VIRTUAL ASSISTANT FOR COLLEGEWEBSITE USING PYTHON

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ABSTRACT
In recent times each employer relies upon facts and communication generation (ICT) for efficient service delivery and the cost-powerful utility of technological assets. Answering a question can be a hard project to do manually. But chatbots or conversational bots lessen the guide paintings and boom efficiency even as addressing the queries. Our project approach is based totally on growing a virtual assistant for our very own university website that offers responses to the scholar’s queries and may be to be hard at any given time. one of the industries that may advantage from using this era is the educational region.

Education can gain from Chatbot improvement. It can improve productiveness, verbal exchange, and getting to know and minimize ambiguity from the interplay. A brand new education platform can resolve subsequent-level troubles in training using this technology and the engagement tool. A Chatbot is a software program this can simulate a commune with a person using natural language through messaging systems, smartphone programs and websites, and so forth. Users engage with Chatbots which have a conversational person interface (CUI), which permits users to interact with the bot. This means that the users no longer must download any programs onto their gadgets critical and will assist the scholar to get the required facts into time.

INTRODUCTION
computers supply us with information, they interact and assist us in lots of manners. A bot is software supposed to counterfeit clever commune on a text or speech. yet, this paper concentrates only on textual content. those systems can study themselves and restore their expertise through the usage of human help or using internet sources. This application is noticeably fundamental on account that information is stored earlier. The gadget software makes use of the query-and-answer protocol in the form of a talk bot to answer personal queries. Chatbots had been in use for academic purposes for quite some time. These Chatbots may be categorized into people with education intentionality and people without. Chatbots without schooling intentionality are utilized in administrative duties which include pupil guidance and assistance. Chatbots with education intentionality are utilized in fostering coaching and getting to know. within this category, there are Chatbots that offer the framework of the learning procedure, this is, pick out and set up content to fit the students’ desires and pace and assist in the mirrored image and learning motivation. those bots act as learning partners which give communicate, collaborate, and mirror images. furthermore, there are workout and practice Chatbots that gift a stimulus in question shape, to which the scholar provides a solution this is assessed through the Chatbot which then presents comments. Innovation is needed in developing the united states like India if you want to increase pleasant training and create a workforce to compete globally. India has broadly embraced the use of Chatbots in diverse sectors and it’s by far a key participant in the Chatbot market. in the banking area, Chatbots are used to deal with purchaser queries (and FAQs) and deliver steering on financial institution services and products. Chatbots in the banking zone encompass SIA, iPal, and EVA utilizing the state financial institution of India, ICICI financial institution, and HDFC Banks respectively. inside the coverage region, Chatbots are helping clients in submitting claims, getting guidelines, checking the fame in their guidelines, and finding providers and their branches, in addition to different carrier vendors. Baja Allianz’s Boing, Birla Sunlife’s bot, and PNB Metlife’s banking programs are a number of the usually used Chatbots this quarter. Inside the transport zone, Chatbots are used to provide real-time cab details, flight bookings, and verifications, and site visitors evaluation. Meru Cab and Yatra.com Chatbots are many of the bots used inside the transport zone, inside the e-commerce region, Chatbots were used in managing queries, monitoring orders, making payments, and elevate customer complaints.

LITERATURE SURVEY
By utilizing the field of Artificial Intelligence, one can develop numerous applications one of that is mentioned in this paper is a college chatbot system. Even though chatbots can be deployed in various fields like marketing, education, banking, clinical, and finance, Research is being done on making regular rule-based chatbots informative, and responsive and complete the correspondence in a conversational human language. This requires the incorporation of Natural Language Processing (NLP) and Machine Learning (ML) technologies into the college chatbot system. There are various approaches to do as such. Selecting a fitting technique depends on the area of the chatbot, the functionalities it expects to give, the language of correspondence, the end client, and so forth. Some of the approaches are versed in this literature survey.
Michael Maudlin created the “Chatter Bot Algorithm” in 1994 and published it in the book Julia and was used to answer queries. Taking this initial idea, further projects were developed to create a chatbot system. The user needs to log in to the ChatBot application. At exactly that point the user is permitted to submit complaints and queries. When a user query is submitted to the bot, the context of the query is recognized and NLP is applied. WordNet calculation and grammatical form labeling are utilized to
distinguish the feeling of the words. User questions are checked in the knowledge database. If the appropriate response is discovered, at that point that answer is sent to that user. If a particular query isn’t found in the database such inquiries are replied to by the administrator. When the administrator answers the query, at exactly that point the appropriate response is sent to the user. Question alongside answer is put in the database so that at whatever point such inquiries will be posed the intention is that they get addressed legitimately from the database. Because of this administrator doesn’t have to address the same query physically any longer. Different algorithms such as Porter Stemmer Algorithm [5] are used for expelling suffixes from words in English. The wordrequest vector process is used for estimating word request closeness between two sentences. Sentences with precisely the same words yet in a different order may bring about altogether different meanings. The user is permitted to ask any number of questions concerning the institution. Chatbots after receiving the query from the user check the confidence [6] score and give legitimate responses to the user’s question. The keyword match calculation is done where the user inquiry went through. 3 keyword matching algorithms [7]. If this matching of keywords fails then at that pointed query is sent through 2 and 1 keyword matching with the database. Even then if the query doesn’t get the right keyword match, at that point the chatbot application sends No Answer Found as a reply. The utilization of logic adapters to choose a response is another algorithm used for chatbot applications. An input adapter aims to get input from the bot source, and then convert it into a format that makes the chatbot understand. The chatbot system uses a special logic adapter that allows one to pick the fitting response from all the responses. The Multi Logic Adapter is used to choose a single response from the responses returned by all of the logic adapters that the chatbot has been configured to use. Preprocessing of information is done by wordembedding. Here each word is mapped to a vector and the vector structure is spoken to in a one-hot encoded structure [8] which implies 1 represents the presence of the word and 0 for everything else. Natural Language ToolKit (NLTK) is a python library that offers assistance for Natural Language Processing (NLP). NLTK [9] has inbuilt tokenizers. The NLTK incorporates a wide scope of tokenizers which are as per the following norm, letters, path, words, keywords, class, N-gram, pattern, and so on. The most usually utilized tokenizer is the word-punk tokenizer [10] which parts the sentences at the blankspaces. The precision, speed, and effectiveness of the NLTK tokenizers are exemplary. The administrator signs in to the portal and can perform activities like erasing invalid answers or including the explicit answer of a specific inquiry. With the assistance of computerized reasoning, the chatbot application answers the question asked by the users.

