

Project Based Learning Report

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CERTIFICATE

This is to certify that the seminar report entitled “**CHAT-BOT USING DIALOGFLOW**” being submitted by **Jyoti pawar (Exam Seat No.S190348562)**, **Prajwal Said (Exam Seat No.S190348565)**, **Sneha Salunke (Exam Seat No.S190348566)**, **Shital Jadhav(Exam Seat No.S190348572)** is a record of bonafide work carried out by her under the supervision and guidance of Prof.**A.D.Khairkar** in partial fulfillment of the requirement for **SE (Information Technology Engineering) – 2019 course** of Savitribai Phule Pune University, Pune in the academic year 2021-22.

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ABSTRACT

Chat-bots are poised to revolutionize User Interface design. Here's a quick summary of what chat-bots are all about technology.

Chat-bots, or conversational interfaces as they are also known, present a new way for individuals to interact with computer systems. Traditionally, to get a question answered by a software program involved using a search engine, or filling out a form. A chat-bot allows a user to simply ask questions in the same manner that they would address a human. The most well known chat-bots currently are voice chat-bots: Alexa . However, chat-bots are currently being adopted at a high rate on computer chat platforms

. A simple chat-bot can be created by loading an FAQ (frequently asked questions) into chat-bot software. The functionality of the chat-bot can be improved by integrating it into the organization's enterprise software, allowing more personal questions to be answered, like "What is my balance?", or "What is the status of my order?".

Most commercial chat-bots are dependent on platforms created by the technology giants for their natural language processing. These include Microsoft Cognitive Services, Google Cloud Natural Language API, and IBM Watson. Platforms where chat-bots are deployed include Facebook Messenger, Skype, and Slack, among many others.

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ABBREVIATIONS

- 1.NLP: Natural Language Processing
- 2.AI: Artifical Intelligence
- 3.API: Application Programming Interface

CHAPTER 1

Introduction To Chatbot Using Dialogflow

1.1 Introduction to Seminar

Chatbot is a simple computer program that attempts to simulate human conversation using Artificial Intelligence. It uses AI to simulate conversation with user through messaging chats or voice commands.

These bots are used in many service areas as an information provider in online mode. Nowadays, making a Chatbot with Google Dialogflow is quite easy.

In this article, we will present some notions about Dialogflow and Chatbots. Then, we will talk about how to create a simple Chatbot with Dialogflow Platform.

1.2 Motivation behind project topic

As we all know chatbots square measure a really fashionable approach of communication between the user the system text interface. we have a tendency to wished to use this system to implement college web site for a additional economical communication between the coed and administration. Students will use school web site chatbot for Queries rather than about to workplace or authorities directly for info. College web site based mostly bots square measure accustomed develop effective communication between different branches and facilitate management to produce innovative solutions. Our Project to create a university web site chatbot would undoubtedly have a bright scope as this could bring a modification within the approach of interaction between school and students .

This Project would inspire alternative schools still to develop internet chatbots to Ease the communication between Management and Students

1.2 drawback Definition: Traditionally, the chat larva system isn't renowned to those who don't seem to be additional into the technology. Even if there exist a talk larva system, it's not abundant correct in proving the solution or solutions.

Students got to manually visit to the school to induce their queries answered by the school facilitate table. This method consumes ton of your time still as cash because the client required to go to school if its miles removed from home. Also, this method might cause communication gap between student and school.

1.3 Organization of the report

In chapter one of chat-bot presentation we get to know it's uses in different types of buisness to introduce their apps in smart way. Our main motto behind this that students will use college website chat-bot for queries rather than about to workplace or authorities directly for info. The chapter two tells us how chat-bot is developed with the help of Google owned Dialog-Flow interface which is commonly used to create Chat-bots or NLP based Chat-bots. Components of dialog-flow are User can be Humans or Machine Text Query/Voice Query:- The user interacts with an app like Facebook messenger / Google-home to start the interaction with the bot. Dialog-flow is the Chat-bot platform used to create Fresher agent. Virtual agent is AI virtual character which is a Chat-bot. Intent is a specific action that can be invoked by the user in the Dialog-flow console using one of the defined terms. In chapter three we have specified some advantages and disadvantages those are Sentiment analysis, User-Friend, Incorporates Google features, Swift and more efficient coding, Can express itself via natural conversation, Can handle small talks, Powered by Google's machine learning. Disadvantages are as follows .Chat-bots can only handle basic questions, Chat-bots require constant maintenance. In chapter four we have compared with similar apps/tools some of applications already in use for building chat-bots are Active-Chat, Bot-mother, Amazon lex, Drift, Flow XO. It also shows comparision between what is dialog-flow and amazon lex. What it includes ?,Pros and Cons, companies using dialog-flow are paralect, lumeno.com, Commombond and companies using amazon lex are shelf, caravelo, vonder.

