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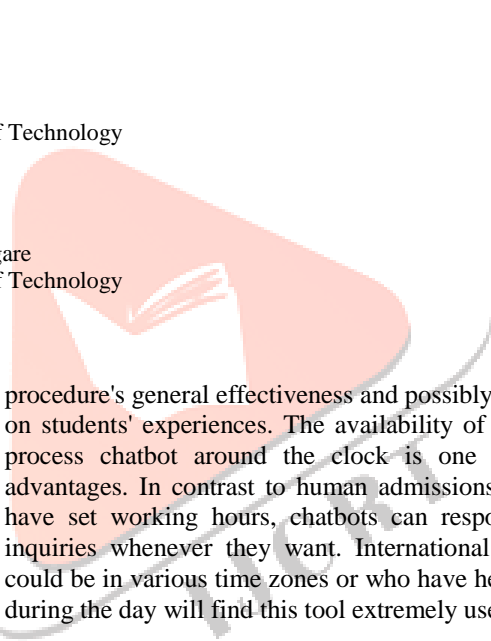
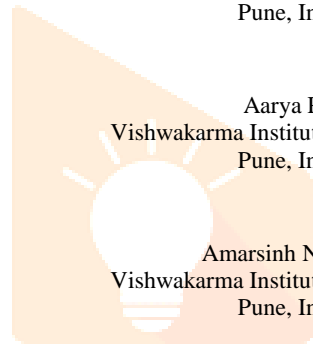
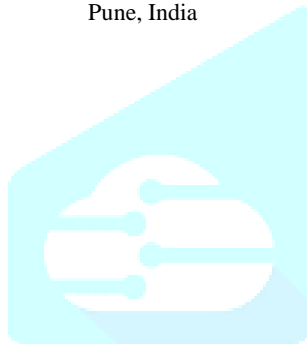
ADMISSION PROCESS CHATBOT-ADPRO

Zarinabegam Mundargi
Vishwakarma Institute of Technology
Pune, India

Radhika Jaju
Vishwakarma Institute of Technology
Pune, India

Gayatri Nangare
Vishwakarma Institute of Technology
Pune, India

Pranav Sahasrabuddhe
Vishwakarma Institute of Technology
Pune, India



Aarya Pise
Vishwakarma Institute of Technology
Pune, India

Amarsinh Nangare
Vishwakarma Institute of Technology
Pune, India

Abstract— Admission Chatbot is an AI-powered tool that simplifies the college or university admission process. The technology uses natural language processing to answer questions, provide guidance, and help students with admission. It can also provide personalized recommendations based on the student's academic profile and interests. An admission process chatbot can save time and effort of student allowing for a smoother and more efficient admission process. This tool has the potential to enhance the student experience and improve the overall efficiency of the admission process.

Keywords-chatbot, admission process, natural language processing, personalized recommendations, 24/7 availability, student experience, efficiency.

I. INTRODUCTION

For both applicants and admissions officers, the college or university admissions process may be a challenging and drawn-out procedure. Students frequently have trouble figuring out the process, which can lead to irritation and anxiety. But as artificial intelligence (AI) technology has advanced, chatbots have been created that can expedite the admissions process and enhance experiences.

Natural language processing (NLP) and machine learning (ML) algorithms are used by the AI-powered admissions process chatbot to communicate with students and help them during the application process. Providing information about the application process, responding to inquiries, and even creating tailored suggestions based on the student's interests and academic profile are just a few of the many jobs that this technology can manage.

This essay examines the advantages of utilizing a chatbot for the admissions process, as well as how it might enhance the

procedure's general effectiveness and possibly have an effect on students' experiences. The availability of an admissions process chatbot around the clock is one of its biggest advantages. In contrast to human admissions workers who have set working hours, chatbots can respond to student inquiries whenever they want. International students who could be in various time zones or who have hectic schedules during the day will find this tool extremely useful.

Chatbots that handle the admissions process can provide tailored recommendations based on a student's interests and academic history. Through an evaluation of the student's extracurricular activities, academic standing, and other relevant data, the chatbot can recommend appropriate courses or programs that align with the student's interests. Students can use this feature to locate programs that fit their career aspirations and make well-informed decisions regarding their academic future.

By assisting students with each step of the application process, the chatbot for admissions can expedite the process. It can offer details on necessary paperwork, due dates, and other pertinent information. The chatbot can also give students updates on any prerequisites or missing documents and assist them in monitoring the status of their applications.

Chatbots can be useful for admissions officers as well. Admissions officers can free up time to concentrate on more important duties like reviewing applicants by automating repetitive operations like responding to frequently asked queries and setting up interviews. This can lessen the workload for admission officials and increase the overall effectiveness of the admissions process.

Students can have a more positive experience with the admissions process chatbot by using its interactive and personalized interface. During the application process, students can feel less anxious and frustrated since they can ask questions and get prompt answers. Furthermore, compared to conventional forms or emails, the chatbot can offer a more engaging experience, which can keep pupils engaged and focused.

The chatbot that handles the admissions process has the power to profoundly affect students' experiences in a number of ways. By offering a more interesting and encouraging experience, the chatbot's interactive interface and tailored advice might help lower stress. By offering a more personalized and interactive experience, the chatbot designed to assist with the admissions process can improve student engagement. Students can make better judgments on their academic futures with the assistance of the chatbot's tailored recommendations.

Student-admissions officer communication can be enhanced via the admissions process chatbot.

To sum up, the chatbot designed to automate the admissions process is an AI-powered tool that can improve the experience for both admission staff and students. Students may find the admissions process easier to navigate, less stressful, and more interesting because to its round-the-clock accessibility, tailored recommendations, and simplified application procedure. Furthermore, by automating repetitive duties and lightening the burden for admission officials, the chatbot can increase the overall effectiveness of the admissions process. The admissions process chatbot has the potential to revolutionize the way schools and universities oversee their admissions process and improve the student experience as AI technology develops.

II. LITERATURE SURVEY

1.1: Dialogflow basics, Google Cloud. [Online]. Available: Dialogflow is an ingenious platform for comprehending natural language. It streamlines the creation and fusion of conversational interfaces into mobile apps, web platforms, gadgets, bots, IVR systems, and more. With Dialogflow, a fresh and captivating avenue emerges for users to engage with the products they craft. This versatile tool assesses distinct consumer data forms, be it text or audio snippets (like those from mobile or voice recordings). Moreover, it can converse with customers using diverse methods—through text or even synthetic speech.

2] Accenture Interactive, Chatbots in customer service, 2016: A chatbot is a computer program crafted to converse with humans using text messages or speech. Typically, chatbots are endowed with artificial intelligence and natural language processing, transforming them into intelligent programs capable of responding to human-specific queries. These chatbots are constructed upon subjects meticulously modeled within a knowledge base. Presently, numerous chatbots revolve around topics and challenges that individuals seek to address, be it for personal or business objectives.

3] Research Paper on Chatbot Development for Educational Institute. School of Computer Science Engineering and Technology Dr. Vishwanath Karad MIT World Peace University Pune, India – 411038. A chatbot is software designed to foster interaction between a user/human and a computer/system in a natural language, resembling human

conversations. Chatbots engage in dialogue with the user based on human input and respond accordingly, creating the illusion of a conversation with a human when, in fact, it's with a computer. This chatbot application empowers students to access information about the college admission process from anywhere with an internet connection, receiving prompt responses. The chatbot system streamlines the workload of the admission process department by furnishing necessary information to students or parents, alleviating the burden of constantly addressing student queries.

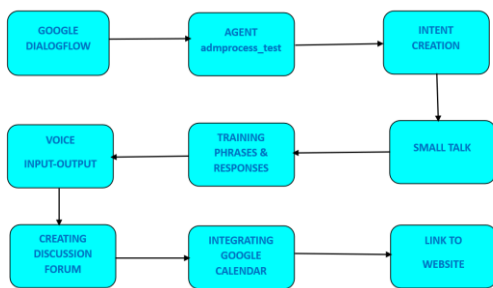
4] Chatbot for the education system. Hiremath Guruswami et.al; International Journal of Advance Research, Ideas, and Innovations in Technology. The evolution of information technology and communication has heightened the complexity of artificial intelligent systems. These AI systems now approach human activities, making decisions in the moment and handling day-to-day tasks. Within the realm of artificial intelligence, hybrid and adaptive methods contribute to the increasing complexity of these systems. Moreover, a blend of natural language processing and intelligent systems is emerging, allowing these systems to learn autonomously and update their knowledge by scouring the vast expanse of electronic articles on the internet.

As users, humans can interact with these systems much like they would with another person. Often referred to as internet answering engines, these systems can comprehend and respond to user queries. Beyond these engines, a variety of applications have emerged, such as chatter-robots or chatbots, designed for automated responses or purely for entertainment. These applications operate on a straightforward premise, as their knowledge is pre-programmed. Methods employed in these applications include pattern-matching, natural language processing, and data mining. The chatbot analyses input sentences from the user against patterns stored in its knowledge base, sourced from various references.

III. METHODOLOGY

A chatbot is an artificial intelligence (AI) or computer that uses language functions to attempt to interact with a human user. Its main purpose is to talk to users informally while providing information, answering questions, or assisting with certain tasks. Customer support, technical assistance, online messaging services, websites, and mobile applications are just a few uses of chatbots. They can use text-based or conversational interactions and connections to make conversations more meaningful.

Google's Dialogflow uses natural language processing (NLP) that enables programmers to build conversational agents, sometimes known as chatbots or virtual assistants. It allows you to create engaging discussions with consumers on a variety of platforms, including websites, mobile applications, messaging services, and more.



A. Agent creation -

The agent is in charge of processing user requests, deciphering their intentions, retrieving pertinent data, and producing appropriate responses. In this project, the agent name is "admprocess_test" in which all intents are included. The agent needs to be capable of comprehending and responding to the user's intentions or actions, which are represented by intents. Some user expressions, individuals might use to express the same purpose are included in each intent. You design these expressions and assign the correct intent to them. When an agent recognizes a particular purpose, those actions are also specified by the intent.

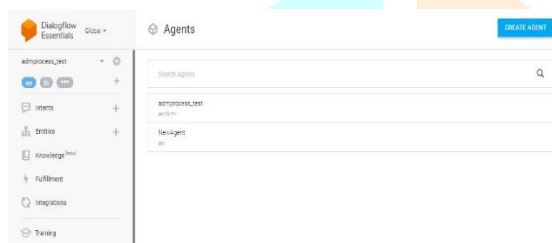


Fig.1. Dialogflow Console Agent

B. Making an Intent -

The console dialogflow agent's creating intent is depicted in the figure. Several user-posted questions on the same subject are gathered together in intent. When a user delivers a query, the agent compares it to the intents and the question that was placed into the data. The representative will then reply with an accurate response. The agent will respond using the fallback intent if a question is sent that is not in line with or does not match the original intent.

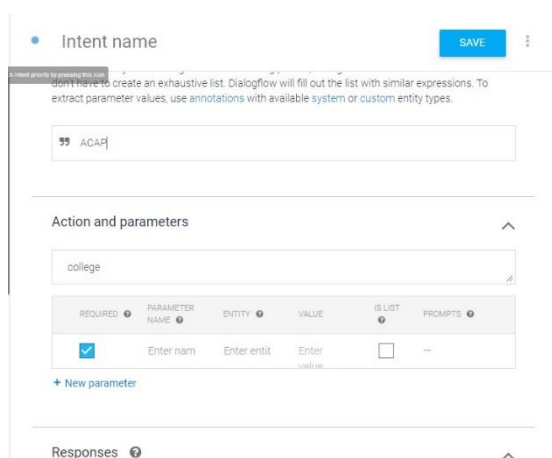


Fig.2. Intents on Dialogflow Console

c. Intent Parameter -



Fig.3. Intents on Dialogflow Console



Fig.4. Intents on Dialogflow Console

ACAP- Represents questions related to against CAP round i.e SPOT round

Allotment of Result. - Contains questions related to the allotment of college after the MHT-CET result is declared.

Branch vs College - It gives probable questions regarding the intriguing doubts about what to give priority (Branch/College) that a 12th pass student has

Default Fallback Intent- This as the name suggests is the default intent. Whenever the chatbot doesn't recognize a question, or it falls short of understanding what the user has to ask it gives a response accordingly. When the user's input fails to match any of the defined intents, the Default Fallback Intent is instantly activated.

Default Welcome Intent- The chatbot initiates the Default Welcome Intent automatically whenever a user initiates a discussion with it. This usually occurs when a user starts a discussion or contributes something at first. You can set up answers to act as a greeting or welcome text with this goal. It establishes the conversation's tone and can offer instructions on how the user should communicate with the chatbot.

Documents FY- This includes questions related to the documents required for the first-year admission process.

Documents SEDA - This includes questions related to the documents required for the first-year admission process.

Percentile Range - Students have various questions related to "Which college will I get for this percentile", "Will I get a decent college", etc. All these questions are included in this intent.

Quota Reservation- There are seats reserved for various categories of students for their upliftment. The percentage of

seats reserved for each category is fixed. All the reservation-related questions are included in this intent.

Schedule Process- Students have various doubts regarding the entire process of admission. Of course, every student will check 10 times before filling a form, whether it's correct or not. To clear these schedules and chronology of process-related doubts our chatbot includes this intent

Top Colleges- This includes questions regarding the top engineering colleges in Maharashtra through the MHT-CET examination

Some of the entities created in this agent are geo-docs, geo-category, geo-reserve, geo-spot, etc. With Google Dialogflow, developers can create conversational interfaces for a range of applications, including chatbots and virtual agents.

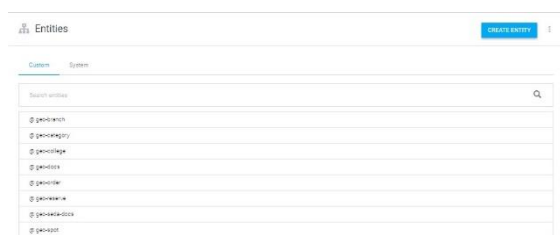


Fig.5. Entities on Dialogflow Console

D. Goals: The connection between what a user states and the appropriate response from the application is defined by intents. To aid the system in comprehending user input, developers designate training phrases for every intent.

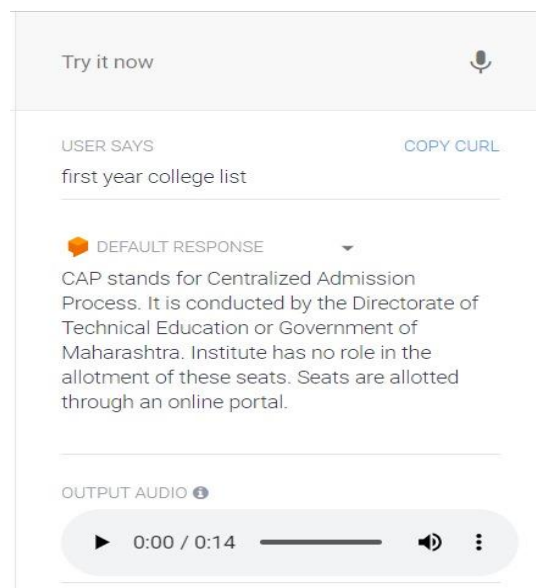
E. Training: By giving samples of input from users and the appropriate replies, developers may hone the model.

F. Fulfillment: The process of acting on user feedback is known as fulfillment. It could entail running bespoke code, obtaining data from a relational database, or contacting an external API.

G. Combination: Numerous platforms, such as mobile applications, websites, and messaging services like Slack or Facebook Messenger, can be linked with dialogflow.

H. Webhooks: Webhooks are a useful tool for developers to integrate Dialogflow with their backing platforms to provide dynamic answers. This makes it possible to retrieve and process data in real time.

I. Testing: The agent is tested by developers to make sure it interprets user inputs accurately and reacts accordingly. The agent's performance is improved through this iterative

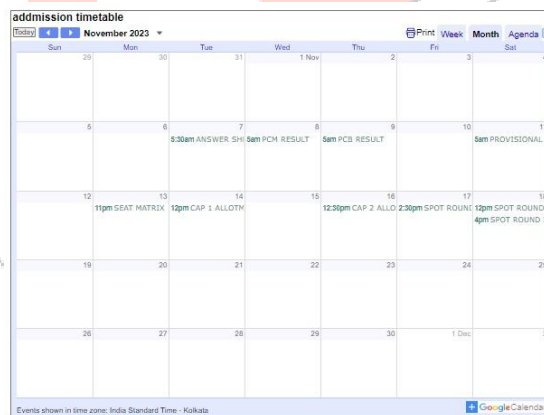


procFig.11. Test Console on Dialogflow Console

J. Implement: Developers deploy the agent to make it accessible to end users after they are happy with its performance.

K. Observation and Analysis: Tools for tracking and evaluating conversational data are offered by Dialogflow.

L. Google calendar-



The process to add Google Calendar to the website:

1. Go to Google Calendar:
2. Open your Google Calendar at calendar.google.com.
3. Select your Calendar:
4. Choose the calendar you want to embed from the left sidebar.

5. CONFIGURE CALENDAR SETTINGS:
6. CLICK ON THE THREE DOTS NEXT TO THE CALENDAR YOU WANT TO EMBED AND SELECT "SETTINGS AND SHARING." UNDER THE "ACCESS PERMISSIONS" SECTION, MAKE SURE THAT THE CALENDAR IS SET TO "MAKE AVAILABLE TO PUBLIC" OR "SHARE WITH SPECIFIC PEOPLE" AND THAT THE APPROPRIATE ACCESS SETTINGS ARE CONFIGURED.
7. 7.Get the Embed Code: After configuring your calendar settings, go to the "Integrate calendar" section in the left sidebar. In the 8. Customize the "Embed code" section, you will find the frame code for embedding your calendar.
8. the Embed Code (Optional): You can customize the iframe code based on your preferences. For example, you can set the height and width of the embedded calendar by modifying the height and width attributes in the iframe code.

10. Copy the entire iframe code provided by Google. Add the Embed Code to Your Website:

11. Open the HTML file or content management system where you want to add the Google Calendar.

Paste the copied iframe code in the appropriate location within the HTML code.

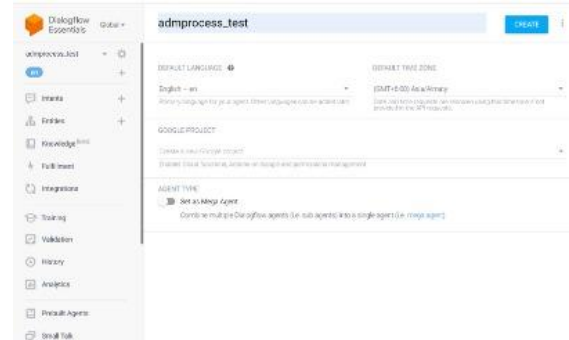


Fig 1: Admission test

9. Copy the Embed Code:

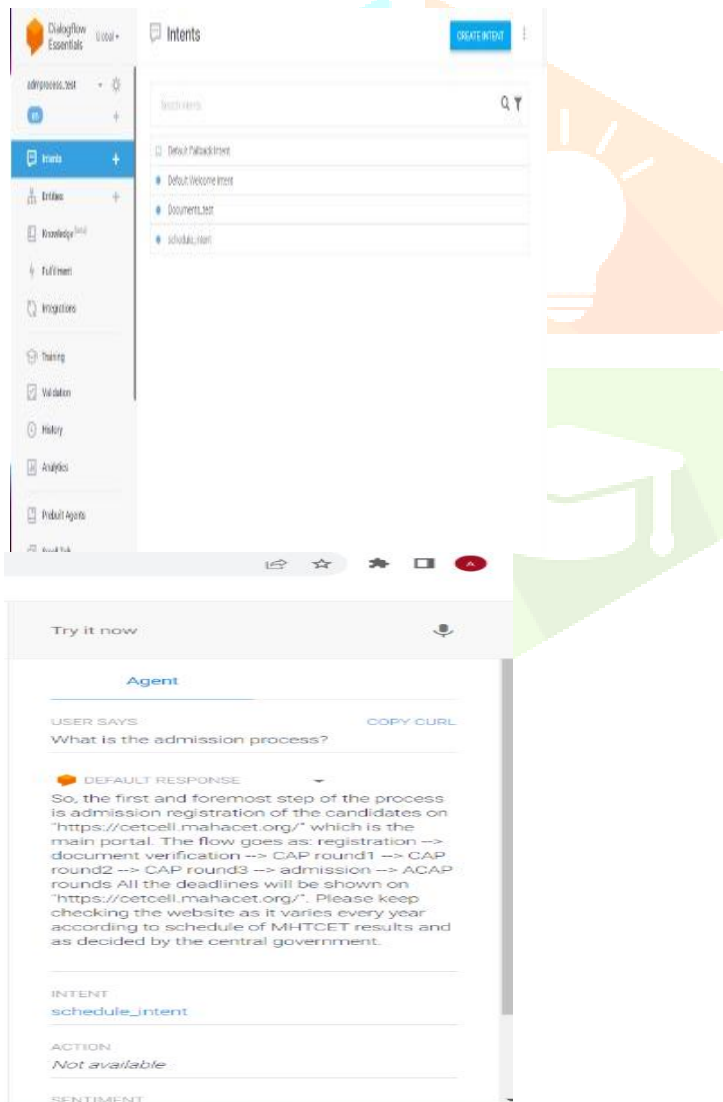
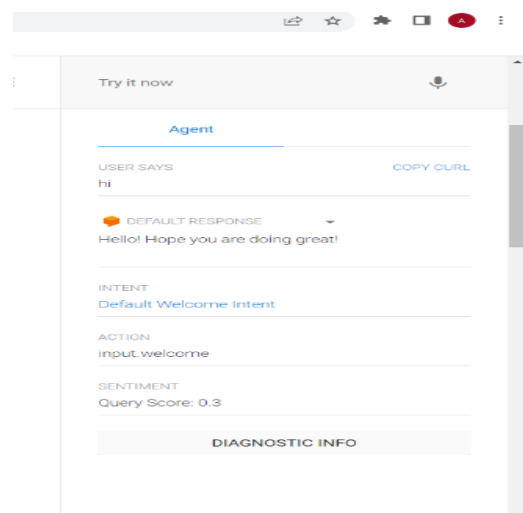


Fig 2: Intents of the admission process

Fig3:Test

Feature	Google Dialogflow	Microsoft Bot Framework	Amazon Lex
Natural Language Processing	Yes (Google NLU)	Yes (LUIS)	Yes (Lex NLU)
Pre-built Entities	Yes	Limited	Yes
Machine Learning	Yes (Google Cloud ML)	Yes (Azure ML)	Limited
Integrations	Extensive	Good	Extensive
Speech Recognition	Yes (Google Speech-to-Text)	Yes (Azure Speech)	Limited
User Interface Tools	Yes (Web UI, Mobile SDKs)	Yes (Web Chat, Direct Line API)	Limited
Customization	High	High	Moderate



Aspect	Google Dialogflow
NLP	makes use of Google's sophisticated NLU capabilities.
Integrations	provides a wide range of platform and service integrations.
Pre-built Entities	offers a large collection of pre-built entities for typical use scenarios.
Machine Learning	allows for sophisticated machine learning capabilities through integration with Google Cloud ML.
Multi-language Support	Supports various languages, making it adaptable for use in other countries.
Speech Recognition	Accurate Google Speech-to-Text.
User Interface Tools	offers a variety of technologies, such as mobile SDKs and web UI, to make interface building simple.

Table 2: features of dialogflow

IV. RESULTS AND DISCUSSIONS

The implementation of a chatbot in the admission process yielded promising results, offering valuable insights into its impact on efficiency, user satisfaction, and overall effectiveness.

Key findings include:

1. Timely Information Delivery:

- The chatbot effectively delivered information in real-time, addressing user queries promptly.
- Users reported a significant reduction in the time required to gather admission-related details, contributing to a more efficient decision-making process.

2. Reduction in Information Overload:

- The chatbot's ability to filter and present information tailored to the user's specific queries reduced information overload.
- Prospective applicants found it easier to grasp key details without feeling overwhelmed by an excess of information.

3. Personalized Guidance:

The chatbot demonstrated an understanding of individual user needs, offering personalized guidance based on the user's program of interest and academic background. This personalized approach enhanced the user experience and increased the relevance of the information provided.

1. Application Status: Make sure the process is transparent by giving real-time updates on the application's status.

The results of the study suggest that employing chatbots to disseminate admission information is an effective strategy. The technology provides a user-friendly interface for accessing personalized information, thereby enhancing the overall admission experience. The reduction in information overload and the timely delivery of relevant details contribute to a smoother decision-making process for prospective students.

Additionally, the chatbot's ability to understand and respond to user-specific queries showcases the potential for further development of natural language processing capabilities in chatbot technologies. Future research could explore expanding the scope of information covered, incorporating multimedia elements, and refining the chatbot's conversational abilities.

V. FUTURE SCOPE

A.) User Involvement:

1. Information Retrieval: To ensure candidates have access to correct and current information, the chatbot can offer comprehensive information on the admissions process, requirements, and deadlines.

2. FAQs: Provide answers to commonly asked questions, saving candidates from having to read through extensive documentation.

B.) Support for Applications:

1. Form Completion: Help candidates complete the application by guiding them through it and offering clarifications and explanations as needed.

2. Document Submission: Help with the submission of appropriate documents, making sure to include all relevant information.

C.) Particularized Suggestions

1. Program Matching: The chatbot can recommend appropriate research programs or advisers based on the applicant's history and research interests.

D.) Monitoring Progress:

VI. CONCLUSIONS

In conclusion, the WhatsApp chatbot for admissions has the potential to completely change how colleges admit students. The chatbot can free up admissions staff to concentrate on more strategic work by automating many of the processes involved in the admissions process. Additionally, the chatbot can give candidates a more tailored and interesting experience, which can enhance the entire admissions process. The chatbot can free up admissions personnel to concentrate on more strategic work by automating many of the processes involved in the admissions process. By automating processes like responding to frequently asked questions, the WhatsApp admission chatbot can assist in increasing the effectiveness of the admissions process. The chatbot can also help to improve the accuracy of the admissions process by providing a more consistent and objective assessment of applicants.

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