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## Digital Assistant



### Introduction

A **digital assistant**, also known as a **predictive chatbot**, is an advanced computer program that simulates a conversation with the people who use it, typically over the internet.

Digital assistants use advanced artificial intelligence (AI), natural language processing, natural language understanding, and machine learning to learn as they go and provide a personalized, conversational experience. Combining historical information such as purchase preferences, home ownership, location, family size, and so on, algorithms can create data models that identify patterns of behavior and then refine those patterns as data is added. By learning a user's history, preferences, and other information, digital assistants can answer complex questions, provide recommendations, make predictions, and even initiate conversations.

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### What's the Difference Between a Digital Assistant and a Chatbot?

**Chatbots** are computer programs that simulate and process written or spoken human conversation so that people can interact with digital devices as if they were communicating with a real person. If you speak into your phone to order your favorite coffee drink, you are interacting with a chatbot. You can also request a ride from a ridesharing service by using one of the service's chatbots. These are relatively simple "conversations."

It's easy to confuse digital assistants with chatbots—and, in fact, a digital assistant is an advanced type of chatbot that can handle more complex interactions in a conversational way. A digital assistant, for example, can respond to a complex request such as, "Schedule a flight to Phoenix for me next Sunday using my usual seating preferences, and arrange transportation to and from the airport." To respond to this request, the digital assistant will need to access multiple sources—a capacity that the ordinary chatbot does not possess.

Perhaps an easy way to understand the difference is to remember that while all digital assistants are chatbots, not all chatbots are digital assistants.

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## Advantages

For individuals, digital assistants bring convenience—and a dose of fun—into homes, cars, and other locations. When used for certain purposes, such as to manage home heating and home security, they can also save people money and free them from tedious tasks.

Businesses are also finding many benefits to using digital assistants, especially to improve efficiency and provide better assistance to their employees and customers. By using digital assistants, a business can:

- **Offer more services.** Businesses can provide more services to their employees and customers by using chatbots to handle the more routine help desk or customer service requests.
- **Save money.** Digital assistants allow businesses to connect with customers and employees in a personal way without the time and expense of live representatives. By taking care of redundant tasks or shortening the time it takes to perform essential tasks, digital assistants free staff to perform more mission-critical work.
- **Provide better service.** Customers and employees appreciate having natural conversations on convenient messaging apps as well as receiving fast and accurate responses to their questions.
- **Avoid mistakes.** Digital assistants can anticipate upcoming events and issue reminders—for example, letting users know that they need to submit a form or that the deadline is coming up for a report.
- **Scale at will.** By implementing a digital assistant, a business can provide humanlike, personalized, proactive service to millions of people at the same time—and scale up or down at will.
- **Learn as they go.** Digital assistants gather real-time insights, which businesses can use to continually improve the user experience and learn about their customers and employees.