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# An Internet Relay Chat Bot using AIML

**Om Komawar[1], Prasad Thakar[2], Rohit Shetty[3], Akshay Bartakke[4], Prof. Manisha Desai[5]**

Department of Computer Engineering, RMD Sinhgad School of Engg, Pune, India

**Abstract:** ***A chatterbot (also known as a talkbot, chatbot, "Bot", chatterbox, Artificial Conversational Entity or similar) is a computer program which conducts a conversation via auditory or textual methods. Such programs are often designed to engage in small talk with the aim of passing the Turing test by fooling the conversational partner into thinking that the program is a human. However, chatterbots are also used in dialog systems for various practical purposes including customer service or information acquisition. Some chatterbots use sophisticated natural language processing systems, but many simply scan for keywords within the input and pull a reply with the most matching keywords, or the most similar wording pattern, from a textual database.***

**Keywords:** AIML, Artificial intelligence, Chatbot, Intelligent robots, Response Generator

## 1. Introduction

A chatbot is a computer program which conducts a conversation via auditory or textual methods. Such programs are often designed to engage in small talk with the aim of passing the Turing test by fooling the conversational partner into thinking that the program is a human. Some chatter bots use sophisticated natural language processing systems, but many simply scan for keywords within the input and pull a reply with the most matching keywords, or the most similar wording pattern, from a textual database.

Chatterbot, a chatter robot is a type of conversational agent, a computer program designed to simulate an intelligent conversation with one or more human users via auditory or textual methods.

Internet Relay Chat bot, a set of scripts or an independent program that connects to Internet Relay Chat as a client, and so appears to other IRC users as another user.

Chatbot learns new responses and context based on real-time user interactions, rather than being driven from a static database. Some more recent chatterbots also combine real-time learning with evolutionary algorithms that optimise their ability to communicate based on each conversation held. Still, there is currently no general purpose conversational artificial intelligence, and some software developers focus on the practical aspect, information retrieval.

## 2. Related Work

### 2.1 Literature Survey

A Chat bot is system implemented by many researcher to support various types of platforms. Most of them are customized for particular platform. We have examined two systems based on this technology:-

1) Title of Existing System or Paper:-Adding interactive interface to E-Government systems using AIML based chatterbots
2) Title of Existing System or Paper:- Chinese Intelligent Chat Robot Based on the AIML Language

Author & Publication with Year:- Wei Yun Gang, Sun Bo , Sun Ming Chen , Zhao Cui Yi , Ma Pei Zi , August 2014

## 3. Proposed Work

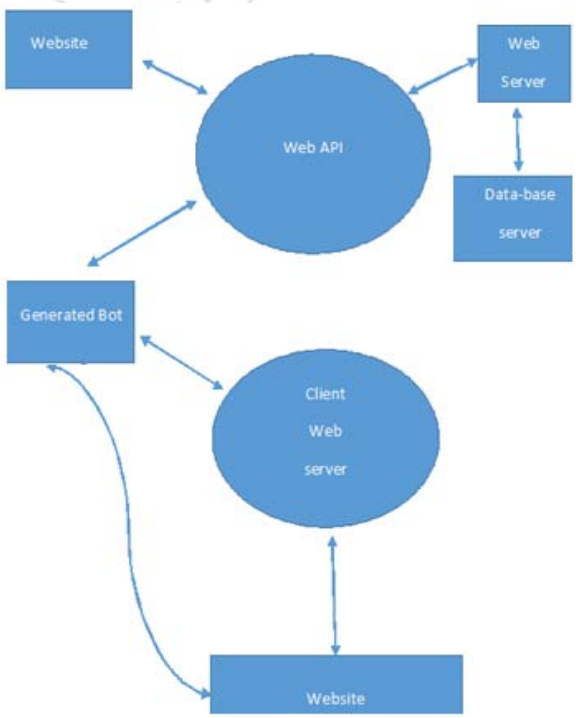
### 3.1 System Modules

- Modular customizable bot
- User Questions analytics
- Information Crawler
- Bot Generator
- General Questions
- Security
- Business analysis

### 3.2 System Features

- This system recognize Suspicious Activity at public places .
- The system will work in real time.
- The CCTV operator should modify region of interest.
- Activity is tracked under occlusion more accurately.

### a) System Architecture

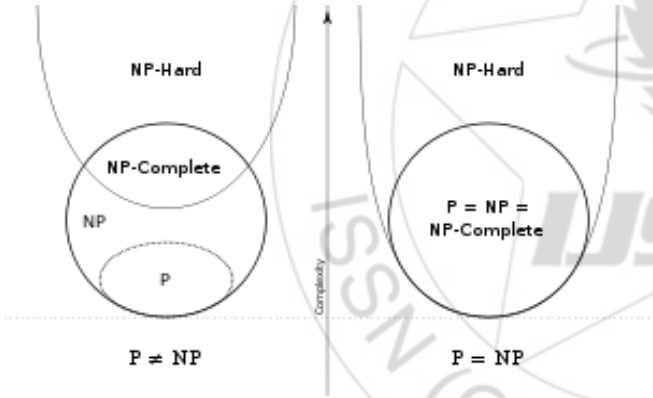


In this architecture system will take the input query from user. Chat bot will assist query from server according to query if query is present in database bot will answer automatically , otherwise it will redirect it to live support.

**b) Algorithm**

1. Start.
2. Generate a query.
3. if(query found)
   goto 4;
   else
   goto 5;
4. Generate response to the query goto step 7 .
5. Live support Will assist the question
   if(Life support wants to add question in database)
   goto 6;
   else
   goto 7;
6. Live support will add new question in database.
7. If (session active)
   goto step 2;
   else
   goto step 8;
8. Exit

**c) Feasibility Analysis**




This is considered with specifying equipment and software that will successful satisfy the user requirement the technical needs of the system may vary considerably but might include-

- The facility to produce outputs in a given time.
- Response time under certainconditions
- Ability to process a certain column of transaction at a particular speed.

Our goal is to divide some data D (e.g., the safe combination) into pieces D1, D2…,Dn in such a way that:

1. The Knowledge of any k or more Di pieces makes D easily computable.

Undetermined (in the sense that all its possible values are equally likely).

This scheme is called (k,n) threshold scheme. If k=n then all participants are required to reconstruct the secret original data.

The intelligent chatsystems are NP type. Because we can get & verify the solution set. Hence the problem statement involving it are NP Complete.

**d) Mathematical Model**

**Step 1**. Let S be a system that describes the execution of the application.

S = {…..}

**Step 2**. Identify the modules as M

S={M,...}

M={E,R}

where,

E = Predefined Questions .

R = Undefined Questions.

(i) Identify input to E as Ie.

Ie= {W , n}

where,

W= Defined Questions With Answers.

n=Number of ways to ask a particular question.

(ii) Identify the modules of R as Mr

Mr= {Tl, Lv }

where,

Tl= Time required for transfer module.

Lv=Live support module.

[A] Input to Tl is Time required for transfer

where,

Time required for transfer = Time limit required for generating response.

[B] Input to Lv is Live Support

where,

Lv = Live Support module.

**Step 3**. Identify the Processes as P

S={M,P,...}

P={Pg,Pf,Pc,P_disp}

where,

Pg = Process of Getting Query.

Pf = Process of Finding Query.

Pc = Process of checking Query.

P_disp = Process of displaying Answer for query.

**Step 4**. Identify the output as O.

S={M,P,O,...}

O={Or, Ow}

where,

Or= Output Defined Question

(i)Context Aware Answering

Ow= Output for Undefined Question.

(i)Time Elapsed

**Step5**. Identify the success as Su.

S={M,P,O,Su,...}

where,

Su= Success is when the accurate answer is generated based on question context.

6. Identify the failure as F.

S={M,P,O,Su,F,...}

where,

F= When improper operations are done.

The system can be described as
S={M,P,O,Su,F}

## 4. System Advantages

1) Context Awareness
2) Easy Deployment.
3) Highly Customizable
4) Free Of Cost.

## 5. Conclusion and Future Scope

The users of the computer devices are becoming more dependent on the machines. The chat bot uses artificial intelligence and hence will learn the responses of the users resulting in increasing efficiency. chatbot has ability to respond like human being hence will reduce extra efforts required to be done by humans.

The future scope for this project is limitless. The system which was proposed is only a minimum viable product and has lot of future possibilities and it can be improved as well the improvement in performance as well as knowledge of the bot will increase. In future the bot will be able answer accurate and somehow it can also replace humans in live support that will save lot of infrastructure and resource cost. User analytics can have the way to track where the bot did not help and analyse over time.

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