CREATE CHATBOT IN PYTHON

Phase 3 Submission

DocumentProjectTitle : Creatingchatbot

Phase3:DevelopmentPart 1

Topic: Startbuilding a chat bot by preparing the environment and implementing 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 achatbotusingadatasetobtainedfromKaggle.We'llutilizePythonandlibrariessuchasChatterBottofacilitatethis process.

By following the steps in this example, you'll learn how to set up theenvironment,loadandpreprocesstheKaggledataset,andimplementbasic user interactions with your chatbot. While our chatbot'scapabilities will be confined to the dialogues present in the dataset,this project serves as a foundation for understanding how to leverageexternaldatasets forchatbottraining.

GivenDataset:

```
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 followthesesteps:

1. DownloadandPrepareetheDataset:

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

2. InstallDependencies:

Install the necessary Python libraries for working with data andbuildingachatbot.We'll usepandas,ChatterBot,andChatterBot'snaturallanguageprocessing library,spacy.

pipinstallpandas

pipinstallchatterbot

pip installchatterbot_corpus

pip install flask

3. CreateaPythonScript:

CreateaPythonscript,e.g.,chatbot_with_dataset.py.

4. Implement the chatbot:

Program:

```
importpandasaspd
fromchatterbotimportChatBot
from chatterbot.trainers import
ListTrainerdata=pd.read_csv('dialogues.cs
v')chatbot=ChatBot('MyBot')
trainer =
ListTrainer(chatbot)dialogs =
data['User'] +
```

```
 data['Bot']trainer.train(dialogs.toli

 st())conversation_history=[]

defchat_with_bot():

    print("Hello!I'myourchatbot.Youcanstartaconversation,ortype'exit'toq
 uit.")

    whileTrue:

        user_input=input("You:")

        if user_input.lower() ==

            'exit':print("Bot:

            Goodbye!")break

        elif user_input.lower() ==

            'history':print("Bot: Conversation

            History")forentryinconversation_h

            istory:

                print(entry)

        elif user_input.lower() == 'clear

            history':conversation_history.clea()

            print("Bot: Conversation history )

            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. Runthe Chatbot:

Run the Python script by executing python chatbot_with_dataset.py interminal orIDE.

SampleOutput:

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

You:hi,howareyoudoing?

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!

keytasks involvedin creatinga chatbot:

1. Define Purposeand Use Case:

Determine the specific purpose and use case for your chatbot.Consider whether itwill provide customersupport, answer frequently asked questions, assist with tasks, or engage in casualconversations.

2. Select a Platform:

Decide on the platform where your chatbot will be deployed.This could 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, andframeworks. Common choices include Python,JavaScript,Node.js,and machine learning libraries like TensorFloworPyTorch.

4. Data Collection and Preprocessing:

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

5. Train the Chatbot:

Train your chatbot using appropriate datasets. This training caninvolve supervised learning, reinforcement learning, or rule-basedapproaches,dependingon thecomplexityofyourchatbot.

6. Natural LanguageProcessing(NLP):

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

Conclusion:

Building a chatbot is an exciting and complex endeavor with

thepotential to revolutionize various industries and enhance userexperiences. In this process, we've explored the fundamental steps andconsiderationsinvolved increatinga chatbot