

DOCUMENTATION

Problem statement:

All your inbound marketing work can fall short if you are not engaging with the leads that click through to your website: Business problems can spark from this. When there is a lack of customer support or connection taking place beyond the initial form of customer engagement with your brand, people will quickly jump on to your competitors. With 67% of global consumers having an interaction with a chatbot over the last 12 months, it's clear to see the growth that this technology is having across the world.

Simple and common questions can often go a miss or have delayed response times on your website, which could have been avoided with the help of artificial intelligence (AI) bots, button-based bots and voice bots. These all have their own strengths, and should be chosen depending on your business goals, target audience and current size.

How can chatbots resolve this?

Chatbots can be an incredibly useful tool when it comes to forging good customer relationships. Your business can leverage it to build strong connections by engaging, and interacting with, users coming to the website. By integrating chatbots, you not only achieve marketing goals but also drive sales and improve customer service.

There are many different ways a chatbot can positively impact customer communication and drive business growth.

Chatbots can help gather information from potential customers to better understand the intent behind a user visiting a website or an application. The ability to automate this user interaction will allow data to be stored to better understand the patterns, and ultimately, predict what the user is wanting from your organization.

Benefits of using chatbots:

- Easy and quick replies to customers
- 24/7 availability

- Cost saving, better to buy a chatbot than to hire a human
- Provides live chat feature
- Multilingual support
- Remembers conversations and users
- Stores data
- Automated tracking
- Easy ticket creation

Requirements

Software used:

- Tkinter
- Playsound
- speech_recognition as sr
- pyttsx3

Technologies Used:

- Python

Project description

What are bots?

Chatbot or bot – is a computer program that simulates a natural human conversation. Users communicate with a chatbot via the chat interface or by voice, like how they would talk to a real person.

It 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. Chatbot, short for chatterbot, is an artificial intelligence (AI) feature that can be embedded and used through any major messaging applications.

Rule-Based Chatbot

As the name suggests, these chatbots use a series of defined rules. With this type of bots, the communication is through pre-defined rules and a set of questions.

These chatbots are not able to generate their own answers but with an extensive set of answers and smartly designed rules, they can be proved very useful and productive

These chatbots are also referred to as **decision-tree bots** and the reason is that rule-based chatbots are guided by a decision tree, the customer or the user is given a set of predefined options that lead to the desired answers.

One limitation of these chatbots is that they don't answer any question outside of the defined rules. But it can't be said a drawback as the main mechanism of these chatbots is to answer questions bounded by the defined rules. Rule based chatbots are simply directed conversational flows that occur based on clickable buttons below a chat window.

How does it work?

These bots are built on AI technologies, along with NLP, machine learning, deep learning algorithms, and would require massive amounts of data. Selecting the right NLP engine is being the most important aspect of implementing a chatbot. They are said to have varying levels of complexity since the owners have to decide whether they are in need of structured conversations or unstructured ones.

The working process might look simple yet seems to be quite complex in practice:

- The user gives a request to the bot
- Bot analyzes user's request to identify the intent of the user
- Extracts relevant entities based on the intent
- Provides the user with the most appropriate response

Scope

1)Provides Faster Solutions

It can easily save time and effort. It can help in resolving base level complex issues without customer support's intervention.

Instead of having a customer going through page after page, analyzing data, and finding a solution to a particular problem, it can easily help to identify the problem.

It provides efficient solutions to users' many problems on request.

2) It Is Free to Explore Solutions

It can process vast amounts of data to find answers to burdening problems, it can resolve customer problems more effectively.

It holds the capability to gather insights and information from a variety of different sources.

3) It is Chatbot with a Targeted Purpose

It is created with keeping specific purpose in mind.

If a bot doesn't have a clear purpose, it won't be able to produce relevant and agile results.

4) It is a Simple & Easy User-Interface for Chatbots

It has an easy-to-use interface. Customers might already be annoyed when coming to you for support. The last thing you want is to frustrate them even more.

That is why it easy to find, proactive, engaging, and aesthetically appealing.

Functions of a chatbot:

- *Provide basic product information*
- *Update customer/order details*
- *Add/change/remove plans*
- *Switch options or preferences*

Challenges Faced

- Had to download several files like **py** , **pillow** etc which was not pre-available.
- While executing the code there several error at every stage .

Conclusion

Without a doubt, chatbots can revolutionize the experience of the customer and streamlining business processes for efficiency. Chatbots are inching towards the mainstream market for business owners.

They can help increase customer satisfaction with your organization's products and services, which is a great way to help level set expectations. Chatbots have close to 100% view rate and super high response rates, eclipsing even email marketing.

Prospecting, troubleshooting, and increasing engagement are all things chatbots can help solve. Chatbots are solving a multitude of problems from simple to complex, and are becoming an important part of marketing and operational strategies for businesses across the globe.