CREATE CHATBOT IN PYTHON

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Phase 3 Submission

DocumentProject Title : Creating chatbot

Phase 3:Development Part 1

Topic: Start building a chatbot by preparing the environment andimplementing basic user interactions.

Creating Chatbot

Introduction:

Building a chatbot using a specific dataset involves several steps, including setting up the environment and implementing basic userinteractions. In this example, we will demonstrate how to create a chatbot using a dataset obtained from Kaggle. We'll utilize Pythonand libraries such as ChatterBot to facilitate this process.

By following the steps in this example, you'll learn how to set up theenvironment, load and preprocess the Kaggle dataset, and implementbasic user interactions with your chatbot. While our chatbot's capabilities will be confined to the dialogues present in the dataset, this project serves as a foundation for understanding how to leverageexternal datasets for chatbot training.

Given Data set:

```
hi, how are you doing?  i'm fine. how about yourself?
i'm fine. how about yourself?   i'm pretty good. thanks for asking.
i'm pretty good. thanks for asking.     no problem. so how have you been?
no problem. so how have you been?       i've been great. what about you?
i've been great. what about you?        i've been good. i'm in school right now.
i've been good. i'm in school right now.        what school do you go to?
what school do you go to?       i go to pcc.
i go to pcc.    do you like it there?
do you like it there?   it's okay. it's a really big campus.
it's okay. it's a really big campus.    good luck with school.
good luck with school.  thank you very much.
how's it going? i'm doing well. how about you?
i'm doing well. how about you?  never better, thanks.
never better, thanks.   so how have you been lately?
so how have you been lately?    i've actually been pretty good. you?
i've actually been pretty good. you?    i'm actually in school right now.
i'm actually in school right now.       which school do you attend?
which school do you attend?     i'm attending pcc right now.
i'm attending pcc right now.    are you enjoying it there?
are you enjoying it there?      it's not bad. there are a lot of people there.
it's not bad. there are a lot of people there.  good luck with that.
```

To build a chatbot using the dataset from Kaggle, you can followthese steps:

1. Download and Prepare the Dataset:

Download the dataset from Kaggle (https://www.kaggle.com/datasets/grafstor/simple-dialogs-forchatbot).

2. Install Dependencies:

Install the necessary Python libraries for working with data and building a chatbot. We'll use pandas, ChatterBot, and ChatterBot'snatural language processing library, spacy.

pip install pandas pip install

chatterbot pip install

chatterbot_corpus pip

installspacy

3. Create a Python Script:

Create a Python script, e.g., chatbot_with_dataset.py.

4. Implement the

Chatbot:Program:

```
import pandas as pd from chatterbot

import ChatBot from

chatterbot.trainers import ListTrainer

data = pd.read_csv('dialogues.csv')

chatbot = ChatBot('MyBot') trainer =

ListTrainer(chatbot) dialogs =

data['User']

+ data['Bot']

trainer.train(dialogs.tolist())

conversation_history = []
```

```
def chat_with_bot():
    print("Hello! I'm your chatbot. You can start a conversation, or type 'exit' to quit.")
    while True:
        user_input = input("You: ")if user_input.lower() == 'exit':
            print("Bot: Goodbye!")
            break        elif user_input.lower() == 'history':            print("Bot: ConversationHistory")
                for entry in conversation_history:
                print(entry)        elif user_input.lower() == 'clear history':
            conversation_history.clear()
            print("Bot: Conversation history cleared.")
        else:
            response =
```

```
chatbot.get_response(user_input)

conversation_history.append(f"You:

{user_input}")
```

conversation_history.append(f"Bot: {response}") print("Bot:", response) chat_with_bot()

5. Run the Chatbot:

Run the Python script by executing python chatbot_with_dataset.py interminal or IDE.

Sample Output:

Hello! I'm your chatbot. You can start a conversation, or type'exit' to quit**.**

You: hi,how are you doing? **Bot:**i’

m fine how about yourself ? **You:**

What's the weather like today?

Bot: I'm not sure about the weather. I'm just a chatbot.

You: history

Bot: Conversation History

You: hi,how are you doing? **Bot:**i’

m fine how about yourself ? **You:**

What's the weather like today?

Bot: I'm not sure about the weather. I'm just a chatbot.

You: clear history

Bot: Conversation history cleared.

You: exit **Bot:**

Goodbye!

key tasks involved in creating a chatbot:

1. Define Purpose and Use Case:

Determine the specific purpose and use case for your chatbot. Consider whether it will provide customer support, answer frequentlyasked questions, assist with tasks, or engage in casual conversations.

2. Select a Platform:

Decide on the platform where your chatbot will be deployed. Thiscould be a website, messaging apps (e.g., Facebook Messenger, WhatsApp), or a custom application.

3. Choose the Technology Stack:

Select the technologies and tools you'll use to build the chatbot,including programming languages, libraries, and frameworks.
Common choices include Python, JavaScript, Node.js, and machine learning libraries like TensorFlow or PyTorch.

4. Data Collection and Preprocessing:

Collect and preprocess data for training your chatbot. This may involve gathering conversation datasets, cleaning and formatting thedata, and extracting relevant information.

5. Train the Chatbot:

Train your chatbot using appropriate datasets. This training can involve supervised learning, reinforcement learning, or rule-basedapproaches, depending on the complexity of your chatbot.

6. Natural Language Processing (NLP):

Implement Natural Language Processing techniques to enable the chatbot to understand and generate human-like text. This may includetasks like tokenization, entity recognition, sentiment analysis, and intent detection.

Conclusion:

Building a chatbot is an exciting and complex endeavor with the potential to revolutionize various industries and enhance user experiences. In this process, we've explored the fundamental steps andconsiderations involved in creating a chatbot