What is a Chatbot?

A **chatbot** is a software application designed to simulate human-like conversations using:

Text

Text-based chatbots engage in conversations via messaging apps or websites, responding to user inputs with automated text replies.

Speech

Voice-powered chatbots, like virtual assistants, interact with users through spoken commands, providing audio responses and performing tasks.

Key Characteristics of Chatbots:

1. **Automation**: Provide automated responses to user inputs.

2. **Interactivity**: Simulate a two-way conversation.

3. **Intelligence**: Ranges from simple rule-based systems to advanced AI-driven bots.

Early Text-Based Chatbots

1 **ELIZA (1966)**

Developed by Joseph Weizenbaum, ELIZA mimicked a psychotherapist by rephrasing user inputs, creating a surprisingly engaging interaction.

2 **"The Hobbit" Game (1982)**

This early text-based adventure game showcased basic chatbot mechanics, allowing players to interact with characters through typed commands.

Made with Gamma

Rise of Rule-Based Chatbots

ALICE (1995)

Built by Richard Wallace, ALICE used AIML (Artificial Intelligence Markup Language) for responses, based on pattern matching and pre-written scripts.

SmarterChild (1997)

One of the first chatbots integrated with messaging platforms like AIM, SmarterChild provided pre-defined responses and basic tasks like weather updates.

AI-Powered Chatbots

Siri (2011)

Marked the transition to voice-enabled AI assistants, combining rule-based and machine learning techniques for a more sophisticated experience.

Amazon Alexa (2014)

Leveraged cloud computing to handle a variety of voice commands, expanding chatbot applications to smart homes and beyond.

Facebook Messenger Chatbots (2016)

Integrated bots into messaging apps for businesses and services, powered by NLP and basic AI for a more personalized and interactive experience.

Modern Chatbots with LLMs

GPT-4 (2023)

Estimated over 1 trillion parameters, pushing the boundaries of context understanding and response quality, allowing for even more natural and human-like conversations.

1

GPT-3 (2020)

Introduced human-like conversational abilities, capable of generating creative content, translating languages, and performing various tasks with remarkable accuracy.

2

Today

Chatbots are now integrated into popular apps like Slack, Teams, and WhatsApp, serving as customer service agents, personal assistants, and even therapy companions.

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