

**INT404 ARTIFICIAL INTELLIGENCE**

**PROJECT TITLE: CHATBOT**

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# CHATBOT

**INTRODUCTION:**

A chatbot is an intelligent piece of software that is capable of communicating and performing actions similar to a human. Chatbots are used a lot in customer interaction, marketing on social network sites and instantly messaging the client. There are two basic types of chatbot models based on how they are built; Retrieval based and Generative based models.

There are 2 types of chatbots:

1. Retrieval based chatbots (responses are predefined).
2. Generative based chatbots (not predefined responses).

**Conceptual framework:**

**Library used:**

1)NTLK(Natural Language tool kit)

And imported 2 classes. They are chat, reflections.

**NLTK** : It is a suite of libraries and programs for symbolic and statistical natural language processing (NLP) for English written in the Python programming language. It was developed by Steven Bird and Edward Loper in the Department of Computer and Information Science at the University of Pennsylvania.

**Chat**: This is a class that has all the logic that is used by the chatbot.

**Reflections**: This is a dictionary that contains a set of input values and its corresponding output values. It is an optional dictionary that you can use. You can also create your own dictionary in the same format as below and use it in your code. If you check nltk.chat.util, you will see its values as below:

reflections = { "i am" : "you are",

"i was" : "you were",

"i" : "you",

"i'm" : "you are",

"i'd" : "you would",

"you'll" : "I will",

"your" : "my",

"yours" : "mine",

"you" : "me",

"me" : "you"

}

* I also created one dummy reflection class which give the reflection on the basis of user defined actions.
* we will train our chatbot using patterns like :

pairs = [

[

r"my name is (.\*)",

["Hello %1, How are you today ?",]

],

On the basis of the patterns we are designed the chatbot, it can able to detect the pattern and the response as the reflections are defined.

* In this project I am building retrieval based chatbot so, it only gives the response.it doesn’t do any actions.

**Advantages for using chatbots:**

* 1. Increase customer engagement
  2. Available round the clock
  3. Improves customer satisfaction

**Conclusion:**

the chatbot can able to response everything until it can able to match the pattern. So, we need to train the chatbot in many patterns . I want to do further changes in the project before submission of the project .I will add some more libraries which are helpful to me.