LOVELY PROFESSIONAL UNIVERSITY

A PROJECT REPORT ON:

CHATBOT FOR EXAMINATION ENQUIRY

COURSE CODE: INT404

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1. ABSTRACT:

Chatbots, or conversational interfaces as they are also known, present a new way for individuals to interact with computer systems. Traditionally, to get a question answered by a software program involved using a search engine, or filling out a form. A chatbot allows a user to simply ask questions in the same manner that they would address a human. The most well-known chatbots currently are voice chatbots: Alexa and Siri. However, chatbots are currently being adopted at a high rate on computer chat platforms.

The technology at the core of the rise of the chatbot is natural language processing ("NLP"). Recent advances in machine learning have greatly improved the accuracy and effectiveness of natural language processing, making chatbots a viable option for many organizations. This improvement in NLP is firing a great deal of additional research which should lead to continued improvement in the effectiveness of chatbots in the years to come.
A simple chatbot can be created by loading an FAQ (frequently asked questions) into chatbot software. The functionality of the chatbot can be improved by integrating it into the organization's enterprise software, allowing more personal questions to be answered, like "What is my balance?", or "What is the status of my order?".

2. INTRODUCTION:

User interfaces for software applications can come in a variety of formats, ranging from command-line, graphical, web application, and even voice. While the most popular user interfaces include graphical and web-based applications, occasionally the need arises for an alternative interface. Whether due to multi-threaded complexity, concurrent connectivity, or details surrounding execution of the service, a chat bot-based interface may suit the need.

Chat bots typically provide a text-based user interface, allowing the user to type commands and receive text as well as text to speech response. Chat bots are usually a stateful services, remembering previous commands (and perhaps even conversation) in order to provide functionality. When chat bot technology is integrated with popular web services it can be utilized securely by an even larger audience.

- A Student Information Chat Bot project is built using artificial algorithms that analyzes user's queries and understand user's message.

- This System is a web application which provides answer to the query of the student very effectively.
- Students just have to query through the bot which is used for chatting.
- Students can chat using any format, as there is no specific format that the user has to follow.
- The System uses built in artificial intelligence to answer the query.
- The answers are appropriate what the user queries.
- If the answer found to be invalid, user just need to select the invalid answer button which will notify the admin about the incorrect answer.
- Admin can view invalid answer through portal via login
- System allows admin to delete the invalid answer or to add a specific answer of that equivalent question.
- The user does not have to personally go to the college for enquiry.
- The system analyzes the question and then answers to the user.
- The system replies using an effective Graphical user interface which implies that as if a real person is talking to the user.
- The user can query about the college related activities through online with the help of this web application.
- This system helps the student to be updated about the college activities.

3. LITERATURE REVIEW:

Eliza is considered as the first chatbot which works on the pattern matching system. It is developed by Joseph Weizenbaum in 1964. ALICE is rule-based chatbot based on the Artificial Intelligence Markup Language (AIML). It has more than 40,000 categories, where each category has combination of pattern and its response. Md.Shahriare Satu and Shamim-AI-Mamun showed the review of applications of the Chatbot which are developed using the AIML scripts. They said that AIML based chatbots are easy to implement, they are lightweight and efficient to work. Their paper gives the detailed information about the different applications of the chatbots. Thomas N. T. and Amrita Vishwa designed a AIML and LSA based chatbot to provide the customer care service over the E- commerce websites. Their approach shows we can improve the chatbot ability by adding other models to it. In python, we can implement the chatbot using the various approaches.

4. PROPOSED METHODOLOGY:

The system comprises of 4 modules as follows:

1. **Admin Login**
2. **Bot Chat**
3. **Text to Speech**
4. **GUI**

Description:

1. **Admin Login:**
   - User has to login to the system to access various helping pages through which user can ask queries to the system with the help of bot.

2. **Bot Chat:**
   - User can chat with the bot it implies as if enquiring to the college person about college related activities.

3. **Text to Speech:**
   - The bot also speaks out the answer.

4. **GUI:**
   - We have created GUI (Graphical User Interface) in a such a way that non-technical human being can also understand it.

5. FEATURES:

Customer Service — A chatbot can be used as an "assistant" to a live agent, increasing the agent's efficiency. When trained, they can also provide service when the call center is closed, or eventually even act as an independent agent, if desired.

Sales/Marketing/Branding — Chatbots can be used for sales qualification, ecommerce, promotional campaigns, or as a branding vehicle.

Human Resources — An HR chatbot can help with frequently asked questions ("how many vacation days do I have left?") and can act as an onboarding assistant.

Benefits:

· Economically offer 24/7 Service

· Improve Customer Satisfaction

· Reach a Younger Demographic

· Reduce Costs

· Increase Revenue

6. REQUIRMENTS:

Software Requirements:

- Windows 7 or higher
- Andaconda3 Navigator (Jyputer)

Hardware Components:

- Processor – i3 (Min)
- Hard Disk – 5 GB
- Memory – 1GB RAM

7. ADVANTAGES:

- User does not have to go personally to college office for the enquiry.
- This application enables the students to be updated with college cultural activities.
- This application saves time for the student as well as teaching and non-teaching staffs.

8. APPLICATIONS:

Enhance AI Based Net Student System can be used in many colleges around the country and it can be used in various firms like:

- Food Ordering

- Flight Booking
- Health Care
- Colleges/University
- E-Commerce

9. CONCUSION:

We have introduced a chatbot application which is able to interact with users. This chatbot can answer for queries in the textual form of user input. For this purpose, Python Programming has been used. The chatbot can answer only those questions which he has the answer in its dataset. So, to increase the knowledge of the chatbot, we can add the APIs of Wikipedia, Weather Forecasting Department, Sports, News, Government Services.