

Agriculture Chatbot Application Using Python

¹Brahmananda Reddy D, ² Gurubasava

¹ MCA Scholar, School of CS & IT, Dept. of MCA, Jain (Deemed-to-be University)

² Assistant Professor, School of CS & IT, Dept. of MCA, Jain (Deemed-to-be University)

ABSTRACT

Talk Bot framework is a piece of regular language preparing, where it expects framework to be prepared according to the human language, with the goal that it can fulfill the requirements of the client. Horticulture area is driving wellspring of nations development. At present ranchers are very little mindful about late advances and works on being utilized in agribusiness field. Extraction of important answer by AI methods is an issue, that has been concentrated by many AI specialists just as cutting-edge AI procedures are presented. These methods are applied to remove the precise answer. We can call this as an Agriculture Question Answering System, where the rancher can inquiry the framework and the framework comprehend the question and reacts to a given question.

Keywords- digital register, identification, machine learning, Agri bot

1. INTRODUCTION

A Chabot is an assistance that individuals communicate with by means of a talk interface. You can pose inquiries utilizing by composing similarly you would ask an individual. The chatbot will as a rule react in a conversational style, and it might do activities because of your discussion (for model, request something for you). It regularly runs inside a mainstream informing application, for example, Facebook Errand person, Slack, or SMS. It addresses your inquiry, as opposed to guiding you to a site.

With online life entrance and web network ready to increment joined by propels in common language handling and man-made reasoning, chatbots are relied upon to overwhelm the market. For a designer it is critical to comprehend what the chatbot will offer and what classification the chatbot falls into. This would help pick the calculations or stages and instruments to use to fabricate the bot. It additionally helps the end-clients comprehend what's in store. Here we talk about the sorts of chatbots, the apparatuses and calculations that can be utilized for various kinds of chatbots and give a general engineering that can be followed while building bots. We likewise address the territories where in chatbots are missing and recognize the exploration regions consequently requiring consideration.

This system overcomes the above-mentioned drawbacks by providing a user interface, where farmers or any other users can interact effectively to get the desired responses with a smaller number of steps. This system "TalkBot" is a chatbot, which is a virtual assistant that enable users to get their queries clarified in a user-friendly manner. The input is obtained from the user, the textual query will undergo pre-processing steps in order to find the category of the query it belongs to, and provide the corresponding response.

Farmers are Suffering from the infection caused to the plants or fields ,Due to this the farmers and getting less yield and getting huge loss in profit .By this Agriculture Chatbot the farmers will be happy and they will get more yield because they can ask the questions to agribot and they can clear their doubts and Spray the pesticides in current time and forming also done at correct time due to this there is no loss for agriculture .

To help the farmers and to solve the queries of the farmers we are introducing a chatbot. Farmers can communicate with the chatbot which makes the computers closer to human-level understanding. The Chabot collects the keywords and will start the conversation by asking queries to the users and provide the suggesting plans.

A Chabot is an Artificial Intelligence (AI) software that conducts a conversation with users via text-based method without any human intervention at the server side. In this project we implemented only limited features like text-based chatting which is designed only for the farmers who are doing Agriculture Farming.

2. LITERATURE REVIEW

[1] In this paper the author is spearheading work in the field of exchange framework in Bengali. The primary test of this work is to make a chatbot dependent on the precise information base. Because of the absence of huge dataset, he executed a recovery based shut area chatbot which will talk with the client dependent on the example coordinating calculation and will improve its presentation measure by gaining from the collaboration. His work will give a Bengali discussion corpus which will aid the development of a framework for Bengali Language Handling research.

[2] The principle goal of the worldview is to succeed a chatbot. This thought was created by considering the issues looked by voyagers. A wide range of the writing audit is done to secure harmony in all the tasks, where a chatbot is thought of the best model to fulfill the necessities. Exploration on the chatbot attracts a nexus to see

more about the consuming fleeting innovations and contrary calculations like Man-made brainpower, Machine Learning, Python, and NLP.

