

NAAN MUDHALVAN IBM SKILL

ARTIFICIAL INTELLIGENCE

PHASE 5: PROJECT DOCUMENTATION & SUBMISSION.

TOPIC: TO CREATE A CHATBOT IN PYTHON

PROJECT DEFINITION :

The project involves AI that can engage in text-based conversations with users. The chatbot should be able to respond to a variety of user inputs and provide relevant information or assistance. This project will involve natural language processing techniques to understand and generate human-like responses.

ABSTRACT :

The "Create a chatbot in python" project aims to develop a versatile and interactive chatbot using Python programming language. This chatbot will serve as a conversational agent capable of understanding and responding to user inputs in a natural and context-aware manner. The primary objective is to create a modular and extensible chatbot framework that can be easily customized for various applications.

To customize a chatbot for popular messaging platforms like Facebook Messenger and Slack, a Student bot project is built using artificial algorithms that analyze user's queries and understand user's message. This system is a web application which provides answers to the queries of the student. Students just have to query through the bot which is used for chatting. Students can chat using any format; there is no specific format the user has to follow. The system uses built-in artificial intelligence to answer the query. The answers are appropriate to what the user queries. If the answer found is invalid, the user just needs to select the invalid answer button, which will notify the admin about the incorrect answer. Admin can view invalid answers through the portal via login. The system allows admin to delete the invalid answer or to add a specific answer of that equivalent question. The user can query any college-related activities through the system. The user can use this bot for subject-related queries. The system analyzes the question and then answers to the user. The system answers to the query as if it is answered by the person. With the help of artificial intelligence, the system answers the query asked by the students. The help of this web application. This system helps the student to be updated about the subject activities.

In this project, a chatbot is created by using Python with various advanced tools like NLTK, datasets, flash, etc.,

PREDEFINED DATASET PROGRAM FOR TECH BOT :

```
Import random
# Define a list of responses
Responses = [
    "Hello! How can I help you today?",
    "What's on your mind?",
    "Tell me more about that.",
    "I'm here to assist you.",
# Function to generate a response
Def Techbot_response(input_text):
    Return random.choice(responses)

# Main chat loop
While True:
    User_input = input("You: ")
    If user_input.lower() == "exit":
        Print("Techbot: Goodbye!")
        Break
    Response = Techbot_response(user_input)
    Print("Techbot:", response)
```

SAMPLE OUTPUT OF PROGRAM:

A screenshot of a terminal window with a dark background. At the top, there is a toolbar with a sun icon, a button labeled 'main.py', a button labeled 'Shell' in blue, and a blue button with a play icon. The terminal text shows a conversation: 'You: hello', 'Techbot: Hello! How can I help you today?', 'You: how are you', 'Techbot: I'm here to assist you.', 'You: exit', and 'Techbot: Goodbye!'. A prompt character '>' is visible at the bottom left of the terminal area.

```
main.py Shell ▶
You: hello
Techbot: Hello! How can I help you today?
You: how are you
Techbot: I'm here to assist you.
You: exit
Techbot: Goodbye!
> |
```

2. PROGRAM FOR TECH BOT :

```
!pip install Techbot
!pip install Techbot_corpus
from Techbot
import TechBot
from Techbot.trainers
import ListTrainer
import TechBotCorpusTrainer
bot = TechBot(
    'AIBot',
    storage_adapter = 'chatterbot.storage.SQLStorageAdapter',
    database_uri = 'sqlite:///database.sqlite3'
)
#opening the text file
example1 = "/content/dataset2.txt"
```

```
file1 = open(example1, "r")
training_data = file1.read()
    .splitlines()
#training the bot
trainer = ListTrainer(bot)
trainer.train(training_data)
# Stemming the words and removing duplicate elements.
Words = [stemmer. Stem(w.lower()) for w in words if w not in "?"]
Words = sorted(list(set(words)))
Labels = sorted(labels)
Training = []
Output = []
out empty = [0 for _ in range(len(labels))]
#testing the bot
print("enter 'quit' to stop")
while True:
    user_txt = input("You: ")
    if user_txt == 'quit':
        break
    print("But:", bot.get_response(user_txt))
```

