© 2017 IJSRST | Volume 3 | Issue 1 | Print ISSN: 2395-6011 | Online ISSN: 2395-602X
Themed Section: Science and Technology

MEDIBOT

S. Suresh Kumar, M. Praveen Raj, N. A. Sreeshma, R. Sachidhanandham
Department of Computer Science and Engineering, Sri Ramakrishna Engineering College, Coimbatore, India

ABSTRACT

Artificial Intelligence is taking over the world. Different real life solutions are coming up from this field. Chat bots are introduced for intelligent conversation with human. Our medibot is a medical assistance chat bot which does instant research on people's problems and prescribes medicine and assistance without any delay. It is a personal healthcare companion to the customers. Medibot can be imported in various chat platforms. The Natural Language Processing identifies the keywords or intents and triggers the required action to be performed.

Keywords : Artificial Intelligence, Natural Language Processing, Chat bot, Medical Assistance

I. INTRODUCTION

Artificial intelligence (AI) is knowledge shown by machines. In software engineering, the field of AI research characterizes itself as the investigation of "intelligent agents": any gadget that sees its condition and takes activities that amplify its risk of achievement at some goal. Colloquially, the expression "artificial intelligence" is connected when a machine impersonates "subjective" capacities that people connect with other human personalities, for example, "learning" and "critical thinking" (referred to as Machine Learning). As machines turn out to be progressively skilled, mental offices once thought to require knowledge are expelled from the definition. For instance, optical character acknowledgment is no longer seen as a model of "artificial intelligence", having turned into a routine technology. Capabilities at present named AI incorporate effectively understanding human speech, contending at an abnormal state in vital amusement frameworks, (for example, Chess and Go), self-driving autos, insightful directing in substance conveyance systems, and translating complex information. AI research is separated into subfields that emphasis on particular issues or on particular methodologies or on the utilization of a specific device or towards fulfilling specific applications.

The focal issues (or objectives) of AI research incorporate thinking, information, arranging, learning, normal dialect handling (correspondence), recognition and the capacity to move and control objects. General insight is among the field's long haul goals. Approaches incorporate factual strategies, computational knowledge, and conventional typical AI. Many apparatuses are utilized as a part of AI, including forms of search and numerical advancement, rationale, techniques in light of likelihood and financial matters. The AI field draws upon software engineering, science, brain science, etymology, logic, neuroscience and artificial psychology.

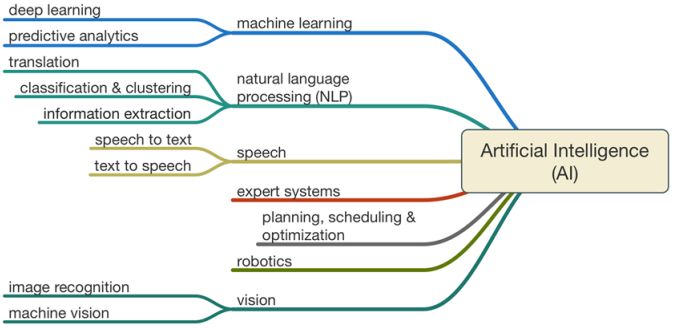

Figure 1. Artificial Intelligence

A chatbot (otherwise called a talkbot, chatterbot, Bot, chatterbox, Artificial Conversational Entity) is a PC program which directs a discussion by means of sound-related or literary strategies. Such projects are regularly intended to convincingly reenact how a human would carry on as a conversational accomplice, subsequently finishing the Turing test. Chatterbots are normally utilized as a part of discourse frameworks for different down to earth purposes including client administration or data procurement. Some chatterbots utilize refined natural language processing systems, however numerous more straightforward frameworks examine for catchphrases inside the information, then force an answer with the most coordinating watchwords, or the

most comparable wording design, from a database. The expression "ChatterBot" was initially authored by Michael Mauldin (maker of the principal Verbot, Julia) in 1994 to portray these conversational programs.

II. METHODS AND MATERIAL

1. Existing System

In the existing system there are various consumer service websites available which are used for various services including medical assistance but the website does not provide instant responses and suggestions.

2. PROPOSED SYSTEM

A. Analysis and Generation of Entities, Intents And Contexts

Agents can be depicted as NLU (Natural Language Understanding) modules for applications. Their motive is to transform natural user language into actionable data. Machine Learning is a tool that permits your agent to understand user inputs in natural language and convert them into structured data, extracting relevant parameters. In the API.AI terminology, the agent uses machine learning algorithms to match user requests to specific **intents** and uses **entities** to extract significant data from them. Entities represent concepts and serve as a effective tool for extracting parameter values from natural language inputs. An intent represents a mapping between what a user says and what action should be taken by your software.

Intent interfaces have the following sections:

- User says
- Action
- Response
- Contexts

Contexts are strings that represent the current context of a user's request. This is helpful for differentiating phrases which may be vague or have different meanings based on the user's preferences or geographic location, the current page in an app, or the point of discussion.

