

INNOVATION

Exploring The Possibilities Of Conversational AI: What Do We Want?



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Forbes Technology Council COUNCIL POST

Feb 28, 2023, 09:00am EST

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Whether it's Alexa, Bixby, Siri, Google or Cortana, you are probably using conversational AI from your phone to your car. Conversational AI is a special branch of artificial intelligence that simply enables computers to understand human speech and reply by voice.

One of the most critical impacts of this is that the global GDP is expected to grow by [\\$15.7 trillion by 2030](#) thanks to AI. This revolutionary technology combines three components: machine learning, automatic speech recognition and natural language processing (NLP). These days, conversational AI looks like a fulfilled dream: you simply ask a question and get a talking answer. Isn't that what we all want from computers?

The Significance Of Improving Information Retrieval

We search for information all the time. This could be internal information produced by you and your colleagues or it could be external, produced by the whole of humanity. Right now, we use computer search, which simply is an index of available information. It's going to be AI-classified and prepare the most suitable answer. Modern search engines will become supplemental. A new way of getting necessary information is going to be a huge time saver and productivity booster. The release of ChatGPT by OpenAI is just the beginning.

The first thing we need to understand is that conversational AI is not just voice assistants—it's a whole new paradigm that changes our relationship with computers forever. As the progress of AI continues to drive the growth of conversational interfaces, businesses are increasingly turning to “talking computers” for new ways to interact with customers and employees. According to [Google Trends](#), there has been a five-fold increase in chatbot interest during the last five years. However, the AI-human relationship has not yet reached its fullest potential.

Nowadays, conversational AI shows up in three main types of products: chatbots, intelligent virtual assistants and customer service assistants. Recent NLP and conversational AI advancements include various innovative options like transfer learning (which allows models to be fine-tuned on specific tasks using smaller amounts of data), multi-modal models (text and images used in computer vision and robotics) and dialog systems (Apple's Siri, Amazon's Alexa, etc.). Also, there are APIs that provide NLP capabilities such as sentiment analysis, entity recognition entity, language detection and processing functionalities, key phrase extraction, concept tagging, part-of-speech tagging, etc.

How Conversational AI Is Being Used

Online Relationship Management

Brands can manage social media engagement and interactions via personalized, synchronized conversations.

Improved Customer Service And Satisfaction

A lot of questions can be answered in a quick and precise way. This can resolve issues and [greatly reduce friction](#) during the buying and post-buying process. In this way, customers can also make a more informed decision, get detailed information about the purchase, efficiently place an order and receive after-sales information.

Improved Security And Customer Information Management

Information can be handled in a [more secure way](#) and with much greater precision. This can ultimately lead to significant time and cost savings.

Increased Collective Intelligence

Conversational AI technology can track shopping patterns, monitor customer data and use the results to deliver the best real-time, personal support. Yet, beware of manipulation! (Research and standards are on the way to prevent this.)

What Users Should Demand From Conversational AI

Affordability

While conversational AI is generally affordable, pricing for NLP and conversational AI APIs can vary greatly depending on the provider and the specific service being used. Most providers offer free trials, so you can try out different services before committing to a paid plan. Average pricing is starting from less than \$1 per 1,000 characters of text processed.

For example, a company might charge \$0.45 per 1,000 characters of text processing with a minimum charge of \$25. These rates are based on the number of API calls made during a given time period. As usual, the price of infrastructure is not going to be critical, but you most probably will need professional help to put your AI system together. In our practice, the development of custom virtual assistants ranges from \$50,000 to \$5,000,000.

Industry Optimization

AI, NLP and other conversational technologies are used in all industries from

healthcare to finance. Operations like onboarding, employee training and maintenance of employee information can all be optimized by conversational AI. Leave requests, performance reviews and compliance tasks can also be automated.

One of the most difficult aspects of natural language understanding (NLU) and personalization in conversational AI is that, for the time being, it does not take into account the individual requirements and preferences of users. By improving NLU, conversational AI systems would be able to gain a better understanding of the context, purpose and tone of a user's message. This would enable them to provide more accurate and efficient responses to user queries and reduce the rate of error when generating responses.

Personal Optimization

This technology is already being used to help us optimize our jobs and get things done faster, but it's important for AI to improve our personal lives as well.

We already see this today through means such as appointment booking and claim processing. You can use conversational AI to check symptoms and get key information on your prescription drugs. AI even improves self-service kiosks by providing immediate and personalized assistance rather than an experience that aims to push a sale.

To effectively improve AI's conversational capabilities and make AI systems even more responsive to user needs, the key element to remember is continuing to invest in research and development can help improve this technology.

Conversational AI: On Track To Being The Next Big Thing

It's no longer a matter of 'if' conversational AI will be the next big thing, but 'when' and 'how.'

The AI revolution offers tools and methods with the greatest potential for the next radical transformation. It is now possible for us to talk directly with machines even about complex topics like quantum physics or gender equality. These interactions, if exploited carefully, should serve in a good way and soon we will see interesting shifts take place within our society.



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Boris Kontsevoi is a founder and President of [Intetics Inc.](#), a leading global software engineering and digital transformation company. Under his leadership, a group of software engineers developed into a truly global technology company with multiple professional certifications and industry awards, including the Global Outsourcing 100, Software 500, and Global Sourcing Association best of class company.

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