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Development Of A College Enquiry Chatbot

Prem Vishwkarma,Pranav Bhor,Kaushal Ghule,Pratik Jadhav,Jadhav A.A
Student, Student, Student, Student,Guide
Department of Computer Engineering,Samarth Polytechnic, Belhe,Maharashtra

Abstract: This paper describes both the design and the implementation of an AI-based chatbot system which deals with typical college inquiries. The chatbot system is intended to provide quick and accurate responses to students' inquiries with regard to college admissions, courses, and related information. This system is done through the use of NLP and ML algorithms that enable the system to analyze and respond to user queries.

Key Words:- NLP (Natural Language Processing), ML (Machine Learning), AI-based Chatbot, Automated Assistance

I. INTRODUCTION

The massive increment in the numbers of young people pursuing higher education has resulted in a spurt in the number of students applying for college admission. However, the process of seeking informative inputs regarding the colleges and respective courses can be tedious and time-consuming. To overcome this predicament, the designers propose the establishment of a college enquiry chatbot system, which has been hinted at that can provide fast responses focused on students' questions and accurate informativeness regarding those questions.

II. LITERATURE REVIEW

There have been several studies conducted focusing on the development of chatbots for diverse applications, like customer care and support, healthcare, and education. There are few studies where the development has mainly focused on college inquiries.

III. METHODOLOGY

The proposed chatbot system uses a combination of NLP and ML algorithms to understand and respond to user queries. It consists of the following main components:

- Natural Language Processing (NLP)Module: This module is responsible for processing user queries and extracting relevant information.
- Machine Learning (ML)Module: This module corresponds to training the bot to answer user queries.
- Knowledge Base: This module contains all the features pertaining to colleges and their courses.
- System Design: This is yet another centrepiece of partial overlapped development of the proposed chatbot system, which is easy to use and navigate around. The system has the following features:

IV. FUTURE SCOPE

The present chatbot system can also be improvised by adding more powerful NLP and ML algorithms like sentiment analysis and intent detection. Furthermore, it can be merged with emerging technologies like virtual reality and augmented reality to help scale the chatbot system and improve engagement and experience for students.

V. Limitations

Nevertheless, the proposed chatbot system suffers from a few shortcomings, such as the capability of answering complex queries or ambiguous queries and needing frequent updates to guarantee that the knowledge base is accurate and updated.

In summary, proposed college enquiry chatbot system offers potential improvement to the college inquiry process by providing quick and right responses to students' queries. Further research is needed to truly pursue chatbot technology.

