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College Enquiry Chatbot

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Abstract: 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 and long process . This is where we thought of using an intelligent bot delivering the information. College Enquiry Chatbot is a simple python web application which aims to provide the information regarding college asked by the user.
Keywords: Chatbot, Python, ChatterBot, Django.

I. INTRODUCTION

A chatbot is software that simulates human-like conversations with users via text messages on chat. Its key task is to help users by providing answers to their questions. This could be a text based (typed) conversation, a spoken conversation or even a non-verbal conversation. Chat bot is typically perceived as engaging software entity which humans can talk to. It can be interesting, inspiring and intriguing. It appears everywhere, from old ancient HTML pages to modern advanced social networking.
College Enquiry Chatbot uses machine learning concepts to have conversations with humans. The purpose of developing this project is based on an intellectual chat-bot system which will deal with the academic activities like admission enquiry, fees structure, scholarship details, time-table of every department, details of the documents required to attach etc. With this chat-bot system it will be easy for the student to directly clear their queries in lesser time. Chat bots typically provide a text-based user interface, allowing the user to type commands and receive text in order to resolve the query. The Chatbot has information stored in its dataset to identify the sentences and making a decision itself as response to answer a given question. The program analyzes the user's query then the bot responds to the query.

II. PROBLEM FORMULATION

To design and develop College Enquiry Chatbot using knowledgeable dataset and interpreter which will be employed as a function to answer the queries of an users.

A. Objective

The main objective of "College Enquiry Chatbot" is to minimize the time required to solve the queries of an user , reduce the work load on the college's office staff , save the time and strength of an user of visiting and contacting the administration office often , keep the user fully updated about the ongoing and upcoming events of college , etc.

B. Scope

In education system work is very lengthy and time consuming and also required extra man power. For reducing that manpower and avoid such difficulties , "College Enquiry Chatbot" is designed. Its intended user is college students. This system will enable student to resolve their queries without physically visiting the campus.

III. LITERATURE REVIEW

1) Eliza is considered as the first Chatbot, which works on the pattern matching system. It is developed by Joseph Weizenbaum in 1964. ELIZA was one of the first chatterbots and one of the first programs capable of attempting the Turing test. ELIZA's creator, Weizenbaum, regarded the program as a method to show the superficiality of communication between man and machine, but was surprised by the number of individuals who attributed human-like feelings to the computer program, including Weizenbaum's secretary.[1]

2) A.L.I.C.E. (Artificial Linguistic Internet Computer Entity), also referred to as Alicebot, or simply Alice, is a natural language processing chatterbot —a program that engages in a conversation with a human by applying some heuristical pattern matching rules to the human's input. It was inspired by Weizenbaum's classical ELIZA program. The program is unable to pass the Turing test, as even the casual user will often expose its mechanistic aspects in short conversations. ALICE was implemented by Richard Wallace in 1995.[5]

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3) 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 pre-programmed. 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.[2]

4) Kuki, formerly known as Mitsuku, is a chatbot created from Pandorabots AIML technology by Steve Worswick. It is a five-time winner of a Turing Test competition. Kuki claims to be an 18-year-old female chatbot from the Metaverse. It contains all of Alice AIML files, with many additions from user generated conversations, and is always a work in progress.[3]

5) PARRY was written in 1972 by psychiatrist Kenneth Colby, then at Stanford University. Parry is natural language program that simulates the thinking of a paranoid individual. This program was the first to pass the "Turing Test".[4]

IV. METHODOLOGY

A Student bot project is built using machine learning that analyzes user's queries and understand user's message. This System is a web application which provides answer to the query of the student. Students just have to query through the bot which is used for chatting. Students can chat using any format there is no specific format the user has to follow. The System uses built in ChatterBot library which works on machine learning algorithm to answer the query.

Following modules are being used in our project:

1) User(Students)

a) User can ask an query from the system.
b) User need to register themselves to ask their query and then login to the system with the registered username and password.
c) Questions/Queries are stored in dataset with answers.
d) Users can give their feedback.

2) Admin

a) Admin can also ask queries.
b) Admin should login in order to access database for the feedback.
c) Admin can add ,delete and update the queries in the dataset.
d) Admin can add ,delete and update the feedback given by the users.
e) Admin can also add, delete, view and update the registered user.

A. *Project Flow Diagram*

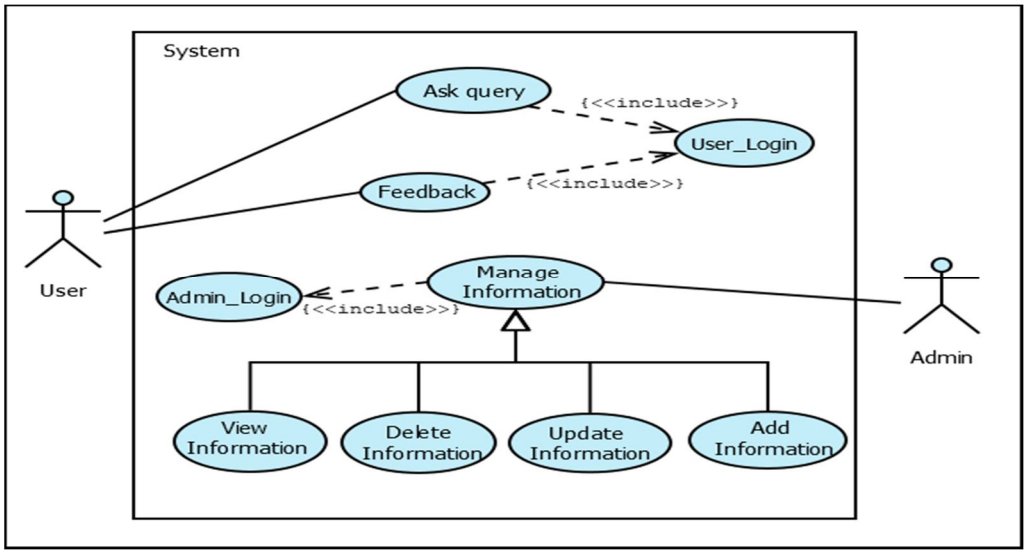

Figure 1.Use Case Diagram

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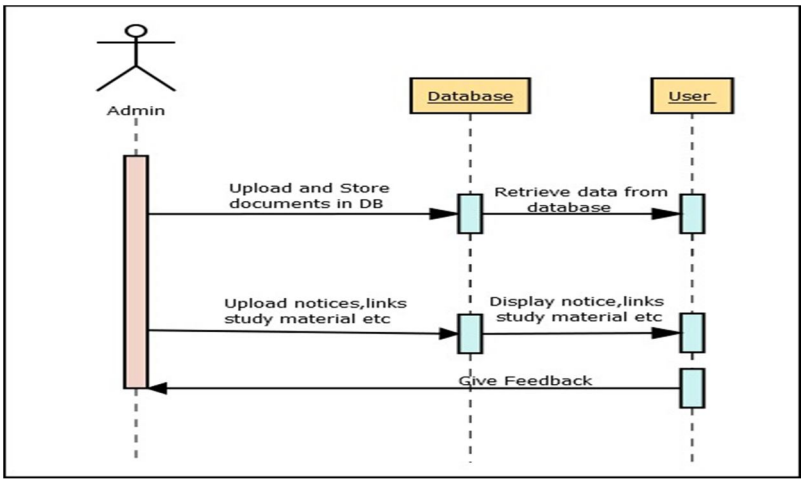

Figure 2:Sequence Diagram

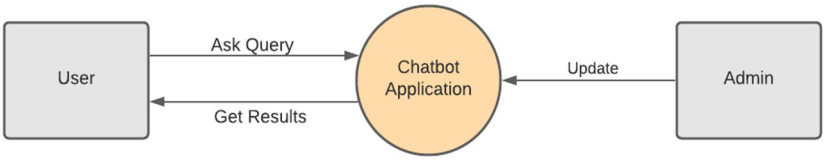

Figure 3.1:DFD Level 0(Context Diagram)

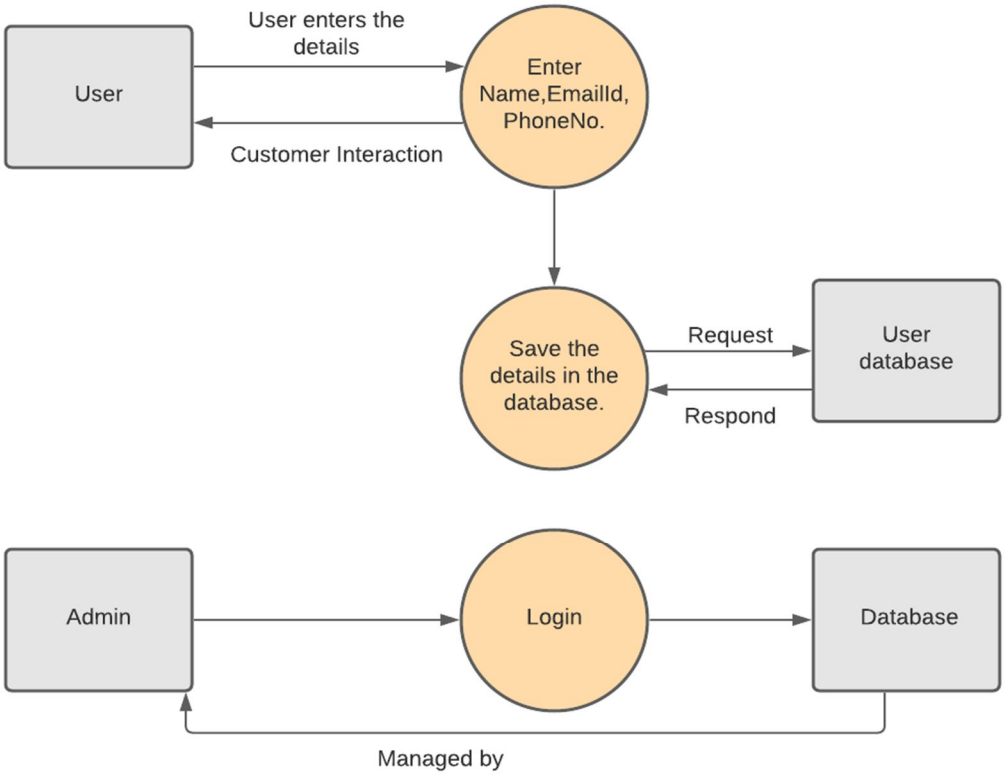

Figure 3.2:DFD Level 1

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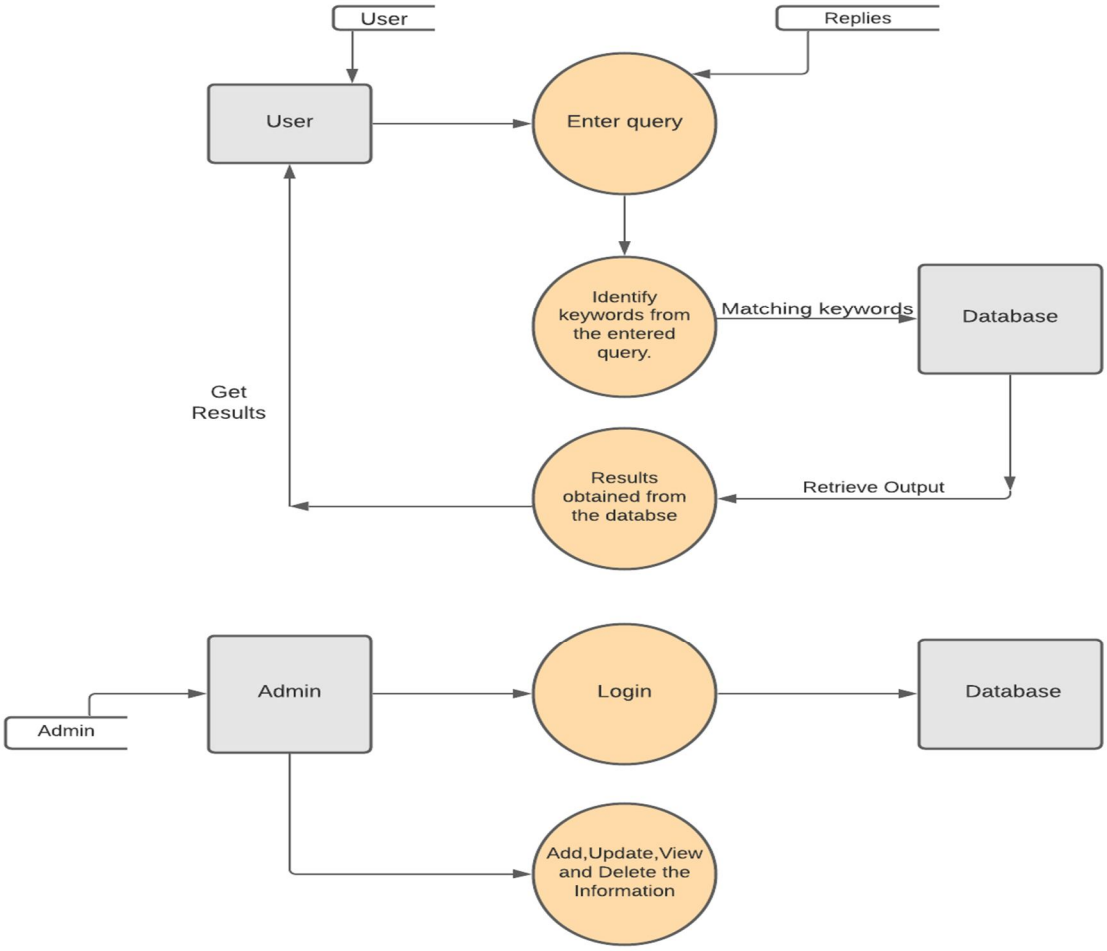

Figure 3.3:DFD Level 2

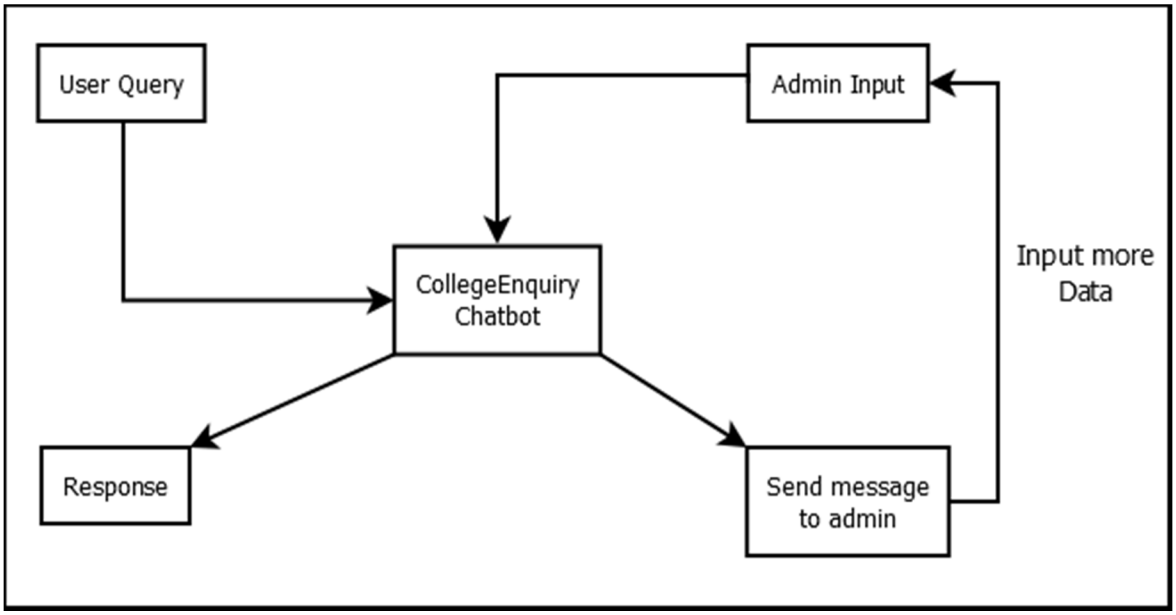

Figure 4:Block Diagram

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V. RESULT DISCUSSIONS

The system will save time ,extra manpower of students. They can access document like, notice, study material, question papers, syllabus and schemes, ongoing and upcoming events of various clubs, etc. on regular basis and from any place whether user is present in college or not. This eventually reduces the work of other college staff. It bridges the gap of improper communication between staff and students i.e., delivering only reliable information. The Chatbot even reduces the paperwork ,resulting the less use of paper and saving trees.

The output screens will be displayed as follows:

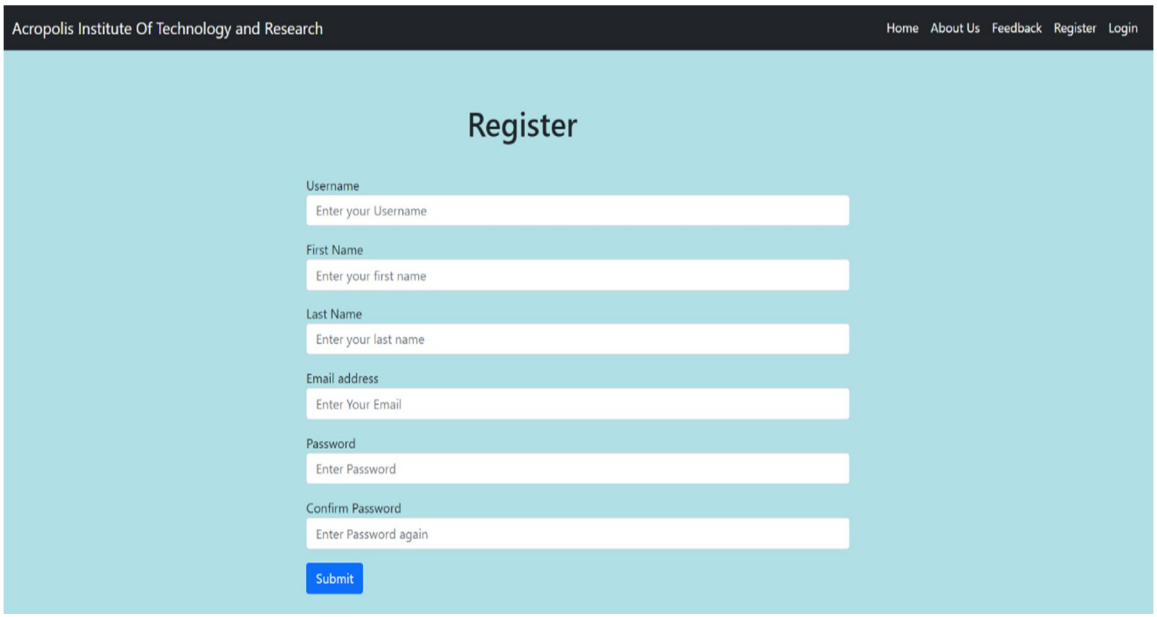

Figure 5:Registration Form

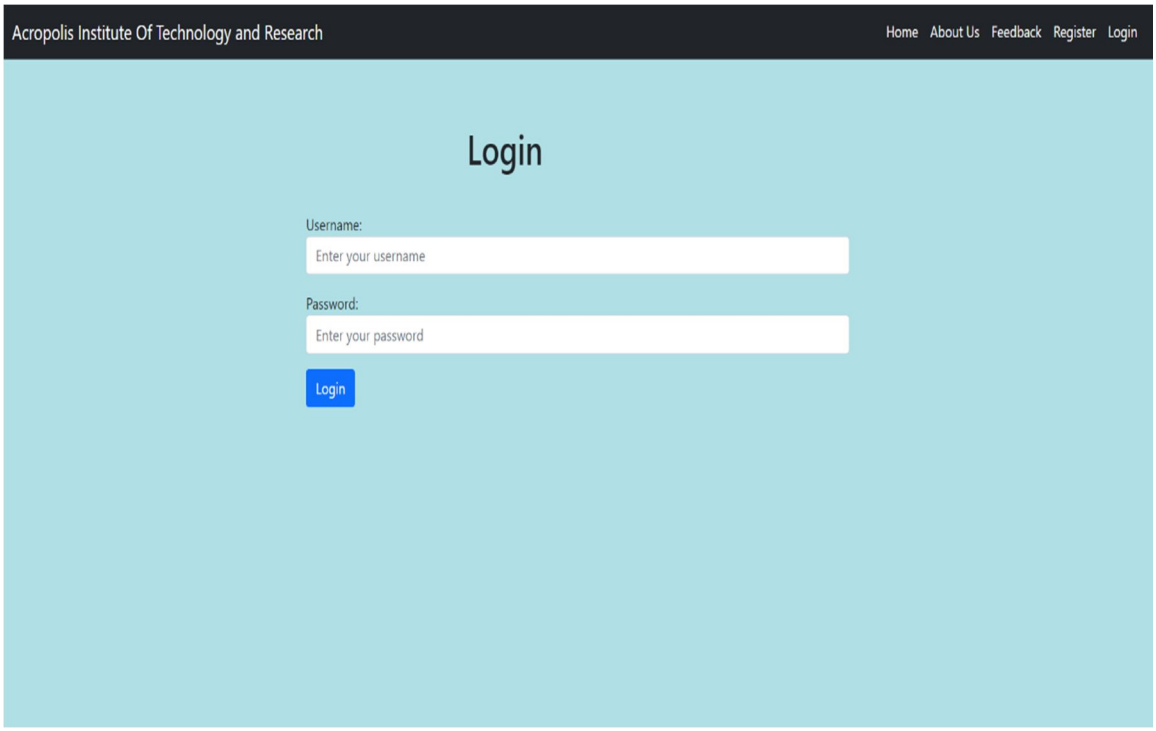

Figure 6:Login Form

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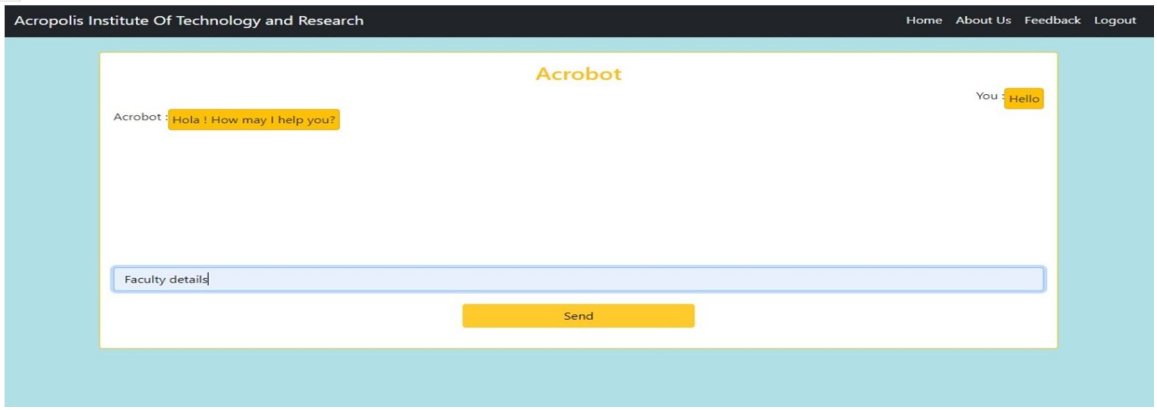

Figure 7:Home Page

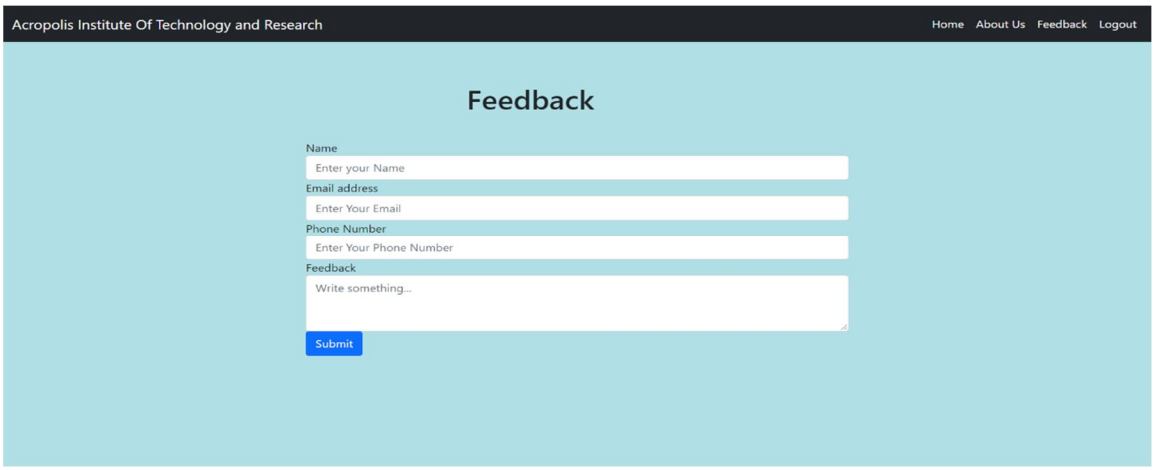

Figure: Feedback Form

VI. CONCLUSION

The main objectives of the project were to develop an algorithm which will identify answers associated with user submitted questions. To develop a dataset where all the related data are going to be stored and to develop an internet interface. The web interface developed had two parts, one for easy users and one for the administrator. A background research happened, including an summary of the conversation procedure and any relevant chat bots available.

VII. ACKNOWLEDGEMENT

We express our sincere gratitude to our guide, Prof. Ajay Khatri at the Department of Computer Science and Engineering at Acropolis Institute of Technology and Research, for valuable suggestions and support during every stage of this work.
We have grown both personally and academically from this experience and we are very grateful for having had the opportunity to conduct this study.

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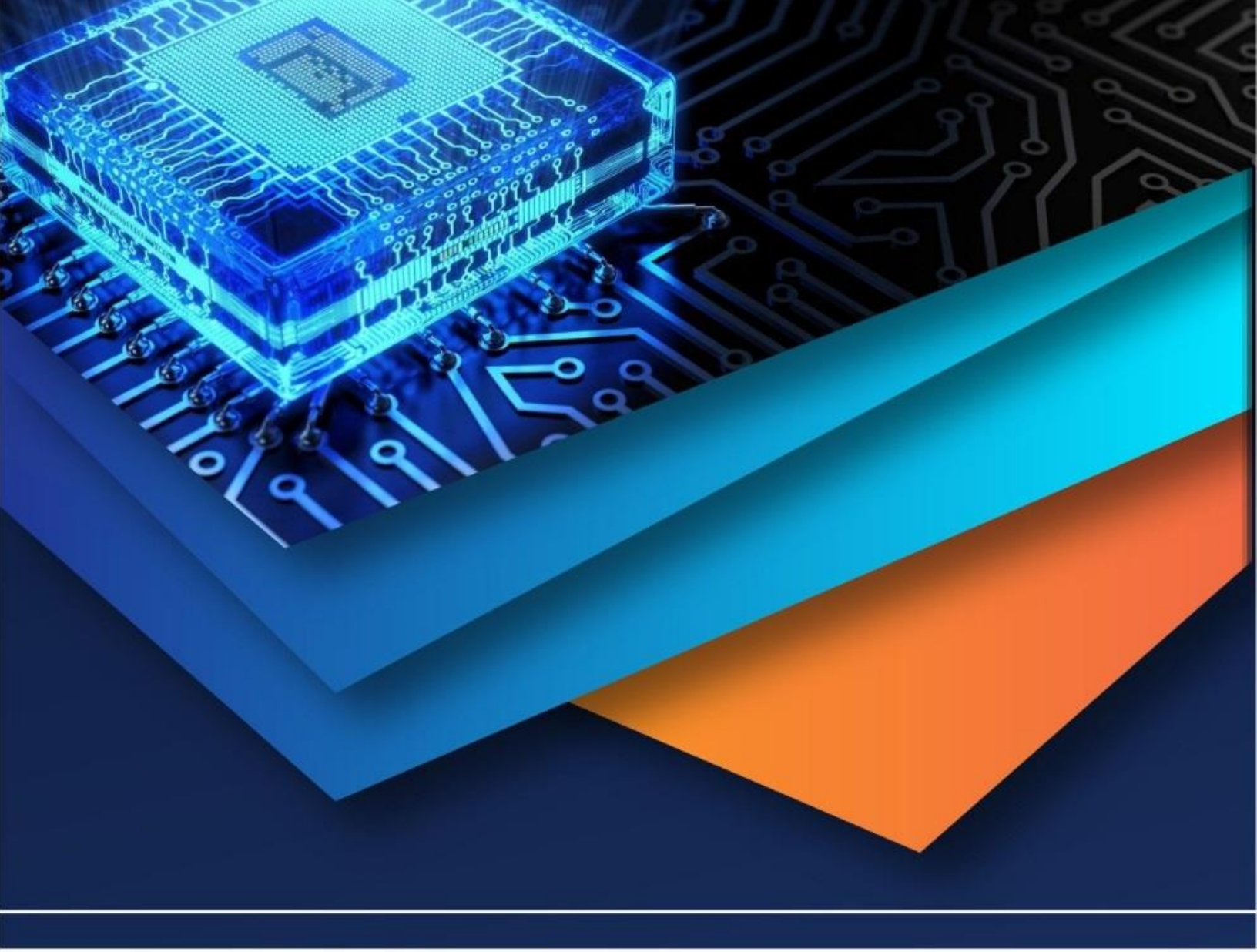

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