

Chat Bot Application Using Artificial Intelligence

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Abstract

Chat bots can have functionality which ranges from little to high which is a virtual conversation but still have a huge impact with great brand message, which is perfect for handling various aspect which involves human intervention especially for marketing campaigns. The way which ideas are shared between two humans is through conversation, therefore Chabot helps in By definition we can understand that, a chatbot is a program responds to the given input either in speech recognition or textual manner which is understood by a human. The main advantage of chatbot is it decreases the repetitive task done by human with same questions. Its main advantage is the questions asked which in turn improves customer experience that maintain uniqueness, scalability and sends automated responses. Currently chatbots can be classified depending on the kind of model used to give better engagement of two brands by having 1-on-1 communication at a standard level. Brands have the opportunity to address the issue involved with better assistance.

Keywords- Chatbots, Automatic Evaluation, Dataset

1. INTRODUCTION

The Chatbot is a machine that answers its answers: 1) The one which provides the response based on a fixed set of possible answers by using a deterministic model, and 2) The one which that tries to generate answers by matching the given information over all possible answers by using the generative model. In the principal classification, we can discover frameworks that utilize pattern matching procedures which are utilized to choose the nearest principle to the present client's turn and afterward pick an answer from the predefined set of preferable choices [1]. Hard coded inquiry/reaction pair however rather it totally creates a reaction dependent on a generative model prepared utilizing AI calculations. These operators are fit for adjusting to the exchange setting without the requirement for the engineer to foresee and give a response to all conceivable client inputs [2]. This paper centers around two principle issues: a) our cooperative endeavors on producing a corpus of visiting sessions commented on at the turn level by methods for publicly supporting assets, and b) the assessment of various multiclass

calculations with the objective of anticipating the ampleness of each turn dependent on utilizing distinctive syntactic and semantic highlights removed from the present turn and its prompt exchange setting.

CHAT BOT:

A chatbot (otherwise called a covert agent, conversational bot, chatterbot, intuitive operator, conversational interface, Conversational AI, talkbot or fake government agent element) is a PC program or a man-made brainpower which leads a discussion by means of sound-related or printed methods. The term "ChatterBot" was initially instituted by Michael Mauldin (maker of the first Verbot, Julia) in 1994 to portray these conversational projects [3]. Today, most chatbots are gotten to by means of menial helpers, for example, Google Assistant and Amazon Alexa, by means of informing applications, for example, Facebook Messenger or WeChat, or through individual associations' applications.

PROBLEMS (OR) LIMITS:

The following are the confinements to chatbots. They are incredible. Enough said. In addition to the fact that they are amusing to utilize they are a genuine distinct advantage for the client bolster industry. Consider how much time, nerves and human work could be saved by utilizing chatbots as the principal occurrence when clients need to get in touch with you[4].

Individuals these days have no resistance for holding up until their solicitations are being prepared. So chatbots being the primary case with regards to client association is the answer for this industry. not have the option to deal with all the setting in any case. They can be used for answering the questions of the people by giving them appropriate answers.

USAGE:

We can bolster the postulation concerning the boundary to compose such a great amount of: Think about the old-school talk. They have turned out to be less significant and shorter in. For what reason do we abridge everything like 'asap', 'lol', 'rofl', 'wtf', 'atm', 'k', and so forth? Since composing requires some serious energy! So the shorter the message the better. This is unquestionably one motivation behind why emoticons were the most loved thing to compose when they got presented [5]. Rather than composing 'lol', you were sending the giggling smiley, it is shorter and furthermore increasingly exact to what you are thinking at this time. So this truly demonstrates when composing, you need it to be short and effective subsequently sparing

time. Furthermore, this is the general purpose of a conversational interface: quick and effective discussions.

DIALECTS:

At first, Chatbot can resemble an ordinary application. There is an application layer, a database and APIs to call outside administrations. For a situation of the chatbot, UI is supplanted with talk interface.

While Chatbots are anything but difficult to use for clients, it adds unpredictability for the application to deal with. There is a general stress that the bot can't comprehend the aim of the client [6]. The bots are first prepared with the genuine information. Most organizations that as of now have a chatbot must have logs of discussions. Engineers utilize that logs to investigate what clients are endeavoring to ask and what does that mean. With a blend of Machine Learning models and devices fabricated, designers coordinate inquiries that client pose and replies with the best reasonable answer[7].

