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**Meta Title** - A complete guide to ChatBots | Bharat Sewani (44 characters)

**Meta Description** - In this blog you'll know about what a chatbot is, the types of chatbots, how chatbots work, what are its uses & why they are essential for your business. (155 characters)

## A complete guide to ChatBots

If you're planning on deploying a chatbot to your business, here are a few questions you might have.

What is a ChatBot? Why do I even need it? What does it do? What are its uses?

Chatbots had their boom back in 2016 when Facebook opened Messenger for Chatbots and since then there's been no looking back. According to a Forbes report, the Chatbot market is forecasted to reach \$1.25billion by 2025.

In this blog, you'll get acquainted with the following:

- 1. What is a ChatBot?**
- 2. How do ChatBots work?**
- 3. Types of Chatbots**
- 4. What's the difference between Chatbots and Bots?**
- 5. How to build a ChatBot?**
- 6. Why do businesses need ChatBots?**

Let's have a comprehensive look at all these questions.

### What is a Chatbot?

A chatbot is an AI-based computer program that replicates human-like conversations with users via text messages or even voice. They can also be called digital assistants that understand the potential of humans. Bots interpret and process the user requests and give answers relevant to the prompt. In simple words, a bot is software that is designed to communicate with human users through the internet.

## How do Chatbots work?

Chatbots work by analyzing and identifying the purpose of the user's intention. They run on pre-programmed responses, artificial intelligence, or both. Based on the mechanism used, chatbots process user's questions in order to deliver a parallel response. A chatbot is programmed to work separately from a human operator.

The chatbots work by adapting three categorization methods.

### **Pattern-Matching**

Pattern-Matching bots organize text and produce a response based on the keywords they find. AIML (Artificial Intelligence Markup Language) is the standard structure for these patterns. A bot is able to find the right answer in the related and correlated pattern although it cannot go beyond the patterns already applied into its system.

Another choice today's chatbots have is to use algorithms. A unique pattern is available in the database for every type of question. Which helps the bot in providing the right response. A hierarchical structure can also be formed with the help of various combinations of trends.

Two more methods using the algorithms are NLU and NLP.

### **Natural Language Understanding (NLU)**

NLU is the competence of a chatbot to understand a human. It's the process of transforming text into structured data for machines to understand. Natural Language Understanding has three specific concepts; Entities, Context, Expectations.

**Entities** - It primarily represents an idea to your chatbots. For example, it may be a purchase system for your eCommerce chatbot.

**Context** - On examining a sentence, the natural language doesn't find any historical backdrop of the user's text conversation. It implies that if it gets a response to a question that was recently asked. it won't recall the inquiry which means the phases during conversations of chat are separately stored.

**Expectations** - This is what a chatbot has to compulsorily fulfill when the customer sends an inquiry. It can be the same for different inquiries.

### **Natural Language Processing (NLP)**

NLP bots figure out a way to convert a user's speech or text into structured data, which is further used to choose a relevant answer.

Natural Language Processing comprises of the following steps :

- 1. Tokenization:** The NLP separates a series of words into tokens or pieces that are linguistically representative, with a different value in the application.
- 2. Sentiment Analysis:** It studies and learns the user's experience. If necessary, it might also transfer the inquiry to a human.
- 3. Normalization:** This model of the program processes the text to find out the typing and common spelling mistakes that might change the meaning of the user's request.
- 4. Named Entity Recognition:** The program model of a chatbot searches for different categories of words, similar to the name of that product, the user's address or name, whichever information is required.
- 5. Dependency Parsing:** Using the related phrases used in the user's text, the chatbot searches for subjects, verbs, objects, phrases and nouns.

## Types of Chatbots

Now that we've gained knowledge on how chatbots work, let us also have a look at the Types of Chatbots. Based on the applied mechanism, a chatbot processes user's data to deliver quick responses to all their requests. Mechanisms used could be pre-defined rules or AI-based.