CHAPTER 2

SYSTEM ARCHITECTURE AND ALGORITHMS

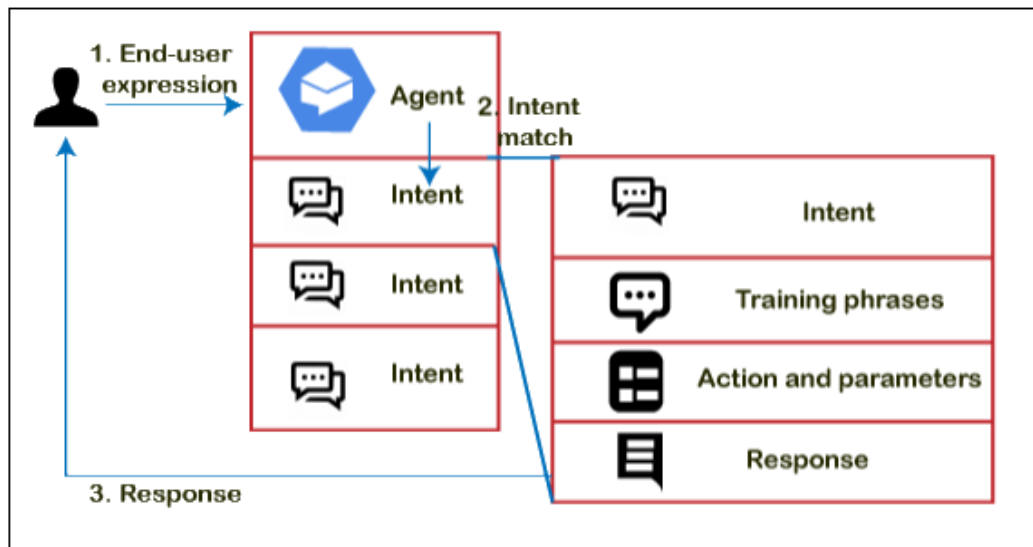


Fig. Components of Dialogflow

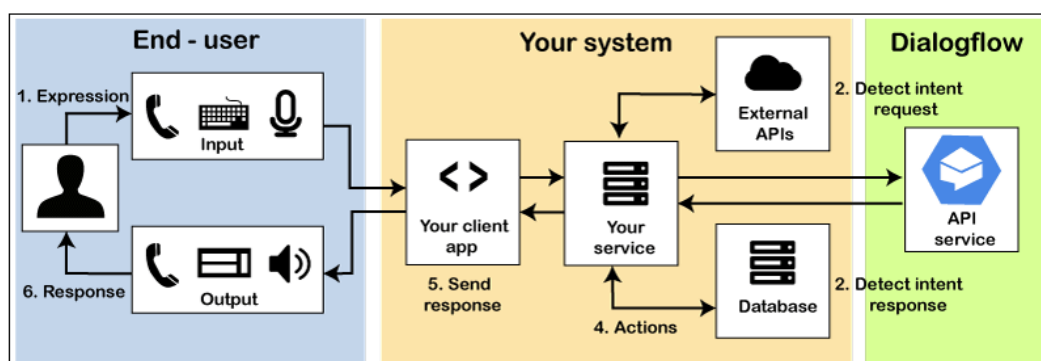


Fig. User Interactions with API

This Chatbot is developed with the help of a Google owned DialogFlow interface which is commonly used to create Chatbots or NLP based Chatbots. NLP enables machines to understand instructions provided in normal English in order to make computers easier to understand. It is “Build-once and deploys everywhere development suite” for developing interfaces for business websites, mobiles applications, messaging platform and so on. It also offers a new analytical tool that can help in assessing usage patterns, latency issues and high intents of the agent. Because of GUI (Graphical User Interface), users who are not from a technical background can also easily build AI based Chatbot using DialogFlow.