EXISTING SYSTEM

The research in the existing methodology is based on using AI methods to identify categories of emotions. These studies train sentiment classification models from extensive labeled data based on RNN, deep learning, and convolutional approaches. Linguistic interaction is most important in counseling to understand user conversations using NLP and NLG. A multimodal approach to emotion recognition is used here. They collect corpora to learn the semantic information of words and use vector representations to collect vocabulary synonymous knowledge. In this article, a voice recognition chatbot is developed. If the question is not understood, the robot will use a third-party expert system for further processing. Bots are created as web applications, the part process of capturing and analyzing the input signal. The server responds by retrieving the credentials and outputting the information. The server used here is a SOAP-based black-box approach. The use of expert systems allows an unlimited and autonomous increase in intelligence.

PROPOSED SYSTEM

Chatbots are virtual conversational assistants that automatically interact with users. Chatbots are powered by artificial intelligence, which uses machine learning techniques to understand natural language. The main purpose of this article is to help users understand the health information of minors. Initially, when a user visits, the website registers first and then the bot can ask the query. If there is no answer in the database, the system uses an expert system to answer the query. Here, domain experts also need to register by providing various information. Chatbot data is stored in the database as schema models. Here SQL is used to manage the database. Using this chatbot, users can get the required information immediately along the way and can work 24 hours a day, 365 days a year. Check various documents available on the web using lower presentation dimensions based on n-grams. Labeled datasets label content. Here the chatbot is created for customer service, it acts as a public health service. The app clearly shows that the keywords are taken from the question and, using one, two, and three tuples, making it easy to answer quickly.

RESULTS

After training the data, python run.py runs the server backend which provides a web platform to connect to the robot. Then the app.run() function reads the data and displays the provided data. When a question is asked, get the response() will find the answer from the results of the given dataset and respond to the user's query. Finally, Chatbot delivers efficient results.
To run the project, install all packages given in the 'requirement.txt' file and then double-click on the 'run.bat' file to get the below screen which starts the FLASK server. In the above screen, the flask server started. Now open the browser and then enter the URL as [http://127.0.0.1:5000](http://127.0.0.1:5000) and press enter key to get below the home page.

In the above screen, you can ask a question then the chatbot will answer in the above screen. I entered some questions and pressed ‘Send’ we will get the answer from the bot. The questioning and answering of the chatbot are based on the keywords that are used and these keywords are matched with the required output finally giving us the answer. You can see the response from the chatbot and now ask a series of questions. In the above screen, I asked some series of questions, and then, I got a response from a chatbot. Similarly, you can ask any question, and if a question is available in the train data, then the chatbot will respond.

In the above screen, I asked the question 'cook biryani,' and the bot answered 'SORRY.'
CONCLUSION
Chatbots are a great conversation tool. The application developed here provides high-quality answers in a short period. It relieves the burden of an were providers by using expert systems to deliver the answers directly to the users without any falsehood. The paper focuses on creating an area where the challenges are provided based on the interaction of the students and the bot uses the data provided and trains itself to provide accurate and immediate answers. The chatbot also provides answers directly to users. This project is developed to allow users to save time by consulting the requests made by the administrators or any other person. Here we are developing an application to extract keywords from user queries using N-grams and TF-IDF. Each keyword is weighed to get the right answer to the query. The web interface is developed for the user, after entering the request. The app is enhanced with security and efficiency upgrades by providing user and character protection and fetching question answers accordingly. The future scope of this chatbot is very wide as researchers have mentioned that the future era is messaging apps, which means people will spend more time on messaging apps than others. So, using a chatbot no matter how far away a person is, the only thing needed is a simple computer, tablet, smartphone, etc.

The intelligence and intelligence of the chatbot can be improved by doing more research and increasing the database so that the Chatbot can answer all types of questions for every type of query it asks. An audiosystem can also be included in this system to make this Chatbot even more interactive.

REFERENCES