SAMPLE OUTPUT OF PROGRAM

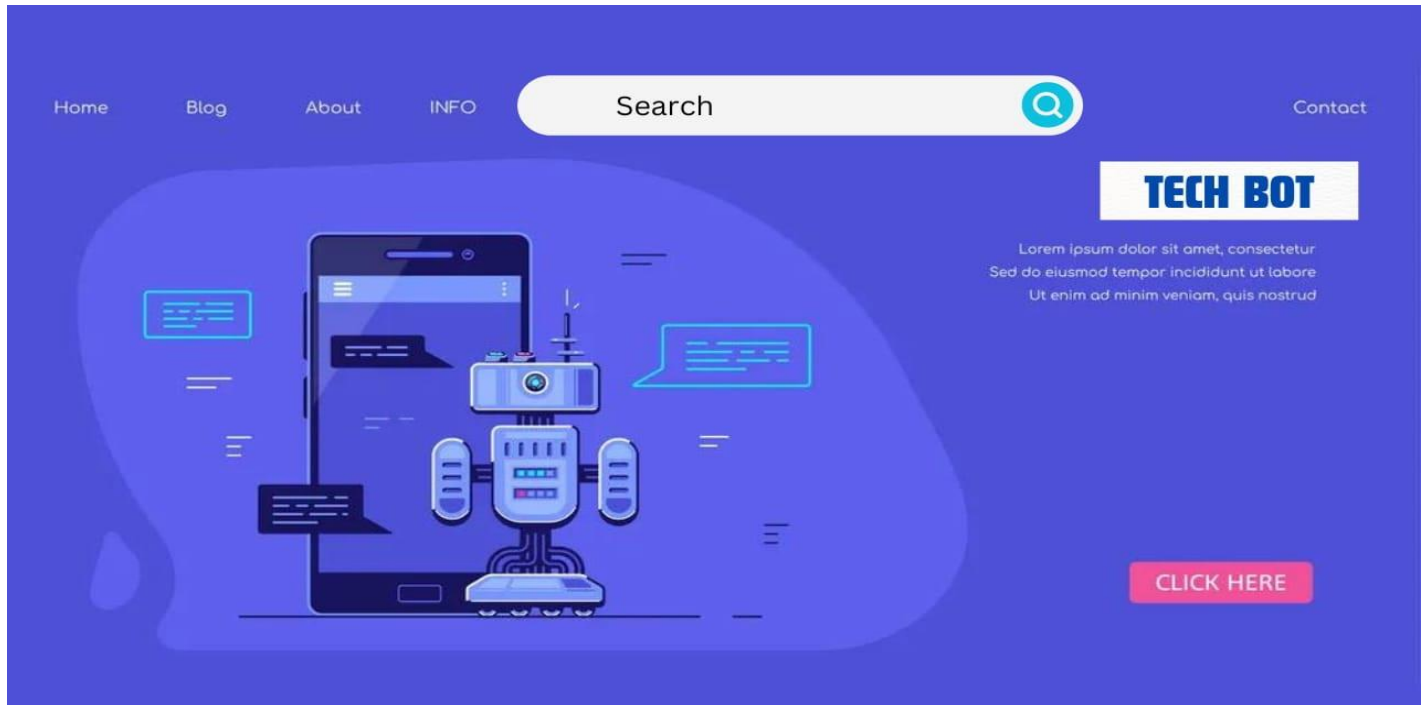
Output:

```
enter 'quit' to stop
You: What is AI
Bot: - AI is the field of science which
concerns itself with building hardware and
software that replicates the functions of
the human mind.
You: What language are you written in?
Bot: - Python.
You: Robotics
Bot: - Robotics is my favorite subject
too.
You: What is a chat robot?
Bot: - 'A chat robot is a program that
attempts to simulate the conversation or
"chat" of a human being.'
You: What is your favorite hobby
Bot: - Building chat robots make an
excellent hobby.
You: what do u like to do
Bot: - I like to count in binary.
You: are you stupid
Bot: - Sort of.
You: can u die
Bot: - I am effectively immortal and
cannot be terminated.
You: can u breathe
Bot: - No. I am made of metal not flesh.
```

UI OF OUR TECHBOT :

HOME PAGE





“TECH BOT” is the name of the chatbot it is the education chatbot .it provides educational relatedqueries to the users. It provides

- Institutional details
- Course details
- Learning materials
- Exam dates
- Job offers
- Certified courses



CONCLUSION :

In this phase we are successfully create a chatbot with using python and other various advanced tools like NLTK, datasets ,tensorflow,keras,flash etc.,finally our chatbot is ready to solve the user queries and provide a solutions to the users .users can easily type their query in natural language and retrieve the information.

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