College Query Chatbot

Satyam Gawande[1], Deepak Dey[2], Girish Charpe[3], Vaishnavi Satpute[4], Madhavi Sadu[5]
[1,2,3,4] Students of B.Tech, Computer Science, Rajiv Gandhi College of Engineering Research and Technology, Chandrapur, India
[5] Professor, Department of Computer Science, Rajiv Gandhi College of Engineering Research and Technology, Chandrapur, India

Abstract -The college query chatbot introduces ease in finding essentials by students such as faculty teaching which subject, a campus map showing faculty cabin locations also the department location, and queries on scholarships, hostel facilities, and fee structures. The flow of communication between students and the administration is improved because time is saved for manual or in-person searches among others. By adding a friendly interface with a campus map, a student would be able to better get around a college campus while receiving reliable information about financial aid and fee structures. Some future updates could include event notifications, academic resource integration, and real-time help for scheduling examinations and due dates.

Keywords - Chatbot, Student Support, Faculty Information, Campus Map, Fee Structure

INTRODUCTION

Easy interaction between learners and learning facilitators is essential in improving the quality of students' learning today. Besides bringing academics, there are numerous questions and concerns of students in camp from an assignment to some faculties, where to find their way about campus, and several alternatives regarding financial aid issues. To address that, we have developed the college query chatbot with the aim of making access to necessary information as easy as possible. This advanced system is a digital assistant to students. This way, students can quickly search for information on faculty members, locate cabins on the vast campus map, and find out about scholarships and the fee structure. This way, it saves time by not having to go through these lengthier procedures that might take students or staff ages to conduct in person. With continuous enhancement in its sights, the chatbot will evolve over time to meet the dynamic needs of the students in creating a supportive and efficient learning environment.

RELATED WORK

[1] Georgia State University launched a chatbot to assist incoming students with questions related to enrollment. The new system enhanced student interaction and reduced the phenomenon of "summer melt," whereby students failed to finalise their enrollment after matriculation, considerably.

[2] In Australia, there is something called the "Deakin Genie," a virtual assistant at Deakin University to guide students academically, manage students' calendars, and more related to university services. This chatbot really came in handy in enhancing the whole level of student satisfaction and in automating more routine administrative tasks.

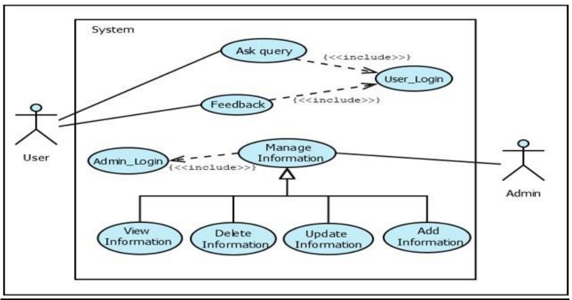
[3] Many of the existing education chatbot systems are domain-specific where the solutions are tailored to specific domains, such as enrollments, campus services, and academic advice. These have been very effective for the automation of repetitive tasks and the provision of real-time information to students, all made possible by the simplification of administration.

[4] What makes this present chatbot special is that it has multiple functions in one single platform. Unlike other existing systems that concentrate mainly on one or two areas, this chatbot has faculty information, campus maps with cabin locations, scholarship inquiries, hostel-related queries, and fee structures, offering a complete service to students.

[5] Unlike most of the chatbot solutions, this system is actually working on structured queries with no NLP, hence making the overall design simpler and cost-effective to small-sized institutions that may not require complexity-based NLP systems.

[6] Current chatbot solutions are useful in themselves as standalone services, but many don't have the capacity to serve the full scope of student needs under one roof. Filling this gap is the current chatbot, which offers a hassle-free and reliable system that enhances the experience of a student through integrated and accessible services.

PROPOSED SYSTEM



[1] The chatbot system proposed is to nullify the aberrations of student information systems. Rather, it would turn out to be a well-planned, effective tool that solves many common queries made by students. The key aspects that students would want to know about would include faculty assignments, scholarship opportunities, hostel facilities available, fee structures, and navigation of the campus, including the precise locations of cabins for faculty. This would be because the chatbot offers a friendly interface, which makes the interaction process much easier, and as such, the campus, scholarship inquiry, and fee structures-under one roof, thereby making valuable with less of a need for students to visit administrative offices or wait for responses through an email or phone.

[2] This system does away with using NLP, as it uses structured queries to return the right information in real time. Students can select any of the predefined options or input clear and structured queries for quick and accurate responses. Thus, this system is both lightweight and extremely efficient: not only does it ensure access but also by resources and technical capabilities at an institutional level.

[3] A campus map with considerable detail helps students navigate around the college and adds further to the usability of the system where students may find not only the cabins of all faculty members but also familiarise themselves with the campus without any inconvenience. Moreover, the system provides information on scholarships and fee structures so that the students are well-informed about available sources of financial support and the payment options in place.

