Title: ***College Enquiry Chatbot***

Submitted To:

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Subject :

Artificial Intelligence

INT- 404

Project By :

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Abstract

Since the time chatbots have entered the digital world. Every marketer is curious to use them as a major tool to daily interact with their customers. Our program will useful for this type of purposes with the interaction with students who are willing to join in the university.

Our chatbot clarifies their doubts regarding the structure of Fee payment, Facilities provided by the college, hostel fee and other cultural activities in the college.

Introduction

Motivation:

Our motive is to solve the doubts from the students and to solve the queries regarding the admissions in the college.

Now-a-days there are no efficient chatbots for colleges to solve the queries of the students.

Regarding the issue we had taken this project.

Our chatbot can solve the queries of the students regarding the admission process, etc.

Aim

The aim of the project is to develop a college enquiry chatbot using Artificial Intelligence in python programming.

Objectives

A chatbot is an artificial intelligence software that can simulate a conversation with a user in natural language through messaging applications, websites, mobile apps or through the telephone.

Why Chatbots are important ?

A chatbot is often described as one of the most advanced and promising expressions of interaction between humans and machines.

However, from a technological point of view, a chatbot only represents the natural evolution of a Question Answering system leveraging Natural language processing (NLP).

Formulating responses to questions in natural language is one of the most typical Examples of Natural language processing applied in various enterprises end use applications.

How chatbot works ?

There are two different tasks at the core of a chatbot.

User request analysis

Returning the response

User request analysis:

This is the first task that a chatbot performs.

It analyzes the users request to identify the user intent and to extract relevant entities.

This is used to take the query from the user and give the relevant answer regarding the query.

Benefits of chatbot's :

We added few more points to categorize benefits of chatbots clearly:

Benefits for customers:

24-hour availability:

While this is clearly a huge benefit highlighting this risk creating backlash when bots are down due to security issues or maintenance

Instant Answers :

When we ask a query chatbot gives the answers instantly related to the query.

End-less patience :

While customers reps and customers sometimes lose their patience that something bots are yet incapable of.

Instant Transactions :

Actions like changing or querying records are almost instantaneous for bots.

Benefits to Companies :

Improved customer satisfaction:

All the benefits above will result in increased customer satisfaction which can lead to increased customer advocacy and sales.

Cost Savings:

Companies need for growing the customer service department can be managed by rolling out increasingly capable bots handling ore and more complex queries.

Reaching new customers:

Bot platforms such as Facebook messenger are one of the most popular apps.

Being continuously active on these platforms helps companies reach new customers who may otherwise not want to reach out to the company with an e-mail or call.

Gaining a deeper understanding of understanding of customers:

Your customers are rarely talk to your business.

Chatbots provide your business with detailed actionable records of your customers greatest pain points, helping your company improve its products and services.

Future scope of Chatbots:

It would be wrong or ignorant to say that chatbot is evolving and their evolution will become complete in 2020

Chatbots evolved in 2018 and are more intelligent as well as humans than ever.

The successful adoption of chatbots by end-users has led to use of more and more bots in advanced artificial intelligence technologies.

Even there are reports that 80-85 % of business will be deploying advanced chatbots by 2022.

Probable trends of Chatbot

Giving Humanlike experience

If you are talking about personalized customer experience and offering services which are like the ones provided by humans

The advancement in artificial intelligence and machine-learning in todays era has made chatbot services more like human-like and even impeccable.

AI chatbot apps:

Speaking of desktop and mobile apps, the ones whose interface is powered by AI and processed by chatbots.

They have the capability of providing flawless delivery and quick access of the required data at the beck and calla of users

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Developing NLO tech for automated calls:

It simply serves as a boon for automated call centers

This technology is so advanced that the best failure is the absence of downtime.

Serving a wide range of customer base all around the day and that too without any hassles is what the NLO is designed for and it can help in solving the problems 24/7

Suited virtual assistants:

In today's era, many smart phone users are simply downloading these types of apps for getting virtual assistance.

It is easier to use applications now and the automation of any kind related to customer service is simply possible.

This is due to the ability of chatbots to combine many applications into a single task that can accelerate the development and growth of a business.

Faster problem solving:

If you really want faster clarifications for your various queries, it is easy.

You can achieve that by using handheld devices like tablets ,smartphones and wearables such as smart watches. In addition, smart tv are becoming one of the major integrations for voice assistants like Siri, Alexa, Google assistant.

NLP for chats (Interactive ones):

Natural Language Programming helps in giving an enhanced human experience , thereby making the chatbots more interactive

No doubts , chatbots are a great help for e-commerce stores where most of the customer issues can be filtered and move them to various consumers for clarifying their doubts.

With chatbots we know where things are heading to the future

For AI and Chatbot, the future is coming one way or another, and that can't be avoided.

Related Work

Code snippet screenshot :

1.

```
from tkinter import *
root=Tk()

def chatbot():
    send="you -> "+e.get()
    txt.insert(END,"\n"+send)
    j=send.split()
    k=len(j)
    #print(j)

    for l in range(0,k):
        if(j[l]=="hi" or j[l]=="hello"):
            txt.insert(END,"\n"+"BOT ->Hello!, I am LPU chatbot")
            #txt.insert(END,"\n"+"BOT ->\n")
            #chatbot()

    for l in range(0,k):
        if(j[l]=="college"):
            for m in range(0,k):
                if(j[m]=="name"or j[m]=="What is your college name"):
                    txt.insert(END,"\n"+"BOT ->Our college name is LOVELY PROFESSIONAL UNIVERSITY - PUNJAB ")
                    #txt.insert(END,"\n"+"BOT ->\n")
                    #chatbot()
    for l in range(0,k):
        if(j[l]=="college"):
            for m in range(0,k):
                if(j[m]=="accredited"or j[m]=="Is your college is accreited or not"):
                    txt.insert(END,"\n"+"BOT ->Yes this is an accredited college")
                    #txt.insert(END,"\n"+"BOT ->\n")
                    #chatbot()
    for l in range(0,k):
        if(j[l]=="college"):
            for m in range(0,k):
                if(j[m]=="fees"):
                    txt.insert(END,"\n"+"BOT ->It is 90000 per semester but we provide scholarship ")
                    #txt.insert(END,"\n"+"BOT ->\n")
                    #chatbot()
```

Making two arrays to store the data for each statement and the answer for each data is stored in the array

2.

```
                #chatbot()

for l in range(0,k):
    if(j[l]=="scholarship"):
        txt.insert(END,"\n"+"BOT ->It depends on the marks obtained in LPUNEST or Jeemains score or board exams ")
        #txt.insert(END,"\n"+"BOT ->\n")
        #chatbot()

for l in range(0,k):
    if(j[l]=="lpunest"):
        txt.insert(END,"\n"+"BOT ->It is an entrance exam conducted by LPU")
        #txt.insert(END,"\n"+"BOT ->\n")
        #chatbot()
for l in range(0,k):
    if(j[l]=="lpunest"):
        for m in range(0,k):
            if(j[m]=="score" and j[m+1]=="required"):
                txt.insert(END,"\n"+"BOT ->90% above for getting good scholarship!")
        #txt.insert(END,"\n"+"BOT ->\n")
        #chatbot()

for l in range(0,k):
    if(j[l]=="college"):
        for m in range(0,k):
            if(j[m]=="acredited"):
                txt.insert(END,"\n"+"BOT ->Yes this is an accredited college")
                #txt.insert(END,"\n"+"BOT ->\n")
                #chatbot()

for l in range(0,k):
    if(j[l]=="college"):
        for m in range(0,k):
            if(j[m]=="hours"):
                txt.insert(END,"\n"+"BOT ->We are open 9 am - 5 pm Monday-saturday!")
                #txt.insert(END,"\n"+"BOT ->\n")
                #chatbot()

for l in range(0,k):
```

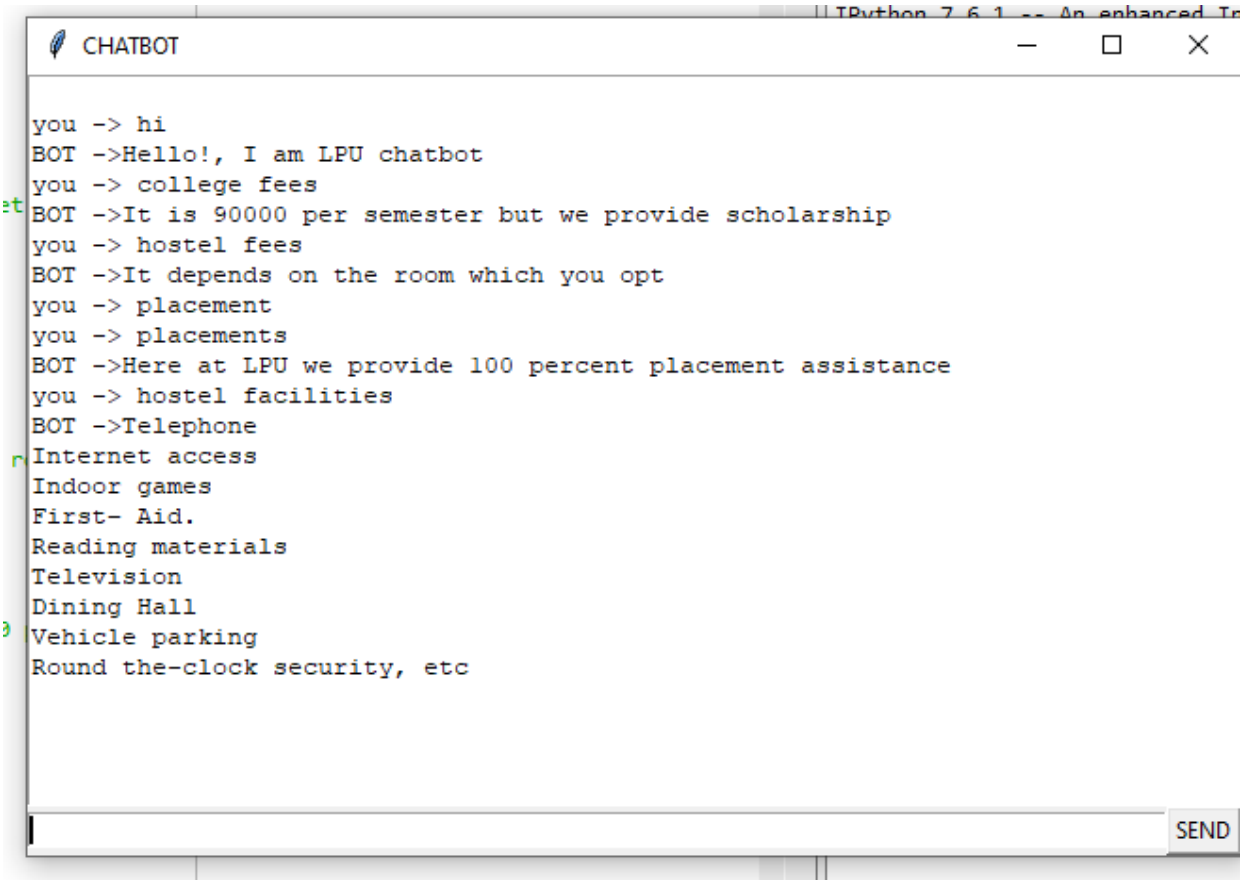
Data sets that contain the queries of the students and answers regarding for that.

3.

```
        if(j[l]=="hostel"):
            for m in range(0,k):
                if(j[m]=="facility"):
                    txt.insert(END,"\n"+"BOT ->Yes hostel facility is available within the campus")
                    #txt.insert(END,"\n"+"BOT ->\n")
                    #chatbot()


    for l in range(0,k):
        if(j[l]=="hostel"):
            for m in range(0,k):
                if(j[m]=="facilities"):
                    txt.insert(END,"\n"+"BOT ->Telephone\nInternet access\nIndoor games\nFirst- Aid.\nReading materials\n
                    #txt.insert(END,"\n"+"BOT ->\n")
                    #chatbot()


    for l in range(0,k):
        if(j[l]=="hostel"):
            for m in range(0,k):
                if(j[m]=="fees"or j[m]=="How much hostel fees"):
                    txt.insert(END,"\n"+"BOT ->It depends on the room which you opt")
                    #txt.insert(END,"\n"+"BOT ->\n")
                    #chatbot()

    for l in range(0,k):
        if(j[l]=="Placements"or j[l]=="placements"):
            txt.insert(END,"\n"+"BOT ->Here at LPU we provide 100 percent placement assistance")
            #txt.insert(END,"\n"+"BOT ->\n")
            #chatbot()


    #if(e.get()=="hello"):
        #txt.insert(END,"\n"+"Bot -> hi")
    e.delete(0,END)

```

Data sets that to implement the instant answers to the users.

Output:



This is the GUI interface that deals with the chatbot answers and it is used by the end users.

Code Snippet Screenshot for Code 2 (without GUI)

1.

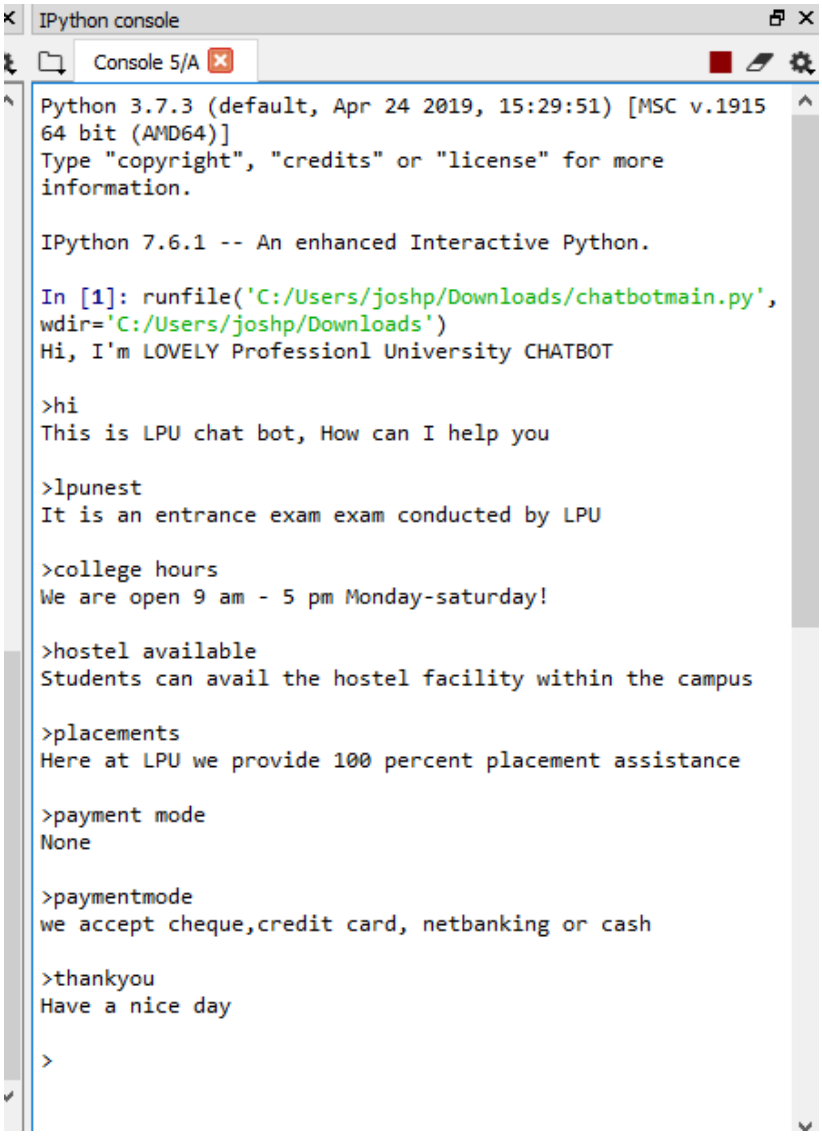
```
from nltk.chat.util import Chat, reflections

conversations= [
    [
        r"hi|hey|hello",
        ["Hello!, I am LPU chatbot","This is LPU chat bot, How can I help you"]

    ],
    [
        r"(.*) college accredited|college accredited(.*)|college accredited",
        ["Yes this is an accredited college"]

    ],

    [
        r"(.*) college fees|college fees|college fees(.*)",
        ["It is 90000 per semester but we provide scholarship ","Per semester it costs around 90000 but you can get schola

    ],
    [
        r"(.*) scholarship|scholarship|scholarship (.*)",
        ["It depends on the marks obtained in LPUNEST or Jeemains score or board exams ","Scholarship can be availed throu

    ],
    [
        r"(.*) lpunest|lpunest (.*)|lpunest",
        ["It is an entrance exam exam conducted by LPU","Every year LPU conducts an enrance exam called LPUNEST"]

    ],
    [
        r"(.*) pay college fee| (.*) installments",
        ["yes,but permission of HOD is required","This require permissions from higher authorities","You need to state the

    ],
    [
        r"(.*) college hours|college hours|college hours (.*)",
        ["We are open 9 am - 5 pm Monday-saturday!","Monday - Saturday from 9 - 5 and sunday is a holiday"]
```

2.

```
        ["cheque,debit card,netbanking,credit card and cash are acceptable","we accept cheque,credit card, netbanking or ca

    ],
    [
        r"(.*) hostel (.*) available (.*)|(.*) hostel (.*) available |(.*) hostel available|hostel available|(.*) hostel av
        ["yes, hostel facility is available ","Students can avail the hostel facility within the campus"]

    ],
    [
        r"(.*) facilities available in hostel| facilities available in hostel",
        ["Telephone\nInternet access\nIndoor games\nFirst- Aid.\nReading materials\nTelevision\nDining Hall\nVehicle parkir

    ],
    [
        r"(.*) hostel fees (.*)|(.*) hostel fees| hostel fees (.*)|hostel fees",
        ["It might be an average of Rs 57500/-","This depend on the type of room you choose"]

    ],
    [
        r"(.*) placements (.*)|(.*) placements|placements (.*)|placements",
        ["Here at LPU we provide 100 percent placement assistance","Every year LPU students get placed at top MNC's"]

    ],
    [
         r"(.*)Thankyou(.*)|(.*)thank you|thankyou(.*)|thankyou",
         ["Have a nice day","We are always to serve you,Thank you!!","Thank you"]
    ],

    ]
def chatbot():
        print("Hi, I'm LOVELY Professionl University CHATBOT ")
        chat = Chat(conversations, reflections)
        chat.converse()
if __name__ == "__main__":
    chatbot()
```

This is the dataset that contain the data like placement etc. queries of the users

3.



This is output of the above code and it doesn't have the GUI

We divided the work on equal basis and both of us gave the data set in two of the programs and half of the report was done by praneeth and another half done by Prakash and both of us discussed the logics that implemented on two codes.

And project was already uploaded in GITHUB by both of us under one repository

Link of the project in Git Hub:

https://github.com/praneethambati/Chatbot

Implementations

Firstly, we showed the project that equipped with GUI and sir told us to do improve logics using the dataset

So, we had chosen the second code that is not equipped with GUI.

References

www.lifechatbots.com

www.dataflairtraing.com

Textbook: Building chatbots with Python.