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Forward Thinking

Large Language Models Will Transform Conversational Assistants



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Conversational assistants—which include text and voice bots, interactive voice response (IVR) applications that answer customer service calls, and apps like Apple’s Siri—are fast becoming ubiquitous, using voice, text, and graphics to converse with users in a growing number of everyday situations. Two trends are driving the move toward these assistants: Big Data and conversational interactions.

More Data, Please

Thanks to generative artificial intelligence, today’s conversational assistants can access massive amounts of data, greatly extending their functionality and enabling them to perform tasks that were previously out of reach. Generative AI is built upon large language models (LLMs) that contain billions of parameters, or variables the model learned during training (GPT-4, OpenAI’s latest LLM, reportedly has 1.7 trillion parameters). So rather than searching a large database for user responses, conversational assistants can use LLMs to generate words, sentences, paragraphs, even entire documents, allowing them to produce results to user requests in innovative ways, often without explicit instructions or predefined rules.

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- **Instacart:**Instacart Ask helps customers create shopping lists and offers suggestions for ingredient pairings and substitutions, meal preparation, diets, and open-ended culinary inspiration.
- **Quizlet:**Q-Chat enables students to interact with a personal AI tutor, one that pulls from Quizlet’s massive educational content library.
- **Snap:**My AI on Snapchat+ can answer a burning trivia question, offer guidance on the perfect gift for a loved one’s birthday, help plan a hiking trip for a long weekend, or suggest what to make for dinner.

Today, many media networks cater to different audiences and needs, serving up vintage TV shows, news and commentary, shopping content, or home improvement. In the future, many LLMs will serve diverse needs for different classes of users, with each LLM generated from vetted and controlled databases of content. Each of the major publishers and media outlets will create LLMs for their content with which their readers/viewers can interact. Some LLMs will be subscription-based, and others funded by advertisement fees.

More Conversation, Please

Current websites are becoming more conversational by incorporating text-based chatbots and using tools such as Speechly, which enable users to talk to websites, and Whisper, which enables users to listen to content from websites. Many users might find actively conversing with a website more convenient, enjoyable, and memorable than just reading it. Many websites will evolve into conversational assistants.

Future assistants will use more data and improved conversational abilities to offer a variety of interactive services:

- **Customer support:**Assistants will help you perform many useful tasks around the house, including installing, testing, and repairing home appliances and devices—no more struggling to locate paper instructions, printed in tiny fonts.
- **Self-help:**Assistants will help guide you to lose weight, research your ancestors, play a musical instrument, learn a foreign language, or some other personal goal.
- **Transactional help:**Conversational assistants will help you prepare your taxes, pay your bills, schedule meetings and trips, and plan events.

How do you find the best conversational assistant to help with your current problem? A conversational assistant browser would be helpful. Every conversational assistant should have a website that contains this information:

- A URL containing the name or location of the assistant.
- Metadata describing its use and capabilities.
- Instructions for accessing the assistant.

Consumers can then use an assistant browser to discover, locate, and access all relevant conversational assistants.

Just as there are several web browser alternatives for accessing websites, there may be several conversational assistant browsers. Some conversational assistant browsers will charge fees; others will be free for anyone to use. Each browser may support different criteria for ranking conversational assistants, including popularity, recommendations by experts, and user-specific criteria.

Future users will use conversational assistants, backed by LLMs, to perform many of today’s tedious tasks. But dark clouds are on the horizon, including hallucinations, deepfakes, and the misuse of private information. We’ll cover these in a future column.

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