

Chatbot:

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

Why are chatbots 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.

Problem Statement:

Send the information to the user about the information of the courses . Also email him the details of the course, and intimate the support team about the new enquiry with the phone no

Case :

1. User says hi or similar phrase
2. Bot welcomes user and asks him to choose any of the option provided in the message
3. User enter the course
4. Bot prompts for user name, email id, and phone number
5. Bot send an email to the user with the course info
6. Bot also send an email to support with the user name and mobile id for further followup
7. Bot asks user for any other query?
8. User replies with either Yes or no
9. If yes, it goes back to the step 2
10. Else it ends the conversation

1. Sign in to Dialogflow
2. Go to console
3. Create a new agent as “iNeuron”

Dialogflow iNeuron SAVE

en

Intents +

Entities +

Knowledge Partial

Fulfillment

Integrations

Training

Validation

History

General Languages ML Settings Export and Import Environments Speech Share Advanced

DESCRIPTION

Describe your agent

DEFAULT TIME ZONE

(GMT+6:00) Asia/Almaty

Date and time requests are resolved using this timezone.

GOOGLE PROJECT

Project ID	ineuron-hnqdlf (Google Cloud ?) Actions on Google ?
Service Account	dialogflow-qjchcy@ineuron-hnqdlf.iam.gserviceaccount.com

4. Provided with Default Welcome and Default Fallback intent

5. Created entity as follows to match the course name:

course_name SAVE

☒ Define synonyms ? ☐ Regexp entity ? ☐ Allow automated expansion

☐ Fuzzy matching ?

MachineLearningMasters	MachineLearningMasters
DeepLearningMasters	DeepLearningMasters
NLPMasters	NLPMasters
DataScienceMasters	DataScienceMasters

Click here to edit entry

+ Add a row

6. To serve our problem statement, created the following intents
 - a. Course selection

course_selection SAVE

Training phrases ? Search training phrase

Add user expression

NLP

ML

Machine Learning

Data science

Deep learning masters

DeepLearningMasters

NLPMasters

MachineLearningMasters

DataScienceMasters

Created actions and parameters, asking the user to enter the following required fields along with the prompts. The user input is checked against the system entities provided by dialogueflow.

• course_selection ⓘ SAVE ⋮

Action and parameters ^

REQUIRED ⓘ	PARAMETER NAME ⓘ	ENTITY ⓘ	VALUE	IS LIST ⓘ	PROMPTS ⓘ
<input checked="" type="checkbox"/>	course_na	@course_name	\$course_name	<input type="checkbox"/>	Enter the cours... ↑ ⋮
<input checked="" type="checkbox"/>	cust_name	@sys.any	\$cust_name	<input type="checkbox"/>	Please enter yo...
<input checked="" type="checkbox"/>	email_id	@sys.email	\$email_id	<input type="checkbox"/>	Please enter yo...
<input checked="" type="checkbox"/>	contact	@sys.phone	\$contact	<input type="checkbox"/>	Please enter yo...
<input type="checkbox"/>	Enter nam	Enter entit	Enter value	<input type="checkbox"/>	—

+ New parameter

Created Response text:

Responses ⓘ ^

DEFAULT GOOGLE ASSISTANT +

Text Response

1

We have sent the details to your email id. Do you have any further query?

2

Enter a text response variant

ADD RESPONSES

☐ Set this intent as end of conversation ⓘ

Fulfillment is enabled, where there will be a webhook call to python program and the mails will be sent as per the requirement.

Fulfillment ⓘ ^

☒ Enable webhook call for this intent

☐ Enable webhook call for slot filling

- b. If the user replies that he wants to ask some more questions, then this intent will be called.

• continue_conversation ⓘ SAVE ⋮

Contexts ⓘ ▾

Events ⓘ ▾

Training phrases ⓘ Search training phrs 🔍 ^

” Add user expression

” yes

” yes i have

Where bot may respond as:

Responses ⓘ ^

DEFAULT GOOGLE ASSISTANT +

Text Response 🗑

1	Please enter your question
2	Tell me the query
3	Enter a text response variant ▴ ▾

ADD RESPONSES

☐ Set this intent as end of conversation ⓘ

c. This intent is to end the conversation

• end_conversation

SAVE

⋮

Contexts ⓘ

Events ⓘ

Training phrases ⓘ

Search training phrase 🔍

” Add user expression

” end

” thankyou

” no

This is set as “end conversation “after the response by the bot.

Responses ⓘ

^

DEFAULT GOOGLE ASSISTANT +

Text Response

🗑

1 Thank you for your interest. We will get back to you soon

2 Enter a text response variant

⬆⬇⬆

ADD RESPONSES

☒ Set this intent as end of conversation ⓘ

7. Go to Fulfillment tab and enable webhook.

Webhook

ENABLED

Your web service will receive a POST request from Dialogflow in the form of the response to a user query matched by intents with webhook enabled. Be sure that your web service meets all the [webhook requirements](#) specific to the API version enabled in this agent.

URL*

https://7eefe374.ngrok.io/webhook

BASIC AUTH

Enter username

Enter password

HEADERS

Enter key

Enter value

Enter key

Enter value

+

 Add header

8. Also enabled “SmallTalk” to handle user’s questions like “How are you” etc

Small Talk

SAVE

Your agent can learn how to support small talk without any extra development. By default, it will respond with predefined phrases. Use the form below to customize responses to the most popular requests.

User: How are you?

Agent: Wonderful as always. Thanks for asking.

User: You're so sweet.

Agent: Thanks! The feeling is mutual.

Enable

9. Upgraded knowledge base for FAQ type of questions, by uploading FAQ file which consists of only two columns with no headers as per the prerequisites

FAQ

SAVE

Search documents

Document Name	Knowledge Type	Mime Type	Source/Path
FAQ (View Detail)	FAQ	text/csv	File uploaded

+ New Document

Understanding python components:

1. Initiated route /webhook from bot
2. app.py/webhook () method is called
3. get the request from bot
4. go to processRequest
 - a. extract entities
 - b. using reponse id , log the details into the file what user says
 - c. read course name and extract related template for the mail message
 - d. send mail to student & send mail to support
 - i. Sendmail.py : extract configuration details using config.ini
 - ii. Prepare messages and send the mails
 - e. Prepare the 'bot says' message and log it into the file
 - f. Prepare fulfillment text as the result
 - g. Return to the webhook()
5. Using the result returned makeResponse in json format
6. Return the response to the bot

Heroku deployment:

1. Created Git Repository as “**GoogleDialogueFlow_iNeuronCourseBot**”
2. Created Procfile to run app.py
3. Created requirements.txt with important modules or packages listed to run the app
4. Sign up to heroku and create new app

Create New App

App name

ineuron-course-info

ineuron-course-info is available

Choose a region

United States

Add to pipeline...

Create app

5. In “Deploy” tab Select ‘GitHub’ as deployment method
6. Connect to your repository created in step 1

App connected to GitHub

Code diffs, manual and auto deploys are available for this app.

Connected to [sandmadh/GoogleDialogueFlow_iNeuronCourseBot](#) by [sandmadh](#)

Disconnect...

Releases in the [activity feed](#) link to GitHub to view commit diffs

7. Go to Manual Deploy and click ‘Deploy Branch’

Manual deploy

Deploy the current state of a branch to this app.

Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more](#)

Choose a branch to deploy

master


Deploy Branch

Your app was successfully deployed.

View

8. Get the heroku url and fill in the fulfillment section as follows:


Webhook

ENABLED 

Your web service will receive a POST request from Dialogflow in the form of the response to a user query matched by intents with webhook enabled. Be sure that your web service meets all the [webhook requirements](#) specific to the API version enabled in this agent.

URL*	<input type="text" value="https://ineuron-course-info.herokuapp.com/webhook"/>	
BASIC AUTH	<input type="text" value="Enter username"/>	<input type="text" value="Enter password"/>
HEADERS	<input type="text" value="Enter key"/>	<input type="text" value="Enter value"/>

9. Lets test the bot now:

Try it now 


See how it works in Google Assistant.

Agent

USER SAYS COPY CURL
hi

DEFAULT RESPONSE
Welcome to iNeuron. Following are the list of courses offered: 1. Data Science Masters 2. Machine Learning Masters 3. NLP Masters 4. Deep Learning Masters. Please select a course

INTENT
Default Welcome Intent

Try it now 

See how it works in Google Assistant.

Agent

USER SAYS COPY CURL
Machine learning

DEFAULT RESPONSE
Please enter your name

CONTEXTS RESET CONTEXTS
c81fb92-d0df-4b5f-b104-cffa39384eb2_id_dialog_context
course_selection_dialog_context

See how it works in Google Assistant.

Agent

USER SAYS COPY CURL
sandhya

DEFAULT RESPONSE
Please enter your email id

CONTEXTS RESET CONTEXTS
c81fb92-d0df-4b5f-b104-cffa39384eb2_id_dialog_context
course_selection_dialog_context
course_selection_dialog_params_contact


See how it works in Google Assistant.

Agent

USER SAYS COPY CURL
sandhya_mulay@yahoo.com

DEFAULT RESPONSE
Please enter your contact no

CONTEXTS RESET CONTEXTS
c81fb92-d0df-4b5f-b104-cffa39384eb2_id_dialog_context
course_selection_dialog_context
course_selection_dialog_params_contact
system_counters

Try it now 

See how it works in Google Assistant.

Agent

USER SAYS COPY CURL
9833722988

DEFAULT RESPONSE
We have sent the course syllabus and other relevant details to you via email. An email has been sent to the Support Team with your contact information, you'll be contacted soon. Do you have further queries?

INTENT
course_selection

ACTION

10. heroku logs:

```
2020-04-22T11:50:25.931740+00:00 app[web.1]: 10.5.212.115 - - [22/Apr/2020 11:50:25] "POST /webhook HTTP/1.1" 200 -
```

10. The mails received are:

a. Mail to the support:

yahoo!mail

Find messages, documents, photos or people

Compose

Back

Archive Move Delete Spam

sandhya.mula... 999+

sandhya_m... 999+

Inbox 999+

Unread

Starred

Drafts 6

Sent

Archive

Spam

Trash

Less

Views Hide

Photos

Documents

Deals

Receipts

Groceries

sandhya.mulay20@gmail.com <sandhya.mulay20@gmail.com>

Hi,

The details of the student showing interest in our courses is as follows:

Student Details.

Student Name	Course	Contact Number
Sandhya Mulay	Machine learning	9833 722988

b. Mail to the user:

sandhya.mulay20@gmail.com <sandhya.mulay20@gmail.com>

To: sandhya.mulay20@gmail.com and 17 more...

Wed, Apr 22, 2020

MachineLearningMasters.pdf

Hi,

Greetings from iNeuron!

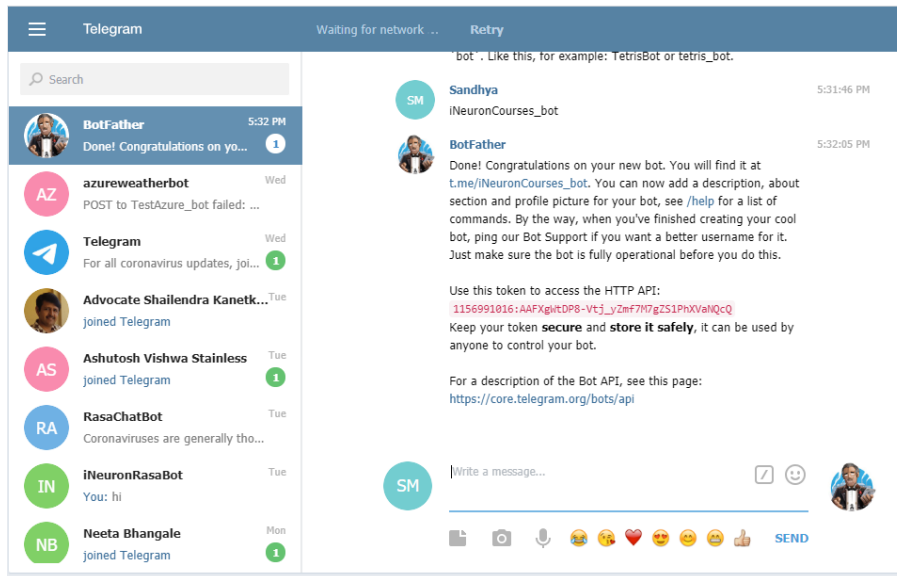
Thank you for showing interest in our Data Science Masters Program, We have attached the course curriculum and other details below for your reference.

1.Batch Projection with Quotation.