[3] The principle destinations of the venture were to create a calculation that will be utilized to recognize answers identified with client submitted questions. Chatbots are sharp connects with man-made cognizance are definitely advancing associations. There is wide extent of chatbot building stages that are open for various undertakings, for model, web business, retail, banking, unwinding, travel, human administrations, and so on This undertaking clarifies about the executed chatbot is a standard based one where the clients depend on the rundown of inquiries and the comparing answers. Clients can be used to get the necessary data about Leukemia and that will assist the individuals with understanding the indications of that specific malignancy it will assist them with directing their shut ones. This Chatbot will spare the hour of individuals if the regarded specialist is living a long way from where they live.

[4] Utilizing secluded plan for every one of its segments a conveyed climate encouraging straightforward and superior of the general framework has been made. The exhibition is comparative with the handling limit of the frameworks in question. Since all the modules are not running off one framework the conceivable load has been diminished and further diminished by appointing the voice preparing to the visit customer speaking with the administration.

[6] This chatbot configuration is yet to be actualized yet to begin with, the inquiries and answers for virtual diabetes control conclusion meeting must be planned with the real diabetes doctor. In this chatbot plan, we proposed the utilized of Path, a path for chatbot to recall the discussion way. We likewise plan the discussion to be constrained by chatbot instead of by client by making the client stay to the discussion point and not to enter any unessential information, and on the off chance that they do, chatbot will reaction that the information was not reasonable and continue rehashing the past inquiry until the catchphrases is recognized. The recommendation additionally will be given as direction to quiet so as to effectively responds to the inquiries. Instead of only one reaction for one information, this plan will permit chatbot to reaction to the entire discussion as it explicitly intended to be a virtual diabetes doctor for right on time side effects finding on diabetes control exercises.

[7] With energy effective machines utilized in green office conditions, the tenant's energy-cognizant conduct plays an indispensable function in observing the fitting burden which offers over 23% of absolute electrical energy in business structures. Including the inhabitants straightforwardly to the structure's EMS will help develop such conduct. A chatbot based attachment booking framework is considered in this article; the client has direct control over his/her machines which are associated with the brilliant fittings in an office climate through a content-based interface. The framework is planned and created to be incorporated to moment informing applications which the inhabitants use on everyday premise. This draws in the inhabitants in the structure's EMS and empowers them to deal with their office apparatuses in the most normal and proficient way that could be available in the long run prompting rationing energy.

[8] The created keen exchange chatbot utilizing the most recent profound learning and human machine communication advances can uphold the discourse and answer inquiries regarding programming .This extraordinarily lessens the product improvement time ,since it doesn't need consistent utilization of the internet browser to look for the fundamental data .later on ,the discourse chatbot can be forced by including new assignments for the discourse specialist ,and by including a voice interface.

[9] In this paper, we utilize the open source Chatterbot and Itchat to actualize an exceptional chatbot for the application on the field of digital money. We gather the informational index for an information base of digital money for information preparing on our chatbot. The testing shows our chatbot is great in reacting to certain questions related with digital money. It is more advantageous for the client's data procurement particularly when the client needs to follow the value pattern of the digital currency of intrigue. We will keep improving the rationale connector usage of the reaction age and upgrading the information base on the cryptographic money.

3. PROBLEM STATEMENT

In the previous days the farmers they are getting trouble to know exact about forming to cultivate the Seeds and forming the field in particular process of field work, like the one who doing the forming they don't know how to approach the people and need to travel more distance to know about forming and about pesticides to spray for plants and all. This was the formers facing problem on farming.

4. SOLUTION

The Proposed Method overcomes the snags that exists in the present-day VA's some of the Supplementary tasks that Agriculture Chatbot performs when compares to the previous days that farmers facing problem ,So Due to this problem analyzing by me as I am a Farmer son ,Proud to say that I am farmer son and by observing all the Problems I conformed to create this bot ,By this Agriculture chatbot So many farmers will be in helpful and they can save money and time of travelling to know the exact pesticide to spray for the particular virus infected

by the plants in the field ,As of now I have developed only for the Pesticides Prediction Agriculture Chatbot as I can just to solve the farmers problem I have developed this Agriculture Chatbot .

5. FLOW CHART

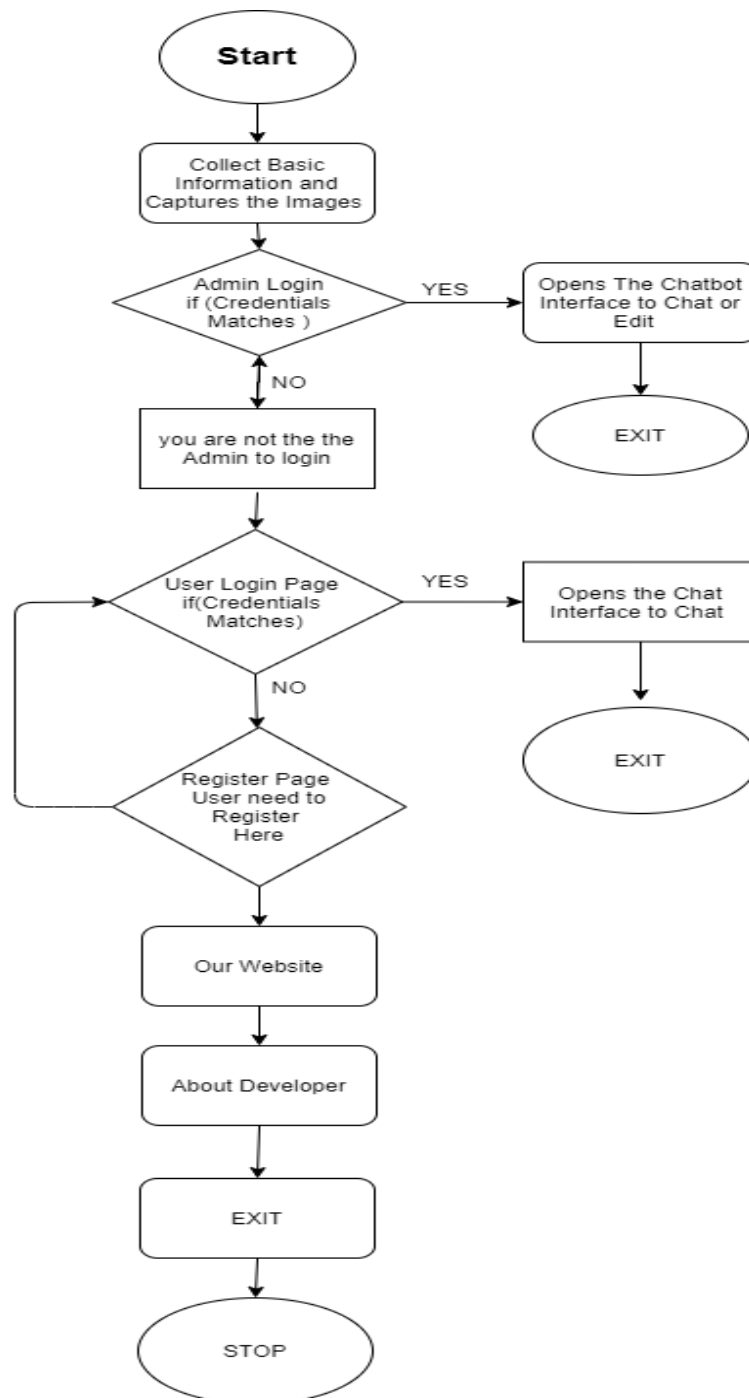


Fig1. Work Flow of Agriculture Chatbot

A flowchart is a kind of graph that speaks to a work process or cycle. A flowchart can likewise be characterized as a diagrammatic portrayal of a calculation.

In this flowchart we can see the it starts by collecting some basic information of particular Farmers and Capture the image and redirect to the Admin page in admin page if credentials match directly redirect to the Chatbot interface so that the admin can chat and edit the Application, if the Credentials won't match displays the error that you are not admin and redirect to the User Register page ,Here the user can Register and login ,After login it directly redirect to the Bot Interface to chat and ask the queries ,The user will login through the interface and it opens the bot where the user information will get stored in the database. The user will give query to the bot

then it will analyse the user request and send the response to the user if the query is found the bot will display the output otherwise it will display the specified data is not found. After this we can see the Website of Agriculture then the Developer Page will display, this is how the flowchart will work. By this the farmers will get benefit and they will be happy by this Agriculture Chatbot, they can easily get the things means Spraying of pesticides and Farming related working.

6. DESIGN

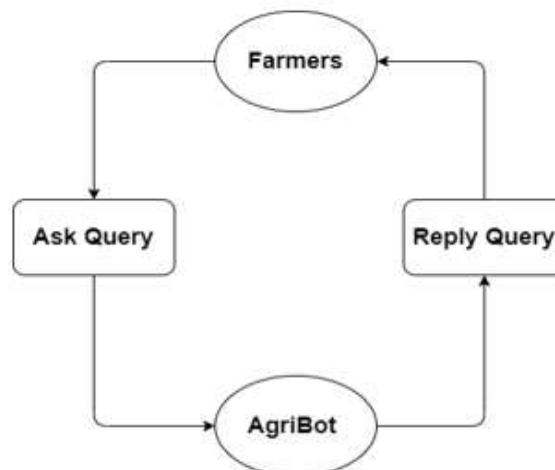


Fig 2. AgriBot Design

A Chatbot denotes to a conversation bot. It is a communication pretending computer program. It is all about the discussion with the user. The conversation with a Chatbot is very easy. Its responses to the queries asked by the user. The conversation with the user and the chatbot is very important. The design of chatbot indicates as follows.

7. ARCHITECTURE

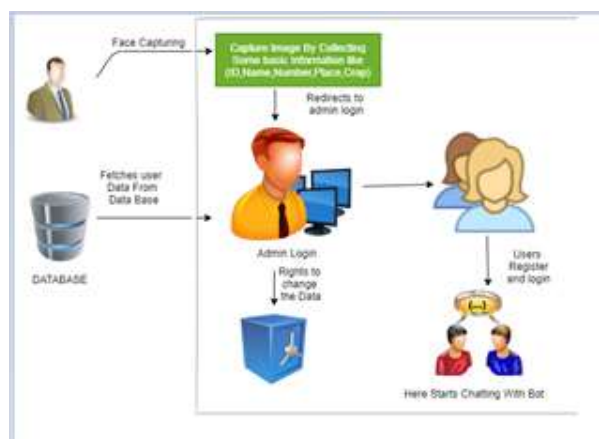


Fig 3. System Module of Agriculture Chatbot

8. IMPLEMENTATION

8.1 Working

Initially it takes some basic data like Name, Phone Number, Place, Crop Details after taking the basic details then it directs to capture the image, it captures the image of the person one who uses the application, and for future reference the details will be stored in the database using SQL (System Query language). After capturing the basic data and image it directly redirects to the user interface. In the interface we can see the options called Admin login, User Registration Page, Website, Developer and Exit options. We can observe, when you click on the Admin option it directly redirects to the login page in that by entering the username and password you can login. If you are not an admin it throws an error that you are not an admin. After login in the admin page it redirects to the bot interface to chat, here the user can ask the questions related to the agriculture cultivation, process of spraying the pesticide and etc.. if you are not an admin, they have an option that you can register and login, if you need to know any information about agriculture. Then you can chat by Agriculture Chatbot, this is the Basic Agriculture Chatbot Architecture. This is how the Agriculture chatbot will work.

8.2 Software Required

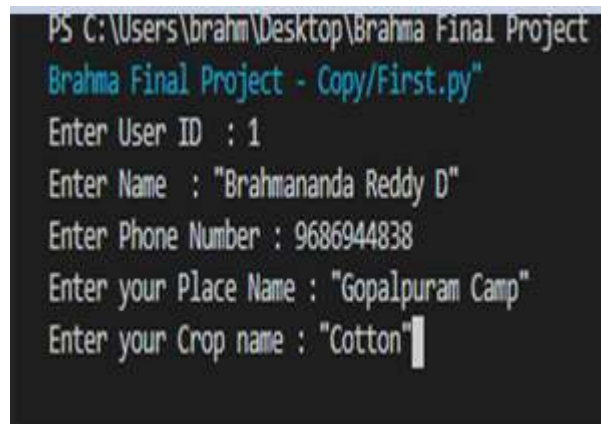
- Python 3.6
- OpenCV 4.1
- VS Code
- SQL Lite3

9. RESULT AND CONCLUSION

The fundamental targets of the task were to build up a calculation that will be utilized to distinguish answers identified with client submitted questions. Chatbots are keen associates with man-made consciousness are drastically developing associations. There is a wide extent of chatbot building stages that are available for various undertakings, for instance, web business, retail, banking, unwinding, travel, human administrations, and so forth

This project explains about the implemented chatbot is a rule based one where the users rely on the list of questions and the corresponding answers. Users can be used to get the required information about Agriculture and that will help the Farmer to understand the infection of that particular Crop it will help them guide their closed ones. This Chatbot will save the time of the people if the respected Guide is living far from the place where they live.

9.1 Result Analysis



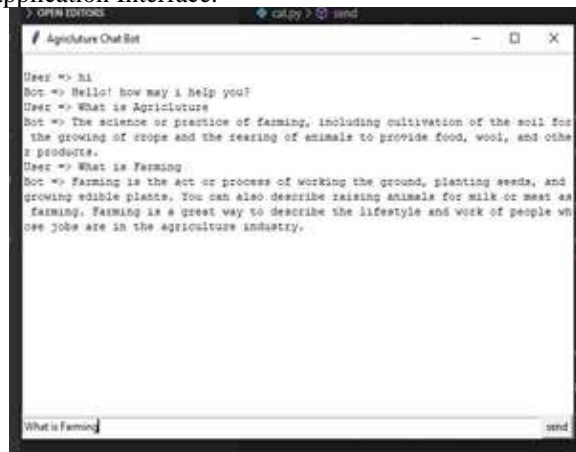
It Takes the basic data from the user while initializing the project like Name, Phone Number, Place, Crop Details Then It Captures the Image of the Particular user for Future Reference.



Here above image can see that, this is how the image will capture.



This is the Actual Chatbot application Interface.



10. FUTURE ENHANCEMENTS

As of Now I have Developed for only the basic Chat Application to overcome Spraying of pesticides to overcome this Problem Using Python and Later I am planning to Develop the Soil Prediction and Weather Prediction for the Cultivation of Farmers means When they need to Leave Water, Spray the pesticides for particular virus and So on.

Voice acknowledgment and discourse acknowledgment can be included which will assist the clients with explaining their questions and can likewise join discourse we should introduce different dialects with the goal that the bot can react in the language the client needs to talk. Can make a superior interface where hand motions can be included for the bot which will make the clients feel they are conversing with the human rather than bots.

11. REFERENCES

- [1] Md. Kowsher, Farhana Sharmin Tithi, M Ashraful Alam, Mohammad Nurul Huda, Mir Md Moheuddin, Md. Golam Rosul “Doly: Bengali Chatbot for Bengali Education”, 2019
- [2] Dharani M, Jyostna JVSL, Sucharitha E, Likitha R, Dr. Suneetha Manne “Interactive Transport Enquiry with AI Chatbot”. 2020.
- [3] G. V. Vaishnavi. “PREDICTIVE ANALYSIS FOR LEUKEMIA SURVIVAL USING AI BOTS”, 2020.
- [4] S. J. du Preez, M. Lall, S. Sinha. “An intelligent web-based voice chat bot”, 2009.
- [5] J. Vijayalakshmi, K. PandiMeena, “Agriculture TalkBot Using AI”, 2019.
- [6] Abbas Saliimi Lokman, Jasni Mohamad Zain Fakulti Sistem Komputer,Kejuruteraan Perisian “Designing a Chatbot for Diabetic Patients”, 2015.
- [7] Dhineshkumar Ramasubbu, KrishnamoorthyBaskaran, Grynberg Yann “Intrusive Plug Management System Using Chatbots in Office Environments”, 2018.
- [8] Levgen Sidenko,Galyna Kondratenko, Pavlo Kushneryk ,Yuriy Kondratenko, “Peculiarities of Human machine Interaction for Synthesis of the Intelligent Dialogue ChatBot”, 2019.
- [9] Qitao Xie, Qingquan Zhang, Dayuan Tan, Ting Zhu, Sheng Xiao, Beibei Li, Lei Sun, Ping Yi, Junyu Wang “Chatbot Application on Cryptocurrency”, 2018.