

Interview QA Chatbot using Python

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Abstract: A chatbot is a software program this is used to expand interplay among a user/human and a computer/gadget in a herbal language like human chats. chatbots chat with the consumer in a dialogue in line with the enter of a human and solution to the consumer. It makes the person suppose that it's far talking to a person in which as they may be talking to the computer. It is a conversational AI designed and implemented to have conversation with humans. This chatbot application is helpful for students and freshers while preparing for the job interviews. This chatbot reduces the time and efforts to search answers of interview questions.

Keywords: chatbot, Query, Interface, Question field

I. INTRODUCTION

Thinking at the most basic level it is simply a conversational interface. chatbots are used to perform tasks which are frequent at specific time. Everyday When we are surfing over the internet came across various chatbots . For example, When you visit a website you may have seen a pop up window that **“What can I help you with?”** and as you hits there ,the interface which you will see is nothing but a chatbot. chatbots make easy for users to find the information they need by responding their questions through text input, audio inputs without human intervention. Users in each business-to-consumer (B2C) and business-to-business (B2B) environments an increasing number of use chatbot digital assistants to address easy tasks. Adding chatbot assistants reduces overhead costs, makes use of assist body of workers time higher and allows businesses to offer customer support throughout hours while stay retailers are not available. chatbot use is at the upward push in commercial enterprise and patron markets. As chatbots improve, clients have much less to quarrel approximately even as interacting with them. Between superior generation and a societal transition to greater passive, text-primarily based totally communication, chatbots assist fill a spot that smartphone calls used to fill.

In this chatbot application when we enter our query in the question field and hit the ASK button , the response/answer of query will be generate in the text area.

II. LITERATURE REVIEW

ELIZA (1966): ELIZA, it is developed by Joseph Weizenbaum, and one of the earliest and most influential chatbot system. It simulated a psychotherapist by using pattern matching techniques to respond to user inputs. ELIZA employed simple language processing method and gave the illusion of understanding the conversation by rephrasing user statements as questions.

SmarterChild (2001): It is developed by ActiveBuddy, and this was one of the first chatbots widely used on an instant messaging platforms. It provides information, entertainment, and acted as a virtual assistant. It had demonstrated the practicality of chatbots in everyday communication

Siri (2011): Siri, has been developed by Apple and has marked a significant milestone in chatbot technology with its integration into mobile devices. It introduced a voice-based conversational interface and employed natural language processing techniques to understand and respond to user queries. Siri popularized the use of chatbots as personal assistants.

Google Assistant (2016): In 2016, Google developed Google Assistant and combined voice-based interactions with the power of Google's search engine and services. It integrated with various devices and platforms which enables users to perform tasks, get information, and control smart home devices through conversational interactions.

ChatGPT (2020): ChatGPT, has been developed by OpenAI, utilized the GPT (Generative Pre-trained Transformer) architecture to create a highly versatile and context-aware chatbot. It showcased improvements in generating coherent and contextually relevant responses, leveraging large-scale language models and reinforcement learning techniques.

Machine Learning (ML) and Artificial Intelligence (AI) techniques play an important role in the development and functioning of chatbots. Nowadays NLP is mostly used ML and AI techniques in chatbot applications. NLP techniques enable chatbots to understand and process human language. They involve tasks such as tokenization, part-of-speech tagging, named entity recognition, sentiment analysis, and syntactic parsing. NLP allows chatbots to interpret user inputs, extract relevant information, and generate appropriate responses.

1.1 Proposed Work System

The proposed work system of a chatbot using the ChatterBot module in Python involves several steps and components.