Components of DialogFlow:

Following are the components of DialogFlow used for designing Chatbot:

- ☐ User: - User can be Humans or Machines
- ☐ Text Query/Voice Query:-The user interacts with an app like Facebook messenger / Googlehome to start the interaction with the bot.
- ☐ Dialogflow: -This is the Chatbot platform used to create Fresher agent.
- ☐ Virtual Agent:A Virtual agent is AI virtual character which is a Chatbot.
- ☐ Intent: - Intent is a specific action that can be invoked by the user in the Dialogflow console using one of the defined terms.

Training Phrase:

When a user queries the agent, the Chatbot will try to match the defined phrases to match the user’s phrases. Based on these phrases the Chatbot will answer the user’s queries. If these phrases are described in various ways, then Chatbot can respond

effectively. The process of Chatbot is depicted in Figure 1. Figure 2 shows diagrammatic representation of user and Chatbot.

Platform Integration:

DialogFlow is the amazing platform since it supports inclusion into the Assistant app and also supports inclusion into more than 20 plus platforms such as twitter, Facebook, Slack, Viber, Kik, Twitter, etc

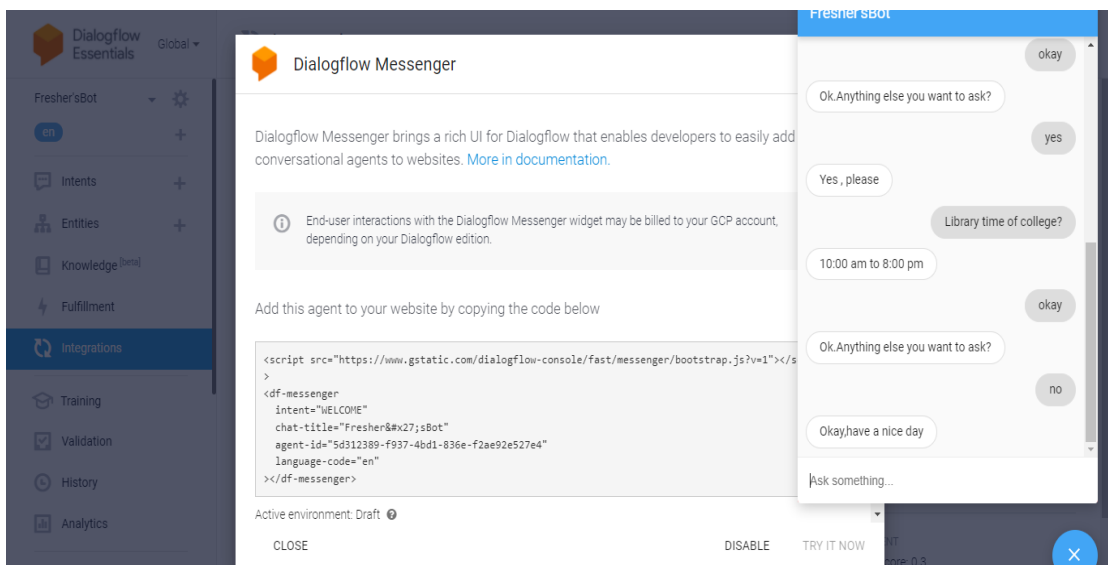
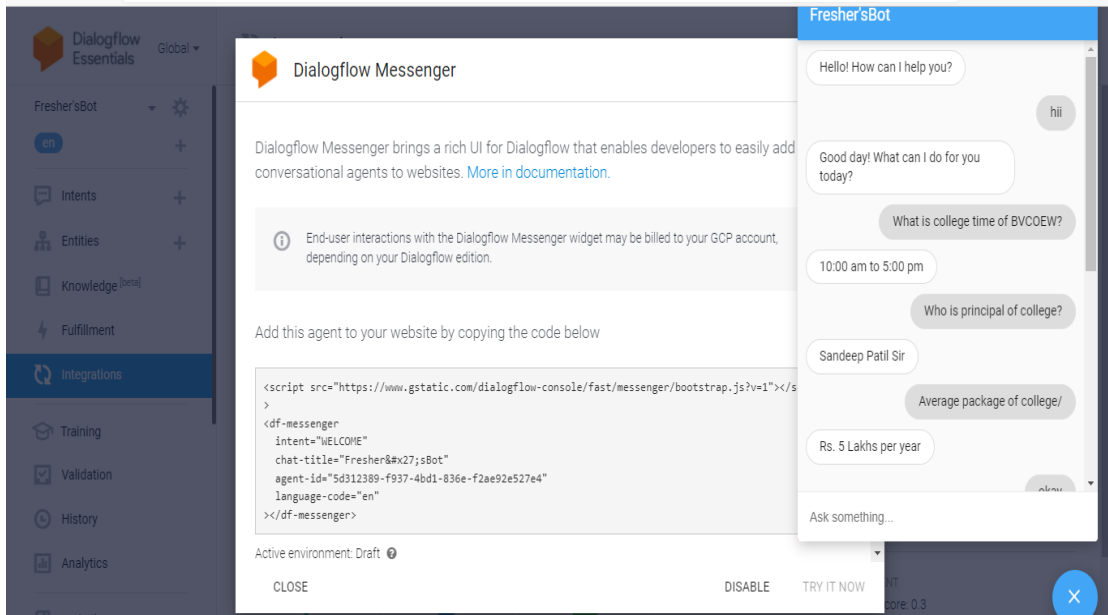
This Chatbot is integrated by clicking the Integrations choice in the left panel to generate a web demo for present agent and then press the Dialogflow Messenger button. Enable it and use.

