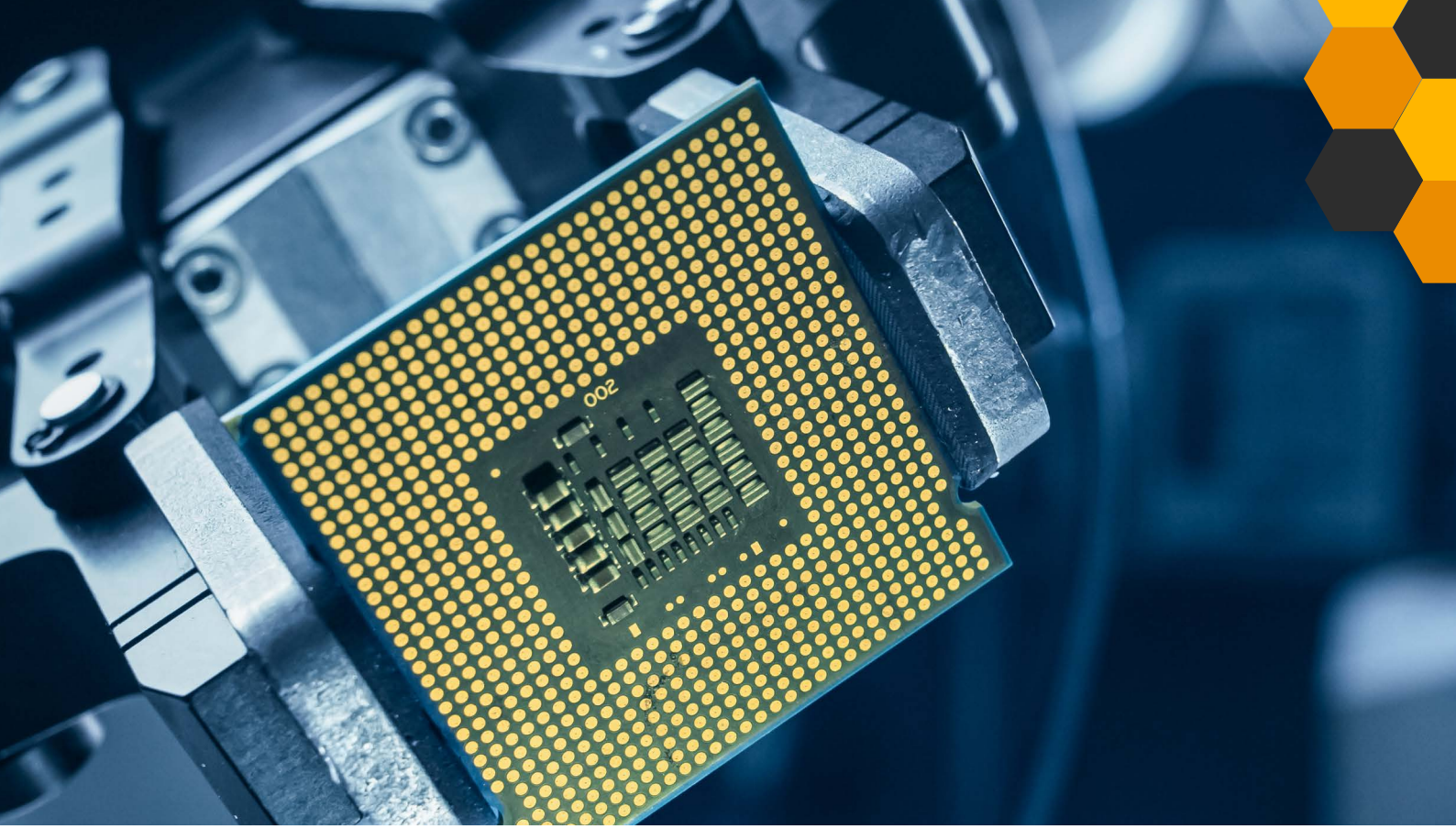
Offering personalised solutions: AI-based systems are efficient in providing instant recommendations to customers regarding the best possible products according to their purchasing behaviour and other trends. By offering such personalised solutions, AI systems make the targeting of specific customers possible.

Support in multiple languages: Conversational AI systems have the flexibility to be designed in ways that enable them to hold conversations and understand queries in different human languages. This can eliminate the issue of language barriers, which is one of the most challenging problems to overcome in international customer service delivery and help organisations improve the range of service delivery for organisations since customers of different countries can be effectively targeted.

Analysis and insights into data: AI-based systems can determine customer behavioural trends by analysing customer interactions. By analysing features like feedback provided by users regarding specific products, their sentiments and common problems highlighted by them, AI systems can suggest efficient counter-strategies. These counter-strategies can be used to improve the quality of services and enhance the satisfaction of the customers.

Flexibility in integrating support channels: Conversational AI systems are flexible enough to be integrated across several platforms. Mobile applications, popular social media sites and messaging platforms are among the channels that can be integrated with such AI systems. Efficient support can be provided to multiple customers on their preferred platforms which can enable organisations to deliver seamless customer service experience to their clients.

Drastic mitigation of errors: Since AI systems can be trained on the latest data, they reduce the possibilities of errors while responding to customer queries. This reduces the scope for errors since AI systems can also efficiently handle several tasks with greater accuracy. The scope for human error at this stage can be minimised through AI and customer service teams can focus on other complex tasks which require human intervention.



Conclusion

The integration of conversational AI with generative AI can transform the very nature of customer interactions. By personalising interactions with customers and maintaining availability at all times, such a system can improve customer experience and minimise costs related to maintaining a large-scale manual customer service department and channelise the team's efforts in handling more complex tasks and improve their efficiency.

However, human efforts and automation have to be adequately balanced to deliver the best possible customer service. Achieving such a balance and successfully utilising a combined AI system comprising conversational and generative AI can help make organisational customer services much more efficient. The utilisation of such an AI system can provide prominent insights to the workforce regarding the best possible ways of interacting with customers and organisations can implement programmes to upskill their employees to use these AI-enabled systems efficiently. Furthermore, since AI systems are capable of being updated and trained with the latest data, handling the changes in customer trends becomes easier for the utilising company as well.

In order to ensure that the AI systems are updated with and trained on the latest data, the maintenance of training data sets is vital. Updating training data at regular intervals is necessary to enable the users to keep up with the ever-changing customer trends and behaviours for providing the best possible customer service. It is also important to prevent and mitigate the cybersecurity risks associated with the use of systems like conversational AI. Companies must ensure strict regulation and monitoring of their AI systems to prevent cybersecurity risks and protect their data. A combination of AI system and human agents can help companies to maximise the quality of their service delivery and customer experience.

How PwC can help

AI-based systems are being used for customer interaction, direct assistance and data analysis. PwC India can help companies by integrating conversational and generative AI tools with their operations to automate customer service management and enhance operational efficiency. Combining conversational and generative AI for customer service can also help increasing customer satisfaction and brand loyalty. By providing contextual and appropriate responses to customer queries, our service can help improve customer experiences and drastically enhance the possibility of customer retention by the utilising organisations.

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