There are 3 types of Chatbots available today :

### **Rule-Based Chatbots -**

Also known as command-based, keyword, or transactional chatbots. They communicate using predefined paths during conversations. At each step in the conversation, the user will need to pick from the precise options that determine the next step. Rule-based chatbots provide answers based on a set of if or then rules that can vary in complexity. A chatbot designer is the one who defines and implements these rules.

Let's say a rule-based chatbot is asked a question like "How to change my email?". It firstly searches for familiar keywords in the sentence. Here it will look for keywords like 'change' and 'email'. IT will then match the keywords with available responses in its database to process the answer. In case, if anything out of the scope of an AI chatbot is presented, it will fail to match that question with an answer.

Rule-based chatbots can't learn from past experiences. With the limitations of rule-based chatbots, they happen to be very useful tools for businesses.

**Intelligent Chatbots -** Using machine learning or “ML”, these Intelligent Chatbots learn from the user's requests and information. They are trained to understand specific words and phrases that trigger a reply. With time, these Intelligent Chatbots also teach themselves to understand more questions and deliver better answers

### **AI-powered Chatbots -**

These AI chatbots are the free birds of the chatbot community as they can freely communicate with users which makes them much better conversationalists than rule-based bots because they leverage machine learning, natural learning processing and sentiment analysis.

Like rule-based chatbots, AI chatbots need to be well-trained and equipped with predefined responses in the beginning. AI chatbots can read the customer's mood and also understands multiple languages. This helps in personalizing their communication with the user.

We can say that AI chatbots get smarter with every conversation because they simply mirror the user's behavior.

## What's the difference between chatbots and bots?

A **chatbot** is a computer program designed to conduct a human conversation. They analyze the user's query and then provide matching answers. Most businesses today use AI chatbots to support customers and help them accomplish simple tasks without human agent's help.

A **bot** is an algorithm that operates on the internet and interacts with web content. They help businesses and users perform helpful, mundane complex tasks faster online.

Search engines, Feed bots, Copyright bots are a few different types of bots.

## How to build a ChatBot?

When beginning with building your first chatbot, you must pay attention to the following stages primarily before moving on.

- Define your business objectives
- Pick the right channel to engage with your customers
- Train your bot for giving the correct response
- Give your bot a voice and personality
- Create a balanced approach
- Test, launch, and iterate

Now here are the two ways of building chatbots.

### 1. Using a chatbot platform

This is the easiest way to create a chatbot. These platforms let you build AI chatbots without much effort and time. They let you easily drag and drop elements to design chatbots and launch them without coding.

Some platforms also provide ready-to-use templates. Another advantage is their ability to integrate them with third-party services.

## 2. Building from scratch

This is a time-consuming job, but it gives you complete control over your chatbot. It's advisable if your business requirements are complex and unique, you must develop your own Chatbot rather than relying on chatbot platforms.

## Why do businesses need ChatBots?

“The great growling engine of change – technology.”

These famous quotes by Alvin Toffler are sufficient to explain how changing with time and adapting the new technology has become a must in today's world. Face-to-face interactions are now replaced by online messaging and video chats. This has forced businesses to adapt to new ways of communicating as well.

### **Bharat quote**

Since 2019, Chatbots have seen a 92% use increase, which makes it the brand communication channel with the largest growth. There are significant reasons why brands want to invest in improving their customer experience.

Chatbots help businesses in the following ways :

1. **24\*7 availability** - Bots are always available to engage customers with immediate answers, which is the most important benefit of using chatbots.
2. **Better customer engagement** - By offering personalized recommendations, chatbots boost customer experience.
3. **Save customer services cost** - Juniper Research estimates that chatbots will help businesses save more than \$8 billion per year by 2022.
4. **Automate lead qualification and sales** - Being able to engage customers instantly increases the number of leads and conversion rates.
5. **Reduces customer waiting time** - AI Chatbots are a smarter way to ensure that customers receive the immediate response that they are looking for without making them wait in a queue.

## **Bottom Line -**

Chatbots are definitely here to stay. We already have them in our computers, phones, smart devices and they've become an important part of our life. The chatbot technology is helping both businesses and users in handling easy and dull tasks quickly. Although they can't replace human-like conversation but are still helping us.

## **Keywords**

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