Algorithm

1. Create an agent
2. Create an intent
3. Add training phrases section
4. Add responses
5. Enable integration , go to Dialogflow Console.

CHAPTER 3

APPLICATIONS



Advantages of Dialogflow

There are various advantages of the Dialogflow:

1. Sentiment analysis
2. User-Friendly
3. Incorporates Google features
4. Swift and more efficient coding
5. Can express itself via natural conversation
6. Can handle small talks
7. Powered by Google's machine learning.

Disadvantages of Dialogflow

1. .Chatbots can only handle basic questions
2. Chatbots require constant maintenance

CHAPTER 4

COMPARISON WITH SIMILAR APPS/TOOLS

Similar applications/tools already in use for building chatbot:

- ActiveChat
- Botmother
- Chatmatic
- Amazon Lex
- Drift
- Flow XO

Comparison between Dialogflow and Amazon Lex:

	Dialogflow	Amazon Lex
What is?	Gives user new ways to interact with your product by building engaging voice and text-based conversational apps.	Build conversational voice and text interfaces , using the same deep learning technologies as ALEXA.
Includes	1.OOTB integration with Messenger and you may use the Web Demo integration provided to embed it to your website. For Messenger, you even	1.Lex provides the advanced deep learning functionalities of automatic speech recognition (ASR) for converting speech to text,

	<p>have some responses such as image responses, card responses and for those that are not available you can use custom payload.</p> <p>2.It has a very nice visual builder which can be easily used by non-technical builders.</p> <p>3.Fulfillment allows you to easily integrate your APIs.</p>	<p>and natural language understanding (NLU) to recognize the intent of the text.</p> <p>2.To enable you to build applications with highly engaging user experiences and lifelike conversational interactions.</p>
Pros	<p>1.Easy console</p> <p>2.Built in chat to test your</p> <p>3.model</p> <p>4.Easy integration</p> <p>5.Great voice</p>	<p>1.Built-in conversational agents</p> <p>2.Custom Webhooks</p> <p>3.OOTB integrations</p> <p>4.Great interface</p> <p>5.Multi Lingual</p>
Cons	<p>1.Multi lingual</p> <p>2.Can't be self-hosted</p>	<p>1.English only</p>
Companies Using	<p>1.Paralect</p> <p>2.Lumeneo.com</p> <p>3.CommanBond</p>	<p>1.Shelf</p> <p>2.Caravelo</p> <p>3.Vonder</p>

CONCLUSION

We have reported design and development of AI based Chatbot for handling fresher's questions in college. This agent provides information related to placement activities to students. NLP module of DialogFlow translates student's queries into structured data in order to understand institute's service.

The advantages of this Chatbot are listed here:

- ☐ This system helps new students to get information related to college queries easily and quickly.
- ☐ This Chatbot provides very rich and wealthy interface to users as they feel chatting with real person.
- ☐ Students need not to physically visit the institute for inquiry because this Chatbot can answer most of their queries.

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