[4] The chatbot is scalable, and more features will be added later. Planned enhancements include giving personal notification of upcoming events, creating a system where the students can leave feedback on it, and including other academic resources, such as access to course materials or exam schedules. Automating routine inquiries, allowing for 24/7 access, the proposed system will ease the burden of administrative employees but be able to provide the best possible way of easy information-seeking for students.

ADVANTAGES

1.Improved Accessibility : The chatbot provides all the necessary information that a student may require, 24 hours a day and for his or her benefit at all times, without having to rely on office hours or availability.

2.Time Saving: Since the chatbot answers student queries immediately, one will not have to go physically to the offices or wait for email responses, which saves both time for a student and for the administrative staff.

3.Centralised Information: The chatbot aggregates various functionalities under one roof-faculty assignments, cabin locations, maps of information readily available.

4.User-Friendly Interface: It is structured, and by using simple design, students can easily navigate the system without the complexity most NLP-based chatbots are imbued with.

5.Cost-Effective: The inability to integrate NLP simply makes a chatbot less resource-intensive and, therefore, more cost-effective to an institution with a more modest budget or a less fully developed technical infrastructure.

DISADVANTAGES

1.Limited Functionality Without NLP: Since the chatbot does not use natural language processing (NLP), it may not handle free-form or complex queries as effectively as chatbots with NLP. Users must input structured or predefined queries, which could limit flexibility in communication.

2.Failure to Handle Complex or Unusual Requests: In as much as the chatbot can adequately address simple inquiries, it may fumble where the request is complex or rather rare, thus requiring users to refer to the help desk of the administrative staff when the issues are unusual.

3.Dependency on Predefined Responses: The answers provided by the chatbot rely heavily on structured queries and predefined options, many of which will not be forthcoming for all possible needs of students. This implies that there is always a gap where some types of queries cannot be resolved by the system.

APPLICATIONS

1.Faculty Information Search: With this feature, the bot enables the student to quickly identify who teaches what, and thus, he can easily reach the relevant person concerning his educational questions or counselling.

2.Campus Navigation: The bot helps students navigate the college campus more easily by providing an interactive campus map with faculty cabin locations, especially useful for new students who don't know the design of the campus.

3.Scholarship and Financial Aid Inquiries: A scholar can apply for scholarship through the chatbot by posing that "what scholarship facilities are there, requirements, application procedure, fee structures, and the modes of payment?"

4.Hostel-Related Queries: The chatbot would provide crucial information related to hostel facilities, which are providing accommodation procedures, fees, and other non-availability-related information.

5.Administrative Support: The chatbot saves the burden of the administrative staff in the college by automating routine administrative tasks and answers the queries of students about fee structures, availability of faculty, and academic regulations.

CONCLUSION

This college query chatbot is a powerful tool designed to ease the communication bridge between students and the administration, providing fast and hassle-free access to crucial information on a given basis. It streamlines most queries about faculty assignments, directions to campus, scholarships, fee structures, and hostel-related information, thereby drastically cutting down on the manual intervention required. It is designed for friendly interfaces that make the search of the students fast and convenient, thereby saving time for themselves as well as the entire college staff.

REFERENCES

[1] Nitesh Thakur, Akshay Hiwrale, Sourabh Selote, Abhijeet Shinde and Namrata Mahakalkar, "Artificially Intelligent Chatbot", Universal Research Reports, vol. 04, no. 06, pp. 43-47, July – September 2017, ISSN 2348 5612.

[2] K. Bala, Mukesh Kumar, Sayali Hulawale and Sahil Pandita, "Chatbot for College Management System Using A.I", International Research Journal of Engineering and Technology (IRJET), vol. 04, no. 11, pp. 2030-2033, Nov 2017, ISSN 2395-0056.

[3] Harsh Pawar, Pranav Prabhu, Ajay Yadav, Vincent Mendonca and Joyce Lemos, "College Enquiry Chatbot Using Knowledge in Database", International Journal for Research in Applied Science & Engineering Technology (IJRASET), vol. 6, no. IV, pp. 2494-2496, April 2018, ISSN 2321-9653.

[4] Sagar Pawar, Omkar Rane, Ojas Wankhade and Pradnya Mehta, "A Web Based College Enquiry Chatbot with Results", International Journal of Innovative Research in Science Engineering and Technology, vol. 7, no. 4, pp. 3874-3880, April 2018, ISSN 2319-8753.

[5] Payal Jain, "College Enquiry ChatBot Using Iterative Model", International Journal of Scientific Engineering and Research (IJSER), vol. 7, no. 1, pp. 80-83, January 2019, ISSN 2347-3878.

[6] Ram Manoj Sharma, "Chatbot based College Information System", RESEARCH REVIEW International Journal of Multidisciplinary, vol. 04, no. 03, pp. 109-112, March 2019, ISSN 2455-3085.

[7] Ms.Ch. Lavanya Susanna, R. Pratyusha, P. Swathi, P. Rishi Krishna and V. Sai Pradeep, "College Enquiry Chatbot", International Research Journal of Engineering and Technology (IRJET), vol. 07, no. 3, pp. 784-788, Mar 2020, ISSN 2395-0056.