Artificial Intelligence Based College Chabot For Admission Related Faqs

Dr. J.P. Patra¹; Rashi Verma²; Riya Soni³

Professor & Head of the Department¹, UG Student²,³
Department of Computer Science and Engineering¹,²,³
Shri Shankaracharya Institute of Professional Management and Technology

Abstract

A Bot is a piece of software that conducts a conversation via auditory or textual methods this system is a web application which provides answer to the query of the student. It helps new comers and parents to clear their doubts on college timing, mess facility, medical facility, courses offered by college, room availability, other cultural activities, etc. We used python as programming language along with AIML[1] to do pattern matching for response selection. User input is broken down to a reduced query using NLP[2] library. The System uses built in artificial intelligence to answer the query. The system provides appropriate answers as per user queries. The User can query any college related activities through the system. The user does not have to personally go to the college for enquiry. The System analyses the question with its knowledge and then answers to the user. The system replies using an effective GUI[3] which makes it easier for user to interact with the bot.

Keywords- Artificial Intelligence Markup Language, Natural Language Processing, Graphical User Interface, Facebook.

Introduction :

A chatbot is a software program for simulating intelligent conversations with human using rules or artificial intelligence. Users interact with the chatbot via conversational interface through written or spoken text. Chatbots can live in messaging platforms like Slack, FB[1-4] Messenger and Telegram and serve many purposes – ordering products, knowing about weather and managing your finance among other things.

The dynamic intelligence of chatbots will allow them to converse with users as in a way we converse and communicate in real-life situations. Conversational communication skill of the chatbot will not only make it a trendy and promising technology but also empower them to deliver what we are looking for – response in human terms.

Though we find chatbots conversing contextually with users, they are yet to communicate contextually on anything and everything that the user wants. It is an assistant that communicates with us through text messages, a virtual companion that integrates into websites,
applications or instant messengers and helps entrepreneurs to get closer to customers. Such a bot is an automated system of communication with users.

Consumers also benefit from chatbots and they are getting increasingly interested in this technology. A study presented at the 4th International Conference on Internet Science in

<table>
<thead>
<tr>
<th>Author and Year</th>
<th>Goals</th>
<th>Future Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sameera A. Abdul-Kader, Dr. John Woods, 2017</td>
<td>Paper presents a survey on the techniques used to design Chatbots and a comparison is made between different design techniques from nine carefully selected papers according to the main methods adopted. These papers are representative of the significant improvements in Chatbots in the last decade.</td>
<td>The Chatbots designed for dialogue systems in the selected studies are, in general, limited to particular applications. General-purpose Chatbots need improvements by designing more comprehensive knowledge bases.</td>
</tr>
<tr>
<td>M. Dahiya, 2017</td>
<td>Chatbot is relatively a new technology. The application of a Chatbot can be seen in various fields in the future. This paper covers the techniques used to design and implement a Chatbot.</td>
<td>Comparison has been made with other Chatbots. General purpose Chatbots must be simple, user friendly, must be easily understood and the knowledge base must be compact. Although some of the commercial products have emerged, improvements must be made to find a common approach for designing a Chatbot.</td>
</tr>
<tr>
<td>Rachit Kulkarni, Ankit Methwani, Nakul Pawar, Charmi Valecha, 2017</td>
<td>The system should answer to the query as if it is answered in person. With the help of artificial intelligence, the system should answer the query asked by the students. The system should reply using an effective Graphical User Interface, as if a real person is talking to the user.</td>
<td>The Chatbot can be enhanced with voice recognition and a few more features can be added to the bot.</td>
</tr>
</tbody>
</table>
November, 2017 identified reasons why people choose to interact with chatbots. According to this research, the main factors that motivate people to use chatbots are:

1. **Productivity**: Chatbots provide the assistance or access to information quickly and efficiently.

2. **Entertainment**: Chatbots amuse people by giving them funny tips, they also help killing time when users have nothing to do.

3. **Social and relational factors**: Chatbots fuel conversions and enhance social experiences. Chatting with bots also helps to avoid loneliness, gives a chance to talk without being judged and improves conversational skills.

The college chatbot will answers to the queries of students who are looking forward to take admission in the college, the users simply needs to feed its query to the message box [5-6] and the bot will answer to the query using its knowledge, the bot create a message object and performs a pattern matching and displays the answer to the user on the screen.

**Literature survey:**

Review of the work done in the area of proposed project

**Proposed System :**

In this work we have developed a bot for college queries that can be raised by any student or their parents regarding college timings, admission process, is their any medical facility available etc.

The operation is divided into two parts such that:

1. The user posts their query onto the chatbot.
2. The bot answers to the query by pattern matching and knowledge.
3. Finally, the answer is presented to the user.

| Sofie Roos, June 3, 2018 | Produce the summary to find out what pedagogical uses and capabilities a chatbot has in an educational context by reviewing the literature in the field, this means looking at what the chatbot can do and be used for in an educational context. | The results imply that chatbots in education have quite a few uses and even more possible features. An AIML-based chatbot can be both simple and complex to implement, all depending on the effort put into implementation. |
Fig. 1. System Workflow Diagram

The figure 1 explains how the chatbot works, when any user types any query onto the message box the message is sent to the dialog manager which matches the pattern of the message to message object with its knowledge, then the bot generates its response and delivers it to the official account from where the query came which queue the event and the answer is presented to the user.

Results:

The Chatbot is implemented for clarifying the doubts of students and parents regarding admission process, room availability, medical facility, courses available in the college, availability of scholarship, academic fees structure etc.
Figure 2(a) and Figure 2(b) shows that the bot can answer to the users one word question by using pattern matching. The bot creates a message object like “fees structure”, “mess”, “library” etc and displays the answer to the user.

**Time Saving**- Bots help user to communicate their problems and resolve them in less time. Bot also help user to give their suggestion and feedback through communication with it. Bot helps user to get answers to their question in just a couple of seconds.

**Bots are excellent tools to process a large volume of requests**- If a particular company receives many requests, it is not necessary to increase the template or team capacity for receiving queries. A well-built Bots allows the brand to face all the questions in a simultaneous manner.

**Cost Effective**- Hiring a human for a job is never a cheap affair. Due to the boundaries of human beings, a single human can only handle one or two people at the same time. More than that would be extremely tough for the employee.

Bots could help solve this age-old problem. As one Bot is equal to loads of employees, it can easily communicate with thousands of users at the same time. We would only need a handful of people to jump into conversations sometimes when necessary. Hence, it would drastically bring down the expenses and bring about a steep rise in revenue and customer satisfaction.

**Customer Satisfaction**- Humans are bound to change of emotions. Bots, on the other hand, are bound by some rules and obey them as long as they’re programmed to. They will always treat
a customer in the perfect way no matter how rough the person is or how foul language the person uses.

References:


