
CONVERSATIONAL API

CHATBOT (WIKI)

- A chatbot is a software application used to conduct an on-line chat conversation via text or text-to-speech, in lieu of providing direct contact with a live human agent.
- Designed to convincingly simulate the way a human would behave as a conversational partner, chatbot systems typically require continuous tuning and testing, and many in production remain unable to adequately converse or pass the industry standard Turing test.
- The term "ChatterBot" was originally coined by Michael Mauldin (creator of the first Verbot) in 1994 to describe these conversational programs.
- Most chatbots are accessed on-line via website popups or through virtual assistants.

TYPES OF CHATBOTS

Categorizing chatbots is becoming an increasingly difficult task due to the fast rate at which developer tools and methodologies are changing. On a high level, we can categorize bots into:

- Retrieval-based Chatbots: These are chatbots that use some type of heuristic approach to select the appropriate response from sets of predefined responses.
- Generative-based Chatbots: These are deep neural network-based chatbots that use a large amount of data to train models that provide an easier translation of user input to output.

Types	Description
Scripted/Quick Reply Bots	A type of chatbot in which interaction with the end-user happens through a predefined knowledge base and technical capabilities that can quickly respond only to specific instructions.
NLP Chatbots	A type of chatbot that uses natural language processing (NLP) to map user input to an intent, with the aim of classifying the message for an appropriate predefined possible response
Action/Service Chatbots	Helps users complete their requests by asking for relevant information.
Social Messaging Chatbots	Integrated into social media platforms such as Whatsapp, Messenger, Twitter, etc.
Context-Enabled Chatbots	These have the capability to utilize machine learning and AI to learn from their experience with users and better understand the context with time, to better be customized to the user. Examples of this type include Siri, Alexa, and Google Assistant.
Voice-Enabled Chatbots	They accept user input through voice and use the request to query possible responses based on the personalized experience.

HOW DO CHATBOTS WORK?

Chatbots are nothing but an intelligent piece of software that can interact and communicate with people just like humans. Interesting, isn't it? So now let's see how they work.

All chatbots come under the NLP (Natural Language Processing) concepts. NLP is composed of two things:

- NLU (Natural Language Understanding): The ability of machines to understand human language like English.
- NLG (Natural Language Generation): The ability of a machine to generate text like human written sentences.

HOW DO CHATBOTS WORK? (CONT.)

Imagine a user asking a question to a chatbot: “Hey, what’s on the news today?”

The chatbot will break down the user sentence into two things: intent and an entity.

- The intent for this sentence could be get_news as it refers to an action the user wants to perform.
- The entity tells specific details about the intent, so "today" will be the entity. So, this way, a machine learning model is used to recognize the intents and entities of the chat.

BUILT YOUR FIRST CHATBOT

ACTIVITY

THE END