



CREATING A CHATBOT USING WHATSAPP API

A Case Study

Abstract

A simple case study on how to create a Chatbot using the WhatsApp API

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Creating a Chatbot using WhatsApp API

What is a Chatbot?

A Chatbot is an AI application that can hold an automated conversation with a client by listening and responding as trained.

Characteristics:

- An alternate approach to hold conversations
- The Chatbot can be integrated with Machine Learning (ML)/ Natural Language Processing (NLP) so that it can be almost identical to a human being in terms of speech patterns
- Can provide seamless experience regardless of time of chat initiation and continuation
- Can provide a personalized experience and escalate to a live-agent when necessary
- WhatsApp enabled

Advantages:

- Acts as an initial point of contact before direct contact with the customer care
- Allows easier connectivity with minimal effort
- Reduces workload and human effort
- Decreases customer queue times
- Easily provides solutions to smaller problems
- Can also be programmed with Python, hence makes it easier to develop

Software Requirements:

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

Procedure to create a Chatbot using WhatsApp API:

Step 1: Setup the Twilio sandbox using a valid mobile number.

Step 2: Create a Python Virtual Environment on the local system and link the Twilio sandbox with the virtual environment.

Step 3: Create a Flask Chatbot service. (Chatbot logic and 3rd party API's).

Step 4: Test the Chatbot by creating a temporary public domain using Ngork, integrating the generated URL with the Twilio sandbox and communicating with the Chatbot via WhatsApp.

Implementation Limitations:

- Limited to the Twilio sandbox (only during initial testing)
- Ngork requires refreshing of port URL every 8 hours
- Twilio sandbox supports only one message per second

Summary:

- A Chatbot is an AI program that can hold conversations with a human by recognizing speech patterns and keywords
- It helps ease overall workload by decreasing direct contact to customer care
- Text based point of contact will be more fluid and easily accessible
- This will in turn decrease device-dependant requirement to receive support
- Once integrated with ML it can learn from past conversations and further evolve to hold more precise and interactive conversations
- Higher the volume of data, higher the amount of training/ learning, higher the accuracy