

# Chatbot using Whatsapp API

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## Concept

A chatbot is an AI application software that can hold an automated conversation with a client by listening and responding to the clients queries as per training received.

## Features of a chatbot

- It serves as an alternate approach to hold conversations.
- It can acts as an initial point of contact before direct contact with a consultant.
- We can integrate machine learning with the bot. A bot may start out from a simple echo bot, but with the appropriate training, it can be modified to be almost identical to a human being in terms of speech patterns.
- It can also be programmed with python, hence making it easier to program.

## Requirements to implement a chatbot

- Python (version 3.6 or above)
- Flask (web framework for python)
- Ngrok (to create a secure URL to our localhost server)
- Pip (latest version)

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## Method of implementation

- First of all, we need to create an account on Twilio and then set up the Twilio sandbox using a valid mobile number.
- Next, we need to create a python virtual environment on the local system and link the Twilio sandbox with the virtual environment.
- Next, we need to create a Flask Chatbot service and implement the chatbot logic along with the 3rd party API's.
- Finally comes the turn for testing the chatbot by creating a temporary public domain using ngrok and further integrating the generated URL with the Twilio sandbox and communicating with the Chatbot via WhatsApp.

## Advantages

- It has a wide reach as whatsapp is readily available for most customers globally.
- It allows easier connectivity and reachability with minimal effort.
- It reduces the workload and human effort of the employees .
- It decreases customer waiting queues and increases the efficiency of dissolving customer queries.
- It easily provides solutions to smaller problems (saving a customers time).

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## Challenges faced during implementation

- Testing can only be done with the users who are having an account on Twilio sandbox.
- We have to refresh the Ngork port URL after every 8 hours.
- Twilio sandbox supports only one message per second.

## Summary

A chatbot is an automated program that can hold conversations with a human by recognizing speech patterns and keywords. It helps ease overall workload by decreasing direct contact to a consultant. It implements a text-based point of contact which smoothenes the accessibility. This will in turn decrease user requirement to receive support and unnecessary web surfing. Once integrated with machine learning modules, it can learn from past conversations and further evolve to hold more precise and interactive conversations. The more it is trained the accuracy is increased.

## Sources of information

- A Step by Step Guide to Creating WhatsApp Chatbot for Business  
(<https://chatbotsmagazine.com/a-step-by-step-guide-to-creating-whatsapp-chatbot-for-business-275dc3924b17>)
- Build a WhatsApp Chatbot With Python, Flask and Twilio  
(<https://www.twilio.com/blog/build-a-whatsapp-chatbot-with-python-flask-and-twilio>)