

# **CREATE CHATBOT IN PYTHON**

## **Phase 4 Submission Document**

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**Project Title :** Creating chatbot

### **Phase 4:Development Part 2**

**Topic:** Continue building the chatbot by integrating it into a web app using Flask.

### **Creating Chatbot**

#### **Introduction:**

Integrating a chatbot into a web app using Flask combines the power of conversation AI with web-based accessibility. This process involves creating a Flask web application that communicates with the chatbot, allowing users to interact through a user-friendly interface. By merging these technologies, we can provide an engaging and interactive experience on our website or application.

## **Chatterbot in python**

ChatterBot is a powerful Python library for building custom chatbots. When creating a chatbot, consider the following key factors:

- Define Your Target Audience
- Dataset for Training
- Natural Language of Communication
- Building the Chatbot
- Language Independence
- Custom Training Data

## **Working of chatterbot**

The chatterbot works in the following manner:

- Input from the user
- Processing and Context Understanding
- Response Generation
- User Interaction

## **Training the chatbot**

Training a chatbot using a dataset involves the process of teaching the chatbot to understand and generate responses based on the data it's provided. The dataset serves as a source of knowledge and conversation examples to improve the chatbot's conversational abilities.

## **Developing a chatbot using flask**

## Developing a Chatbot with Flask and Kaggle Dataset Training

1. Create a Flask Web Application
2. Establish a Template Directory
3. Train the Chatbot with Kaggle Dataset
4. User Interaction with the Chatbot

### Project and Libraries setup

I will be using **PyCharm** to develop this chatbot. Create a **Flask** project using PyCharm. Following libraries are required:

- chatterbot
- pytz
- sqlite3

### HTML template and CSS

#### index.html

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <meta charset="utf-8">
```

```
  <meta name="viewport" content="width=device-width,  
initial-scale=1, shrink-to-fit=no">
```

```
  <link rel="stylesheet"  
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bo  
otstrap.min.css">
```

```
  <link rel="stylesheet" href="/static/style.css">
```

```
<script  
src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.  
min.js"></script>
```

```
</head>
```

```
<body>
```

```
<h1 class="jumbotron text-center">Chatterbot in Python  
using Flask Framework</h1>
```

```
<div class="container">
```

```
<div class="row">
```

```
<div class="col-sm-6 offset-sm-3">
```

```
<div id="chatbox" class="border border-success">
```

```
<p class="botText"><span>Hi! I'm  
Chatterbot</span></p>
```

```
</div>
```

```
<div id="userInput">
```

```
<input id="textInput" class="form-control"  
type="text" name="msg" placeholder="Type Your Message  
Here">
```

```
<input id="buttonInput" class="btn btn-success  
form-control" type="button" value="Send">
```

```
</div>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
<script>
```

```
function getResponse() {  
    let userText = $("#textInput").val();  
  
    let userHtml = '<p class="userText"><span>' +  
userText + '</span></p>';  
  
    $("#textInput").val("");  
  
    $("#chatbox").append(userHtml);  
  
document.getElementById('userInput').scrollIntoView({  
block: 'start', behavior: 'smooth' });  
  
$.get("/get", { msg: userText }).done(function(data) {  
    var botHtml = '<p class="botText"><span>' + data  
+ '</span></p>';  
  
    $("#chatbox").append(botHtml);  
  
document.getElementById('userInput').scrollIntoView({  
block: 'start', behavior: 'smooth' });  
  
    });  
}
```

```
$("#textInput").keypress(function(e) {
```

```
    // If the Enter key is pressed
```

```
    if (e.which == 13) {
```

```
        getResponse();
```

```
    }
```

```
});
```

```
$("#buttonInput").click(function() {
```

```
    getResponse();
```

```
});
```

```
</script>
```

```
<script
```

```
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"></script>
```

```
<script
```

```
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></script>
```

```
</body>
```

```
</html>
```

```
style.css
```

```
#textInput {
```

```
    border: none;
```

```
border-bottom: 3px solid aqua;
}
```

```
.userText {
    color: white;
    font-family: monospace;
    font-size: 17px;
    text-align: right;
    line-height: 30px;
}
```

```
.userText span {
    background-color: #009688;
    padding: 10px;
    border-radius: 2px;
}
```

```
.botText {
    color: white;
    font-family: monospace;
    font-size: 17px;
    text-align: left;
    line-height: 30px;
}
```

```
.botText span {
    background-color: #EF5350;
    padding: 10px;
    border-radius: 2px;
}
```

### **app.py**

```
from flask import Flask, render_template, request
from chatterbot import ChatBot
from chatterbot.trainers import ChatterBotCorpusTrainer
```

```
import pandas as pd

app = Flask(__name)

# Create chatbot
englishBot = ChatBot("Chatterbot",
storage_adapter="chatterbot.storage.SQLStorageAdapter")
trainer = ChatterBotCorpusTrainer(englishBot)

# Load the Kaggle dataset
data = pd.read_csv('D:\\New\\simple-dialogs-for-
chatbot.csv')# Update the file path as needed

# Train the chatbot with the Kaggle dataset
dialogs = data['User'] + data['Bot']
for dialog in dialogs:
    trainer.train([dialog])

# Define app routes
@app.route("/")
def index():
    return render_template("index.html")
```



```
@app.route("/get")
# Function for the bot response
def get_bot_response():
    userText = request.args.get('msg')
    return str(englishBot.get_response(userText))

if __name__ == "__main__":
    app.run()
```

## Output:

