

# **COLLEGE ENQUIRY CHAT-BOT SYSTEM**

## <sup>1</sup>Bimal P Shaji, <sup>2</sup>Habeeb Rahaman Sha, <sup>3</sup>Hiba Sherin, <sup>4</sup>Najia Shereen, <sup>5</sup>Ms.Swathy CS

<sup>1</sup>Student, <sup>2</sup>Student, <sup>3</sup>Student, <sup>4</sup>Student, <sup>5</sup>Assistant Professor (CSE) Computer Science and Engineering Department, Nehru College of Engineering and Research Centre (NCERC), Thrissur, India

\*\*\*\_\_\_\_\_\_

**Abstract** - Nowadays, many people are using smartphone with many new applications i.e. technology is growing day by day. Today Artificial Intelligence is playing a major role in a variety of fields ranging from industries in product manufacturing, to customer care in public relations. As there are many online Artificial Intelligence (AI) systems or chat bots which are in existence that help people solve their problems. So, we are going to implement a virtual assistant based on AI that can solve any college related query. This will work as a College Oriented Intelligence machine. This virtual machine will respond the queries of students on college related issues. A chat bot has information stored in its database to identify the sentences and making a decision itself as response to answer a given question. The college enquiry chat bot will be built using algorithm that analyses queries and understand user's message.

Key Words: AI and Chabot.

# **1. INTRODUCTION**

A Chabot (also known as chatterbot or chatter robot) is conversational or software agents that interact with human using natural language. It can be considered as a question-answer system where experts provide knowledge for user. Chatbot recognize the user input as well as by using pattern matching, access information to provide a predefined acknowledgement. A chatbot is implemented using pattern comparing in which the order of sentence is analysed and response pattern is saved to exclusive variables of the sentence. Chatbots are typically used in dialogue systems for various practical purposes including customer service or information acquisition. Chatbot can scrape data from anywhere and in any form and present it in the most suitable format. This means that the knowledge base of the chatbot can be expanded in many ways like database servers, social media contents such as face book posts, and so on. A student information chatbot system is a web application that built using artificial intelligence algorithms to analyse and understand user's queries. This system provides answer to the query about the college related activities through online with the help of this web application. This system maintains academic record of students. Faculties can upload documents and also contact with parents to inform about students' academic

activities. This system keeps the student updated about college activities

#### **1.1 OBJECTIVES**

A college enquiry chatbot aims to provide information and assistance to prospective students regarding admissions, programs, campus life, and any other inquiries they may have. It should be userfriendly, accurate, and capable of handling a wide range of questions efficiently. Additionally, it should guide users through the application process and provide personalized recommendations based on their interests and qualifications.

- Information Accessibility
- Personalized Assistance
- Administrative support
- FAQ handling
- Feedback and surveys
- 24/7 availability
- Promotion of campus resources

## 2. LITERATURE REVIEW

A literature review is an account of what has been published on a topic by accredited scholars and researchers. It includes the current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. Literature reviews use secondary sources and do not report new or original experimental work. A literature review let us gain and demonstrate skills in two areas, mainly, information seeking and critical appraisal.

#### 2.1 STUDENT INFORMATION CHATBOT SYSTEM

The German scientist, Dr.Joseph Weizenbaum developed a computer program which is called as ELIZA in 1996 and coded in MIT. ELIZA is considered as the first chatterbot in the computer history. It is an early natural language processing computer program. It acts like a therapist by reframing the statements of user and posing them back as question for communication between humans and machines. It simulates conversation by using 'pattern matching' algorithm that helps users to understand the part of program. It was one of the first program capable of passing the turing test. First, Eliza examined the text entered by the users and checked for certain keyword. Then it applies values to them and transformed the input to the output. The script that Eliza ran determined the keywords, set of values and set of rules for the output. The existing system consists a specific module that is student and admin module only. Students can chat using only one format, as there is a specific format that the user has to follow. For example the user can use only one language

to interact with chatbot. If the answer of query found to be invalid, user just need to select the invalid answer button which will notify the admin about the incorrect answer. Admin not delete invalid answers or not add any specific answer to that

#### 2.3 COLLEGE ENQUIRY CHATBOT

In this paper bigram is utilized for computing the sentence comparability. The machine has been implanted with the information to recognize the sentence and settling on a choice itself as reaction to address an inquiry. In this investigation of paper the measurements of example coordinating on the content chatbots are mulled over and give a supporting proof to recognize among human and chatbots. Conventional chatbot information base are hard built and tedious. Programmed chatbot information obtaining from on the web is utilized here. It utilizes unpleasant set and outfit learning for that reason.

#### 2.4 CHATBOT FOR COLLEGE ENQUIRY

information and insights of packed example coordinating on packed type of same content information are thought about . Here the data vault is as an associated chart where the hubs contain data and connections interrelates the data hubs. The plan semantics incorporates AIML (Artificial Intelligence Markup Language) detail language for writing the data store with the end goal that visit bot configuration isolates the Information archive from characteristic language interface part. The paper portrays a novel strategy is proposed where bigram is applied to evaluate the content and improved data pick up calculation are utilized to make suitable element during text classification. The paper outlines the usage and semantic improvement of space arranged inquiry answer framework dependent on example coordinating chatbot innovation created inside mechanical venture FRASI. In this paper a secluded information base is furnished with the regular engineering. It helps in building a particular module that manages a specific element of the discussion. This improves specialist's communication abilities. In this paper discussion of specialist dependent on particular information portrayal is proposed. It has a dynamic and adaptable conduct. In light of the measured quality of the engineering it permits a simultaneous and synergic utilization of various methods making it conceivable to adjust to the particular qualities of the area. It has set of modules which is naturally set off through a part . Onto Bot utilizes suitable planning procedures to change ontologies and information into social data set and afterward utilize that information to drive its talk. Utilizations rule coordinating to coordinate the sentence. Here the developing issue of malignant consumer messages. This machine might be a chatbot with the intention to provide solutions to students' questions. Students actually need to pick out a category for department requests and then request a bot to be used for chat. The project's main goal is to develop an algorithm that may be used to correct the answers to queries that customers ask. It is essential to create a database where all related statistics can be kept as well as to expand the online interface. A database can develop to be able to compile information on queries, responses, key words, logs, and messages. 2016 saw Bayu Setiaji publish "Chatbot the

In the earlier days students had to visit the college to enquire about details like courses ,fee structure ,admission process and other information's about the college ,which is a tiresome process as well as long process for both parents as well as students. Now a days there are many changes occurred in the Education system with help of advanced technolog. Everything is happening over the internet without any trouble. In those days for enquiring about courses we have to visit the college, but as the days are passing away its completing changing. Collecting the course details, fee structure manually will be hectic procedure and it also needs a manpower.For reducing that manpower and avoid such difficulties and time consuming many devices or systems were emerged day by day

# 2.5 CHATBOT SYSTEM FOR COLLEGE ENQUIRY USING KNOWLEDGEABLE DATABASE

Professor Girish Wadhwa suggested that the institution build an inquiry chatbot using artificial intelligence in March-April 2017. Algorithms that might analyze consumer inquiries and recognize

usage of database knowledge." A chatbot is made to communicate with technology. Machine learning is built to recognize sentences and concluded, such as the answer to a question. Personalized message, i.e. A request is saved in accordance with the response. The more similarly the statements are stated, the more it will be marked as similarity of the sentences. It is then answered in light of the answers from the first sentence. The sentence similarity calculator breaks the input sentence down into its component letters. A database stores the knowledge of chatbots. A chatbot has interfaces, and the database control system's access point through this interface is at its core. The Chatbot application was created using a variety of programming languages with the addition of a user interface that allows users to give input and get a response. Starting with the symbol of entity date, which produced 11 entities and their cardinalities, the structure and building of tables was done as an indication of the knowledge contained inside the database. SQL was used in a way that was tailored to the model that was kept inside the programme.

#### 2.6 ONLINE CHATTING SYSTEM FOR COLLEGE ENQUIRY USING KNOWLEDGEABLE DATABASE

This project is mainly targeted at colleges and the synchronization of all the sparse and diverse information regarding regular college schedule. Generally students face problems in getting correct notifications at the correct time, some times important notices such as campus interview, training and placement events, holidays and special announcements. Smart Campus tries to bridge this gap between students, teachers and college administrators. Therefore in the real world scenario, such as college campus, the information in they he form of notices, oral communi- cation, can be directly communicated through the android devices and can be made available for the students, teachers directly for their an- droid devices and the maintenance of application will be easier in later

future because of the use of architectural MVC which separates the major works in the development of an application such as data man- agement, mobile user interface display and web service which will be the controller to make sure for fast and efficient maintenance of application.

## 2.7 COLLEGE ENQUIRY CHAT-BOT SYSTEM

The goal of the system is to help the students to stay updated with their college activities. Artificial Intelligent is the fastest growing technology everywhere in the world, with the help of Artificial Intelligent and Knowledgeable database. We can make the transformation in the pattern matching and virtual assistance. This system is developing chat bot based on android system so with the combination of Artificial Intelligent Knowledgeable database and virtual assistance. We can develop such chat bot which will make a conversion between human and machine and will satisfy the question raised by user. The main motive of the project is to reduce the work load on the college's office staff and reduce the response time to a user's query.

## 2.8 COLLEGE ENQUIRY CHATBOT

Cleverbot is a chatterbot web application that uses an artificial intelligence (AI) algorithm to have conversations with humans. It was created by British AI scientist Rollo Carpenter. Unlike some other chatterbot. Cleverbot's responses are not preprogrammed. Instead, it learns from human input: Human's type into the box below the Cleverbot logo and the system finds all keywords or an exact phrase matching the input. After searching through its saved conversations, it responds to the input by finding how a human responded to that input when it was asked, in part or in full, by Cleverbot

# **3. SYSTEM ANALYSIS AND DESIGN**

System analysis provides more emphasis on understanding the details of an existing system or a proposed one and then deciding whether the proposed system is desirable or not and whether the existing system needs improvement. Thus, system analysis is the process of investigating a system, identifying problems, and using the information to recommend improvements to the system. The chapter deals with the detailed description of each module, the problems faced by the current System and how these problems are rectified by proposed system.

A Student chatbot project developed using Voiceflow analyzes user queries and perceives messages. The proposed system is a web application that provides answers to user queries through a chatbot interface, allowing users to ask questions in any format.Responses are relevant to the user's queries, and invalid or unavailable answers are stored in an "unanswered" table for review by the admin.Admin can update invalid answers and provide a message for urgent inquiries, ensuring prompt assistance.Users can inquire about various college activities without the need for physical visits, and the system replies as if answered by a person, using a user-friendly graphical interface. This web application facilitates online inquiries about collegerelated activities, keeping users updated with relevant information.

The college enquiry chatbot aims to provide a comprehensive solution for students to access all the information they need about admissions, courses, and campus life. Through natural language processing and intuitive UI, the chatbot will offer a seamless and engaging experience for users to get their questions answered. The chatbot will leverage a robust database to deliver accurate and upto-date information, enabling students to make informed decisions about their college journey.With intuitive interfaces and natural language processing capabilities, student chatbots offer a userfriendly experience, making it easy for students to interact and obtain the information.Student chatbots improve access to important information such as course schedules, grades, and campus resources, helping students stay informed and organized.

#### 3.1 MODULE DESCRIPTION

In project modules plays an important role such that through modules we get a clear idea about the project. College Enquiry Chat-Bot System mainly has 3 which describe the site completely. These modules are the main fundamental features of this organ donation management system. The modules are

- User Interface Module 1.
- 2. **Database Integration Module**
- 3. Deployment and Hosting

## 3.1.1 USER INTERFACE MODULE

The user interface module will provide a clean, intuitive, and visually appealing chatbot interface. It will feature a conversational design with natural language processing to understand user queries and respond accordingly. The UI will include features like quick replies, image sharing, and integration with other college resources to deliver a seamless user experience.

## 3.1.2 DATABASE INTEGRATION MODULE

Data Storage The chatbot will utilize a relational database to store and retrieve information about college admissions, including course details, application processes, and student records. Data Retrieval The system will feature efficient querying capabilities, allowing the chatbot to quickly access and present relevant information to users based on their inquiries. Data Synchronization The database will be regularly synchronized with the college's central information system to ensure the chatbot's knowledge base is always up-to-date and accurate

#### 3.1.3 DEPLOYMENT AND HOSTING

To ensure the College Enquiry Chatbot is widely accessible, we will deploy the application on a reliable cloud platform. This will involve setting up the necessary infrastructure, configuring the hosting environment, and integrating the various modules of the chatbot system. The deployment process will be seamless, with

automatic scaling and failover mechanisms to handle fluctuations in user traffic. Regular backups and security updates will be implemented to maintain the integrity and availability of the chatbot service.

#### 3.2 SOFTWARE REQUIREMENTS

Software requirements are specifications that define what a software system should accomplish. They encompass functional requirements (what the system should do) and nonfunctional requirements (qualities like performance, security, and usability). These requirements serve as a blueprint for developers, guiding them in building the software to meet users' needs and expectations

- Front end: HTML,CSS
- Back end: mySql
- Software tools: Voiceflow
- Operating system: windows7/10 64bit

### 3.3 HARDWARE REQUIREMENTS

Hardware requirements typically depend on the specific software you're interested in running. Generally, they include specifications such as processor type and speed, amount of RAM, available disk space, graphics capabilities, and operating system compatibility. For example, a video editing software might require a multicore processor, several gigabytes of RAM, and a dedicated graphics card, while a simple text editor might only need a basic CPU and minimal RAM. If you have a particular software in mind, I can help you find its hardware requirements

- Processor: intel i3
- Hard disk: 100gb 🛛 Ram: 4gb
- Monitor:15' LED

## 3.4 FUNCTIONAL REQUIREMENTS:

Functional requirements specify what a system or software application must do. These requirements define the specific behaviors, functions, and operations that the system must perform to meet the needs of its users. They are crucial in the software development process as they guide the design, development, and testing of the application to ensure it fulfills its intended purpose

Functional requirements of a college enquiry chatbot typically include: Information Retrieval: Ability to retrieve accurate and upto-date information about courses, programs, admission requirements, deadlines, campus facilities, etc. 1. FAQ Handling: Capability to answer frequently asked questions regarding admissions, financial aid, campus life, etc. 2. Personalization: Ability to provide personalized recommendations based on the

3.5 NON- FUNCTIONAL REQUIREMENTS

user's interests, academic background, and preferences. 3. Application Assistance: Guiding users through the application process, including filling out forms, submitting documents, and tracking application status. 4. Integration with Systems: Integration with existing college systems such as student databases, CRM systems, and scheduling platforms to provide seamless services. 5. Multi-platform Support: Availability on various platforms including websites, social media platforms, and messaging apps to reach a wide audience. 6. Language Support: Ability to understand and respond to inquiries in multiple languages to accommodate international students and non-native speakers. 7. Feedback Mechanism: Capability for users to provide feedback and ratings to improve the chatbot's performance continually. 8. User Authentication: Secure login and for accessing personalized authentication mechanisms information and services. 9. Analytics and Reporting: Tracking

## FLOW CHART:





user interactions, collecting data on frequently asked questions, and generating reports to analyze user behavior and improve the chatbot's effectiveness over time. Nonfunctional requirements for a college enquiry chatbot encompass aspects related to its performance, usability, security, and other quality attributes. Here are some key nonfunctional requirements:

1. Scalability: Ability to handle a large number of concurrent users without degradation in performance, allowing for future growth in user base. 2. Reliability: The chatbot should be available and responsive 24/7, with minimal downtime for maintenance or updates. 3. Usability: The interface should be intuitive and userfriendly, with clear prompts and easy navigation, catering to users with varying levels of technological

Implementation of robust security measures to protect user data and privacy, including encryption of sensitive information and secure authentication mechanisms. 6. Compatibility: Compatibility with a wide range of devices and platforms, ensuring seamless operation across different browsers, operating systems, and screen sizes. 7.

proficiency.4.Accessibility: Compliance with accessibility standards to ensure that the chatbot is usable by people with disabilities, including support for screer readers and keyboard navigation. 5. Security:

Maintainability: The chatbot should be easy to maintain and update, with modular architecture and well-documented codebase to facilitate future enhancements and bug fixes.

8. Language Understanding: Accurate understanding and interpretation of user queries, including natural language processing capabilities to handle variations in language, spelling, and grammar.
9. Performance Monitoring: Continuous monitoring of the chatbot's performance, including metrics such as response time, error rates, and user satisfaction, to identify and address any issues promptly.

# USE CASE DIAGRAM

The use case diagram describes the functionality of the system as designed from the requirements and can be found below.





# HOME PAGE

# COLLECTING USERS DATA

0	CLOUIDA –	0	CLOUIDA - >	×
	CLOUIDA Our virtual assistant is here to help you.	4	To better assist you, please your email.	^
			habeebrahhman@gmail.com	
C		4	Share your number for secure and private assistance.	
	Today		8891556677	
			I think this interesting conversation will be	
	Hi i am Cloudia,I am Your Virtual Assistant	4	!	
4	Need Assistance! Select your Type of Queries		polla	
_		6	Hello polla Tell me how can i assist vou	•
Start New Chat		Me	ssage Activate Windows	
		Assistant 4tby toicerowivate Windows.		

International Journal of Scientific Research in Engineering and Management (IJSREM)

Volume: 08 Issue: 07 | July - 2024

SJIF Rating: 8.448

CLOUIDA

Credit)

Your Subjects in this semester is A: CST 302 - COMPILER DESIGN(4 Credit) B: CST 304 - COMPUTER GRAPHICS AND IMAGE PROCESSING(4 Credit) C: CST 308- ALGORITHM ANALYSIS AND DESIGN(4

D: CST-- PROGRAM ELECTIVE I (3 Credit) E: HUT 300 - INDUSTRIAL ECONOMICS & FOREIGN TRADE(3 Credit)

F: CST 308 -COMPREHENSIVE COURSE WORK(1 Credit)

Assistant 4 by Volcetow

S-CEI 332 . NETWORK

ISSN: 2582-3930

#### OUR COLLEGE







#### semester is

A: CST 302 - COMPILER DESIGN(4 Credit)

B: CST 304 - COMPUTER **GRAPHICS AND IMAGE** PROCESSING(4 Credit)

C: CST 306- ALGORITHM ANALYSIS AND DESIGN(4 Credit)

D: CST -- PROGRAM ELECTIVE I (3 Credit)

12:17 pm

E: HUT 300 - INDUSTRIAL **ECONOMICS & FOREIGN** TRADE(3 Credit)

F: CST 308 -COMPREHENSIVE COURSE WORK(1 Credit)

S: CSL 332 - NETWORKING LAB(2 Credit)

T: CSD 334 -

Maccado



# REVIEW

# **COURSE SCHEDULE**





ternational Journal of Scientific Research in Engineering and Management (IJSREM)

Volume: 08 Issue: 07 | July - 2024

SJIF Rating: 8.448

ISSN: 2582-3930

# COLLEGE TOUR

<u></u>	assist you					
	College Tour					
	The campuses are self- sufficient enclave with black- topped, well-lit roads. Its facilities include Canteens, STD/ISD pay phones, Courier Service, Book Store and Stationery Shop, Copier facilities, Digital Photo Studio and the well-maintained gardens. NGI is foodie's paradise with eateries located across the campus. Apart from Spicy Village, NGI has setup multiples of cafeterias and fruits stalls and these serve wholesome cuisine for the health consciousness and fast food for those intended in quick bite between classes					
Mes	ssage Activate Window	5				

# **CONCLUSION AND FUTURE WORK**

The goal of the system is to help the students to stay updated with their college activities.Artificial Intelligent is the fastest growing technology everywhere in the world, with the help of Artificial Intelligent and Knowledgeable database. We can make the transformation in the pattern matching and virtual assistance.

This system is developing chat bot based on android system so with the combination of Artificial Intelligent Knowledgeable database and virtual assistance.We can develop such chat bot which will make a conversion between human and machine and will satisfy the question raised by user. The main motive of the project is to reduce the work load on the college's office staff and reduce the response time to a user's query.

The future scope of a college enquiry chatbot is quite promising. It could evolve to offer personalized course recommendations, assist with enrollment processes, provide real-time campus navigation, integrate with academic calendars for scheduling, and even offer career guidance based on student interests and trends in the job market. As AI advances, the chatbot could become more adept at understanding and responding to natural language, making interactions with students even smoother and more helpful.

# REFERENCES

•Ms.Ch.Lavanya Susanna, R.Pratyusha, P.Swathi, P.Rishi Krishna,V.Sai Pradeep, "College Enquiry Chatbot", International ResearchJournal of Engineering and Technology (IRJET), e-ISSN: 2395-0056, p-ISSN: 2395-0072, Volume: 07 Issue: 3 Mar 2020 pp 784-788.

• Assistant Prof Ram Manoj Sharma, "Chatbot based CollegeInformation System", RESEARCH REVIEW International Journal of Multidisciplinary, ISSN: 24553085 (Online), Volume-04, Issue03, March-2019, pp 109 112.

• P.Nikhila, G.Jyothi, K.Mounika, Mr. C Kishor Kumar Reddy and Dr. B V Ramana Murthy on , "Chatbots Using Artificial Intelligence", International Journal of Research and Development, Volume VIII, Issue I, January/2019, ISSN NO:2236-6124, pp 1-12

• Gooty Joshi Naga Venkata Akhilesh Yadav (39110343) and Yaswanth Hanumanthu (39110365) who carried out the project Phase-2 entitled "CHATBOT SYSTEM FOR COLLEGE ENQUIRY USING KNOWLEDGEABLE DATABASE"

•CHATBOT FOR COLLEGE ENQUIRY Emil Babu, Geethu Wilson Msc Scholar, Assistant Professor Computer Science Department, St Joseph's College Autonomous, Irinjalakuda, India

•College Enquiry Chat-Bot System Harshala Gawade,Vedika Patil Prachi Vishe,Sonali Kolpe Computer Department Saraswati College of Engg Kharghar, India ISSN: 22780181

College Enquiry Chatbot Turkish Online Journal of Qualitative Inquiry (TOJQI) Anshika gupta a, Riya tiwari b, Varun bhardwaj c, Dr. Saumya chaturvedi

Chatbot for College Website IJCAT - International Journal of Computing and Technology, Volume 5, Issue 6, June 2018 Kumar Shivam,Khan Saud;,Manav Sharma;,Saurav Vashishth,Sheetal Patil Department of Computer Engineering, Bharati Vidyapeeth Deemed To be University College of Engineering, Pune

•AI BASED CHATBOT International Journal of Emerging Trends in Engineering and Basic Sciences (IJEEBS) Prof.Nikita Hatwar, Ashwini Patil , Diksha Gondane (Information Technology, Priyadarshini College of Engineering,Nagpur/ RTMNU,India)

•STUDENT INFORMATION CHATBOT SYSTEM

Prof. Onkar D. Dike,Mubashshira Babamiyan Mhaskar,Vajiha Akhtar Hodekar Assistant Professor,information Technology, Finolex Academy of Management and Technology, Ratnagiri, India