

Create AI ChatBot Project using Flask, Python

Updated on 5th September 2023 by [Huzaif](#)

 [Data Science & Machine Learning](#), [Flask](#)

In today's tech-savvy world, chatbots have become an integral part of various applications, from customer support to virtual assistants. Building a chatbot from scratch might seem like a daunting task, but with the power of Flask and ChatterBot, it becomes much more manageable. Flask is a lightweight and versatile web framework in Python, while ChatterBot is an open-source machine learning-based conversational dialog engine. In this tutorial, we will walk you through the process of creating a simple chatbot using Flask and [ChatterBot](#), enabling you to add interactive conversational capabilities to your web applications.

How to Make Chatbot in Python?

Now we are going to build the chatbot using Flask framework but first, let us see the file structure and the type of files we will be creating:

- **data.json** – The data file which has predefined patterns and responses.
- **training.py** – In this Python file, we wrote a script to build the model and train our chatbot.
- **Texts.pkl** – This is a pickle file in which we store the words Python object using Nltk that contains a list of our vocabulary.
- **Labels.pkl** – The classes pickle file contains the list of categories(Labels).
- **model.h5** – This is the trained model that contains information about the model and has weights of the neurons.
- **app.py** – This is the flask Python script in which we implemented web-based GUI for our chatbot. Users can easily interact with the bot.

Here are the 5 steps to create a chatbot in Flask from scratch:

1. Import and load the data file
2. Preprocess data
3. split the data into training and test
4. Build the ANN model using keras
5. Predict the outcomes
6. Deploy the model in the Flask app

```
print("Hello, I'm a Chatbot \n")
User_Name = input("What is your name? ")
print("How are you {0}.
\n".format(User_Name))

User_Age = input("What is your age? ")
print("Oh, so your age is {0}.
\n".format(User_Age))

User_Job = input("What is your job profile?
")
print("So you're a {0}.
\n".format(User_Job))
```

When we run the above program, we will get the following output:

```
Hello, I'm a Chatbot
What is your name? pythonscholar
How are you pythonscholar.
What is your age? 26
Oh, so your age is 26.
What is your job profile? python developer
So you're a python developer.
```