VI. Use Case Diagram

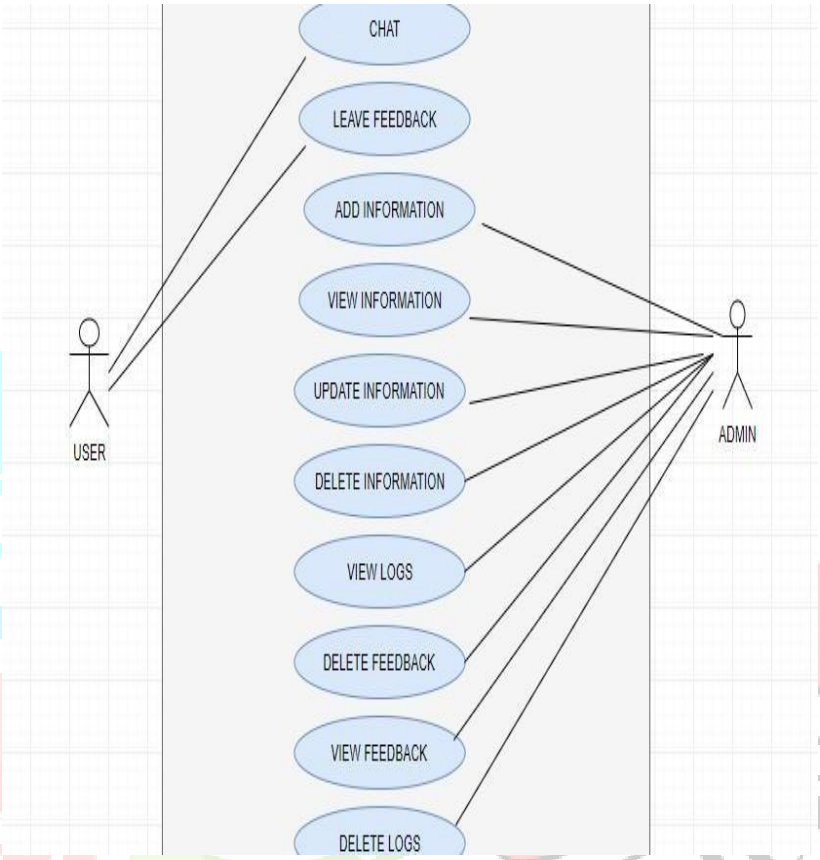

Fig: Use case diagram

VII. Data Flow Diagram

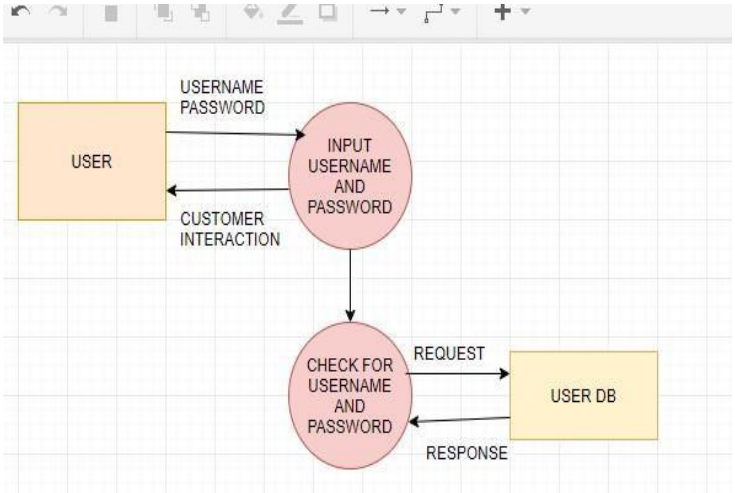

Fig: DFD level 0

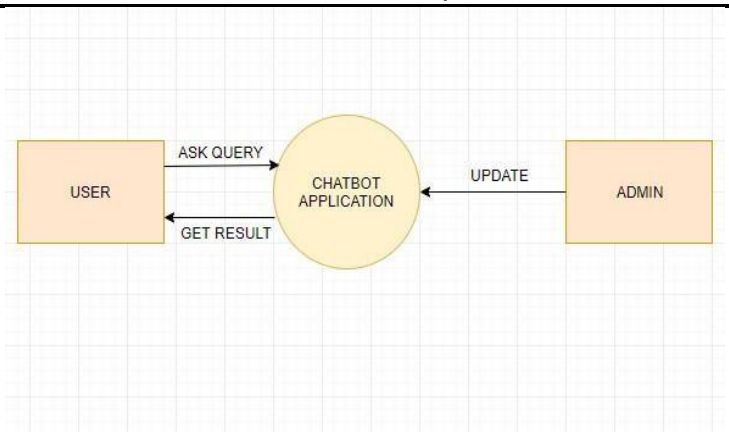

Fig: DFD Level 1

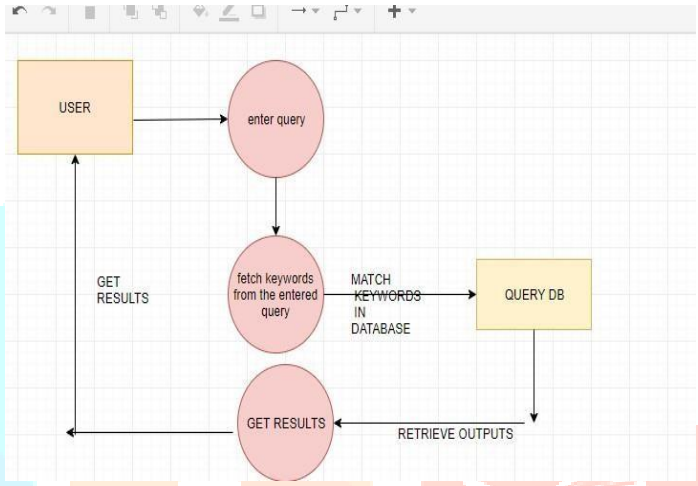

Fig: DFD Level 2

VIII. Conclusion

This paper presents the design and development of a college inquiry chatbot system based on Natural Language Processing (NLP) and Machine Learning (ML) techniques for rapid and accurate answering of student inquiries. This is userfriendly and is easily located with the knowledge-base that informs citizens of colleges and their courses of training.

Though barely there, there exist unique features derived from chatbots/pharmaceutical that the system proposes:

- Efficiency: It can perform several inquiries, with reduced workload for college administrators and faster inquiries to students.
- Enhanced User Experience: A chatbot system makes this an interactive platform for the students who want quick answers regarding colleges and courses.
- Increased accessibility: where the chatbot allows students to access college and course information remotely.

Results indicated the prospects of chatbots improving the college inquiry system. Future directions for research include:

- Integrating the chatbot system with college management systems
- An expansion of its knowledgebase to include college events and activities User studies to evaluate the effectiveness of the chatbot system.

In a broad view, it can very well substitute the way information concerning colleges and courses is accessed by students and act as a very helpful tool for improving recruitment policies of colleges and other student retention efforts.

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