PREPARATION:

Preparing a chatbot occurs at a lot quicker and bigger scale than you show a human. People Customer Service Representatives are given manuals and have them perused it and get it. While the Customer Support Chatbot is nourished with a huge number of discussion logs and from those logs, the chatbot can comprehend what kind of inquiry requires what sort of answers.

2. WORKING

The chatbots work by receiving 3 order techniques:

Example Matchers:

Bots use design coordinating to group the content and produce an appropriate reaction for the clients. AIML The best example of standardized language is "Computerized reasoning Markup Language" (AIML).

A basic example coordinating model:

Code:

```
<aiml version= "1.0.1" encoding="UTF-8"?>
```

```
<category>
```

```
<pattern>WHO IS ABRAHAM LINCOLN?</pattern>
```

<template>ABRAHAM LINCLON WAS THE PRESIDENT OF THE US DURING AMERICAN CIVIL WAR </template>

</category>

The machine at that point gives and yield: Human: Do you know who Abraham Lincoln is?

Robot: Abraham Lincoln was the US President amid American common war.

Chatbot knows the appropriate response simply because his or her name is in the related example. Additionally, chatbots react to anything relating it to the related examples. In any case, it cannot go past the related example. To take it to a propelled dimension calculations can help. In the appearance based methods the image is detected in color or the gray scale image. Then the detected image is converted in to pixels. The two main algorithms are used in this methods that is Haar like feature with AdaBoost.

ALGORITHM:

For every sort of inquiry, a special example must be accessible in the database to give a reasonable reaction. With heaps of blend on examples, it makes a progressive structure. We use algorithms to decrease the classifiers and create the more reasonable structure. Computer researchers consider it a "Reductionist" approach-so as to give a disentangled arrangement, it lessens the issue.

ARTIFICIAL NEURAL NETWORKS:

Neural Networks are a method for ascertaining the yield from the info utilizing weighted associations which are determined from rehashed cycles while preparing the information. Each progression through the preparation information revises the loads bringing about the yield with precision.

As examined before here likewise, each sentence is separated into various words and each word at that point is utilized as contribution for the neural systems. The weighted associations are then determined by various cycles through the preparation information a great many occasions. Each time improving the loads to making it exact, Ref. Fig.1 for the Neural Network Architecture

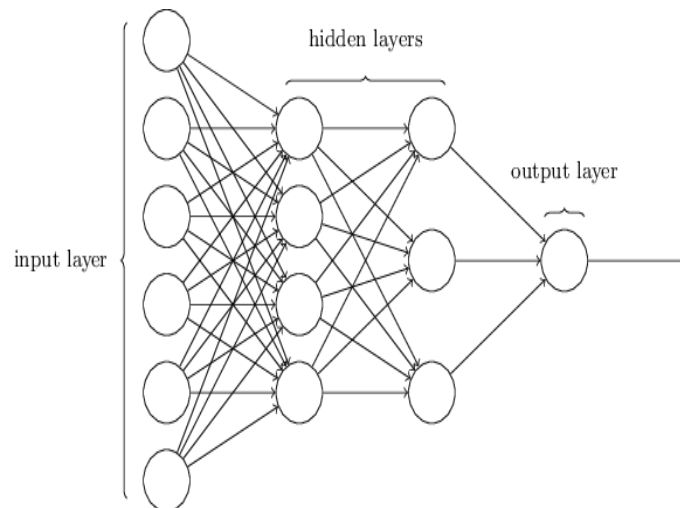


Fig.1. Neural Networks Architecture

3. EXISTING SYSTEM

Traditionally web-bots exist; web-bots were made as based web-companions, a performer for a client. Moreover, and independently there as of now exists upgraded rich webpage synopsis (RSS) channels and master substance handling frameworks that are available to web clients[8]. based web-bots can be connected to work past a performer as a witness, whenever connected with, among others, RSS channels as well as master frameworks. Such a neighborly bot could, thus, additionally work as a mentor giving sensible and exceptional reactions The past technique was actualized utilizing an android application where the correspondence occurred through and messages utilizing the java on a nearby host where the information was spared physically and that was tedious for an inner division.

Drawbacks:

The procedure of an online talk framework would pursue a customer server approach which secures the sign and streams it to a server, based; it will produce huge number of information [9]. While recover that based data, it will set aside more effort to give reaction.

4. PROPOSED SYSTEM

Chatbot for school the board framework, will make dataset about school subtleties like staff subtleties and school occasions, work and so on. At that point, first we need to make one android application for utilizing discourse acknowledgment. This paper shows the plan and advancement of an insightful voice acknowledgment talk bot. The paper displays an innovation demonstrator to confirm a proposed structure required to help such a bot (a web

administration). Thus, utilizing that chatbot android application, we can give discourse contribution about school subtleties. At that point it will demonstrate reaction as data. While a discovery approach is utilized, by controlling the correspondence structure, to and from the web-administration, the web-administration enables a wide range of customers to impart to the server from any stage. The administration gave is available through a created interface which takes into account consistent XML handling; whereby the extensibility improves the life expectancy of such an administration. By presenting a fake cerebrum, the electronic bot creates tweaked client reactions, adjusted to the ideal character. Inquiries posed to the bot, which isn't comprehended is additionally handled utilizing an outsider master framework (an online insightful research collaborator), and the reaction is filed, improving the fake mind abilities for future age of reactions. The below image Fig.2 shows HMM Algorithm

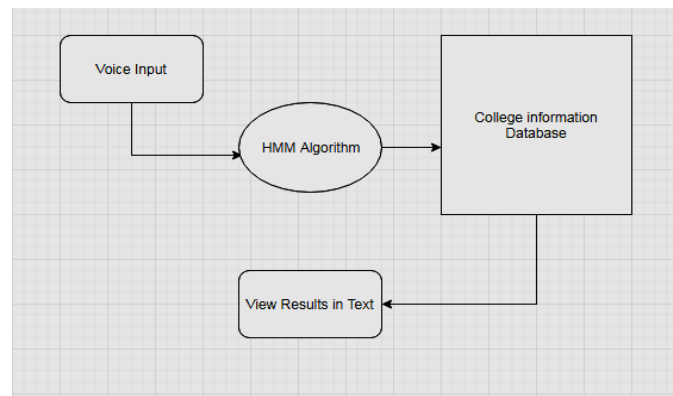


Fig.2. HMM Algorithm

Advantages:

1. Speech recognition systems, based on hidden Markov models are today most widely applied in modern technologies.
2. They use the word or phoneme as a unit for modeling.
3. The model output is hidden probabilistic functions of state and can't be deterministically specified.
4. State sequence through model is not exactly known.
5. The results are given by the bot rather than the physical human that helps to understand the concern about the person.

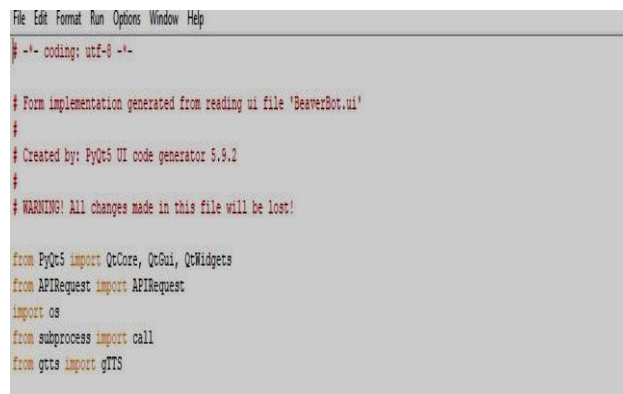
5. EXPERIMENTAL RESULTS

In the experimental results a live collection of the data set is created when the instruction is given from the mobile phone the data is captured in the desired format and the data is captured in the database using SQLyog where the information of the student and their respective department is shown in the form of tables and the results are displayed. If the details are in the database it displays and if not the new data is created in the next row with the different attributes in their columns. The following are the functioning steps for the experimental results.

Functioning Steps:

Step-1:

Build the application without any errors. That helps in running the program without any difficulty so that the next process becomes easy and we can handle the execution with an ease.



```
File Edit Format Run Options Window Help
# -*- coding: utf-8 -*-

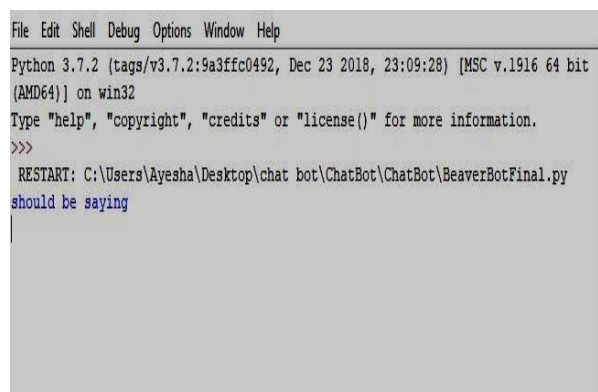
# Form implementation generated from reading ui file 'BeaverBot.ui'
#
# Created by: PyQt5 UI code generator 5.9.2
#
# WARNING! All changes made in this file will be lost!

from PyQt5 import QtCore, QtGui, QtWidgets
from APIRequest import APIRequest
import os
from subprocess import call
from gtts import gTTS
```

Fig. 3. Build the Application

Step -2:

If the build is successful then run the project.



```
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 23:09:28) [MSC v.1916 64 bit
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\Ayesha\Desktop\chat bot\ChatBot\ChatBot\BeaverBotFinal.py
should be saying
```

Fig. 4. To Run The Project

Step-3:

If the project is run successfully then the chatbot interface appears as shown in the fig.

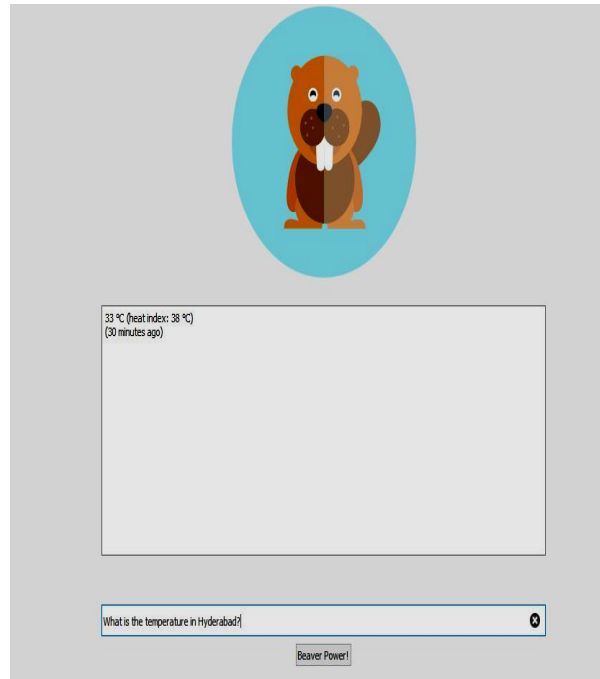


Fig. 5. Chat Bot Interface

Step-4:

The textual input is given to the bot and the bot analyses the given sentence of the query and then depending upon the keywords the answer is given by the bot which entirely depends on the matching technique. After the bot matches input given and searches for the appropriate output of the given query and then displays the results as the answer.

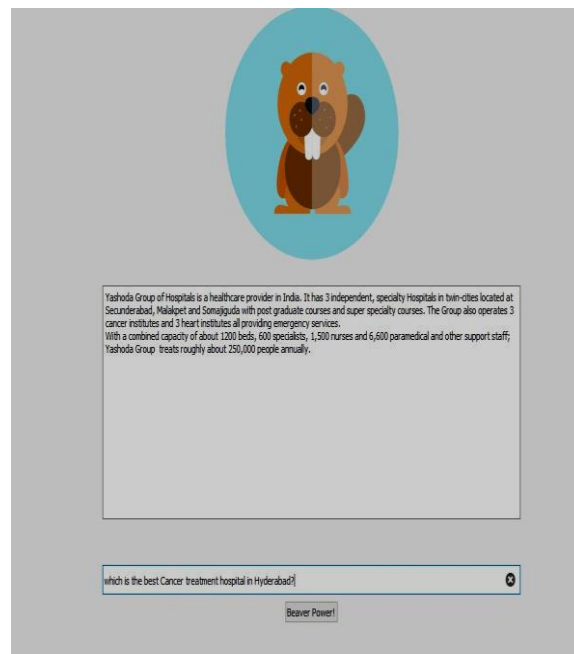


Fig.6. Chat Bot Textual Input

More work can be done in less time without any human interruption. The user does not have to wait for a human being to answer the questions and the user and even access the information

by just few simple clicks. Which in turn saves the time and energy of the user and also the questions are being answered even without the internet supply.

6. CONCLUSION

Chat bot is used in many applications such as medicine and mental health, messaging applications such as college management, support automation, toys, banking, and company internal platforms. It is designed in the field of artificial intelligence for the college management system which record student attendance, the section which they belong to without the intervention of any human. Which in turn save the time and helps in the work done quicker.

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