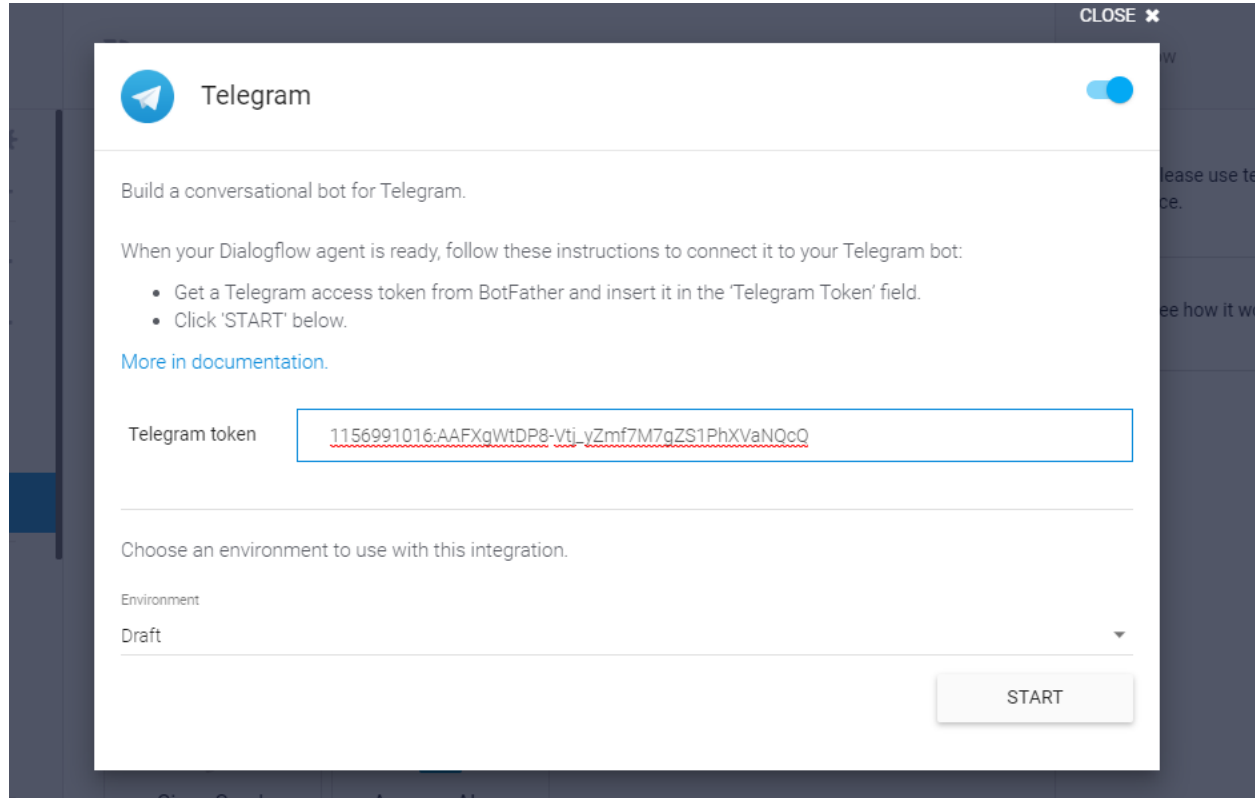
Sr no	Course	Added Benefits	Scheduled days	Timings	Standard course fee
1	Data Science Masters	Real-time projects + 24*7 online support + Job placement assistant			40,000 INR + GST

Intergration with Telegram:

11. Got to telegram and search for botfather,
12. Create a new bot using /newbot, give botname and username
13. Copy the generated access token



14. Go to dialogueflow → click on intergration → click on telegram enable and input the access token and click start



The communication with the bot has started:

IN

iNeuronCourses
Please enter your email id

5:45:15 PM

SM

Sandhya
sandhya_mulay@yahoo.com

5:45:41 PM

IN

iNeuronCourses
Please enter your contact no

5:45:57 PM

SM

Sandhya
9833722988

5:46:07 PM

Unread messages

IN

iNeuronCourses
We have sent the course syllabus and other relevant details to you via email. An email has been sent to the Support Team with your contact information, you'll be contacted soon. Do you have further queries?

5:46:38 PM

SM

Write a message...

IN

SEND

The mails have been received as follows one to the user and one to the support

<input type="checkbox"/>	● sandhya.mulay20...	🔍	★	iNeuron Course Details	MachineLearningMasters.pdf Hi, Greetings fro...
<input type="checkbox"/>	● sandhya.mulay20@gm...		★	LEAD GENERATED	Hi, The details of the student showing interest in our...