Tools and Technologies used

Python 3.7

ChatterBot:

It is a python library used to generate automated responses for user's input/query. **chatterbot**

```
pip install chatterbot
```

Tkinter: It is used to build cross-platform GUI application.

```
pip install tk
```

IDE used :

Pycharm

Train the chatbot:

Customize training data:

Now add your custom training data to improve the chatbot's responses. Create a separate file like we have created Interview.yml and add relevant data that means, for this project, it is interview questions and answers

```

1 Questions:
2 -DBMS:
3   -What is Dbms:
4     DBMS is a collection of programs that facilitates users to create and maintain a database.
5
6   -What is database :
7     A Database is a logical, consistent and organized collection of data that it can easily be accessed, managed and updated.
8
9   -What is a degree of Relation? :
10    The degree of relation is a number of attribute of its relation schema. A degree of relation is also known as Cardinality it
11
12
13 -C:
14 -What is C language :
15   C is a mid-level and procedural programming language.
16 -Why is C known as a mother language :
17   C is known as a mother language because most of the compilers and JVMs are written in C language.
18 -Why is C called a mid-level programming language :
19   C is called a mid-level programming language because it binds the low level and high -level programming language.
20 -Who is the founder of C language :
21   Dennis Richie.
22 -When was C Language developed :
23   C language was developed in 1972 at bell laboratories of AT&T.
24 -What is the use of printf() and scanf() functions? :
25   printf():- The printf() function is used to print the integer, character, float and string values on to the screen.
26

```

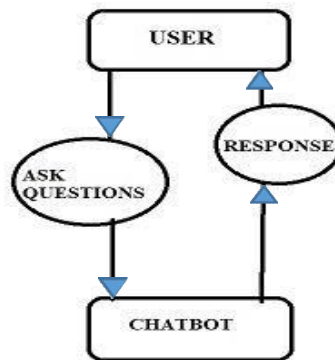
Train the chatbot using the custom dataset :

```
data = open('Interview.yml', 'r',
encoding='utf-8').readlines()
```

Generate Responses: bot.get_responses method used to generate responses based on user input.

```
answer = bot.get_response(question)
```

Workflow Diagram:



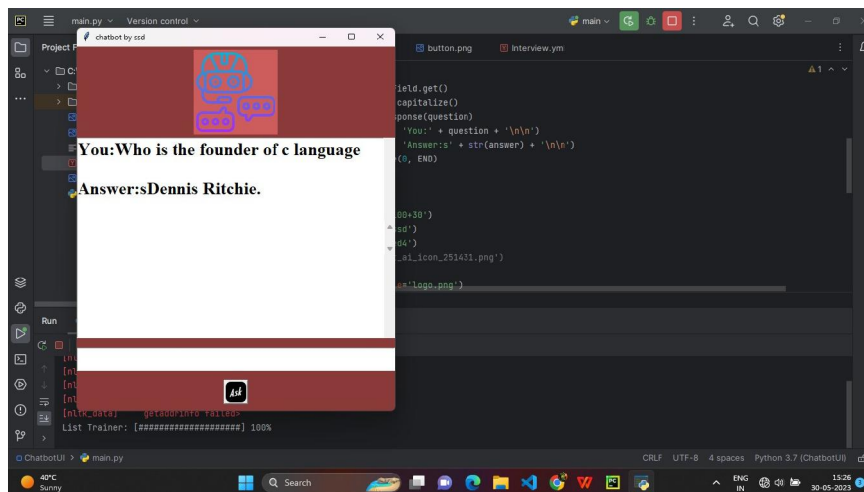
III. APPLICATIONS

Interview QA chatbot helps fresher to get right source of information about their first interview. AI based chatbots are mostly used by students and employees

IV. RESULTS AND DISCUSSION

This Chatbot System is successfully tested to show its effectiveness and achievability .It reduces the time and efforts of students or TPO’s of colleges .In this paper we have developed a chatbot which will interact with the users and provide preparation required for interviews.

OUTPUT



This image shows how a QA chatbot replies to user’s questions.

FUTURE SCOPE

- In a future enhancement of our chatbot, we can make it more interactive in more ways like
- Integration with voice(eg. Siri, Google Assistant ,Alexa)
- Integration with visuals(eg. augmented reality, virtual reality, smart displays)
- Improvement in linguistic and conversational ability

V. CONCLUSION

The main objective of this project is to develop a GUI application of chatbot. This GUI application of chatbot can be used by anyone who is curious about knowing answers for a particular question. This chatbot can answer only those questions which he has the answer in its AIML dataset. This bot is built to respond queries of job seekers and giving them answers of their questions

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