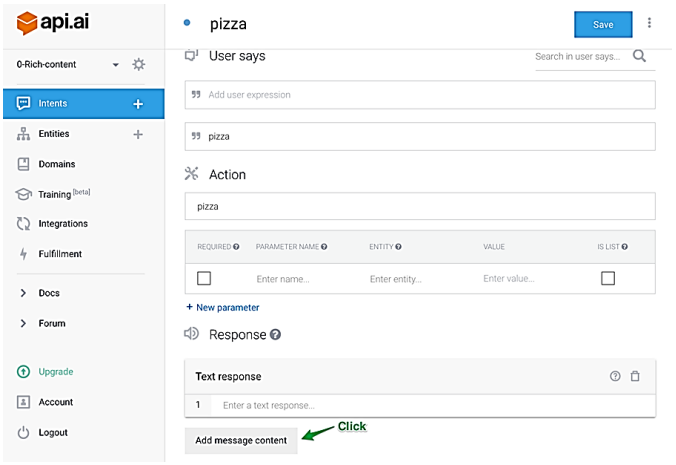

Figure 2. Generating intent and response

B. Setting up Server And Webhook

Go is the system programming language that provides standard HTTP protocol support in its standard library, which makes it easy for developers to build and get a web server running very quickly. Meanwhile, Go offers developers a lot of flexibility. ngrok is used as a tunnel between the local host to server.

Webhook integration permits you to pass information from a matched intent into a web service and get an outcome from it.

Authentication can be done in 2 ways:

- basic authentication with login and password
- with additional authentication headers

If integrated service does not require any authentication, leave the authentication fields blank. The service should preferably use HTTPS. When an intent in which a webhook was enabled is triggered, API.AI sends data to the service in form of POST request with a POST body in the format of a response to query. If a request is sent from one of the messaging platforms, the "originalRequest" field is appended to the response to a query. This format is chosen in order to streamline the response parsing on the service side with the assistance of API.AI SDKs.

III. RESULTS AND DISCUSSION

Integration/Hosting on Heroku

API.AI Facebook Integration permits you to easily create Facebook Messenger bots with natural language understanding based on API.AI technology. Log in to the Facebook Developer Console and select 'Add a New App' from the 'My Apps' menu. In the Product Setup, tap on 'Get Started' in the Messenger section. On the Messenger Platform welcome page, click 'Get Started'. On the following page, select a Facebook page in the Token Generation section. Create a Facebook page. Select the page to get Page Access Token. Copy it to the clipboard. Create an API.AI agent with the assistance of the API.AI NLU technology tools.In the left side menu, click Integrations and enable Facebook Messenger integration. Create Verify Token and insert it into the 'Verify Token' field and paste the Facebook Page Access Token in Facebook app settings. Then, click 'Start' to launch Facebook Messenger bot.Go back to the Facebook app settings and click 'Setup Webhooks' in the Webhook section. To set up the webhook, do the following:

Go to API.AI agent settings, copy the Callback URL and insert it to the 'Callback URL' field. Fill in the FB_VERIFY_TOKEN field with the token created in API.AI agent settings. Check the "messages" and "messaging postbacks" checkboxes. Click the 'Verify and Save' button and wait until the "Complete" status appears. Create an API.AI agent with the help of the API.AI NLU technology tools. In the left side menu, click Integrations and enable Facebook Messenger integration. Then, click on the 'Deploy to Heroku' button.

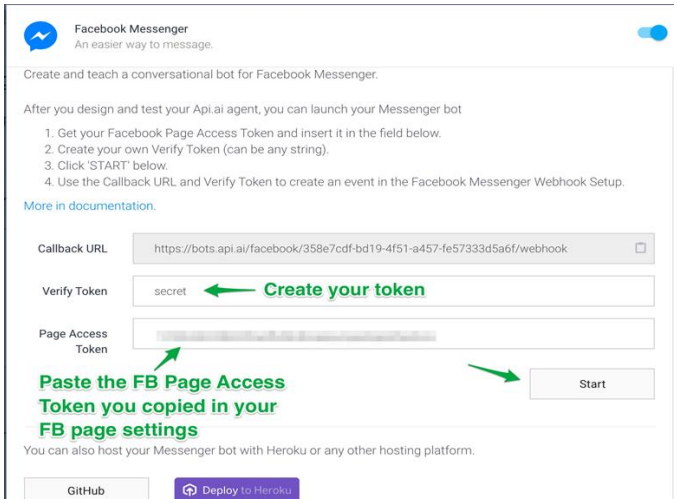

Figure 3. Integrating with Heroku

On the Heroku app settings page, fill in the following fields:

App Name – insert app name that will be used in Facebook app settings.

FB_VERIFY_TOKEN – create verification token (can be any string) that will be used in Facebook app settings.

FB_PAGE_ACCESS_TOKEN – paste the token that have been generated in the process of the Facebook app creation.

Click the 'Deploy for Free' button . Then "Your app was successfully deployed." appears.

IV. CONCLUSION

Thus the "Medibot" does instant research on people's problems and prescribes medicine and assistance without any delay . It provides as a personal healthcare companion to the customers. It helps you find the nearby pharmacies in ease. It has instant response. It is also portable across messaging platforms.

V. FUTURE ASPECT

Future enhancements like purchasing the medicines from retailers based on locality and establishing one to one conversations with doctors available can be implemented.

VI. REFERENCES

[1]. Bayu Setiaji, Ferry Wahyu Wibowo, "Chatbot Using A Knowledge in Database",2016 7th International Conference on Intelligent Systems, Modelling and Simulation , Pg 72 – 75

[2]. Anirudh Khanna, Mansee Jain, Deepa Singh, Tanesh Kumar Bishwajeet Pandey, Vikas Jha, "Anatomy and Utilities of an Artificial Intelligence Conversational Entity", 2015 International Conference on Computational Intelligence and Communication Networks, Pg.595– 597

[3]. Amiya Kumar Tripathy, Rebeck Carvalho, Keshav Pawaskar, Suraj Yadav, Vijay Yadav "Mobile Based Healthcare Management using Artificial Intelligence", 2015 International Conference on Technologies for Sustainable Development (ICTSD 2015), Feb.04-06, 2015, Mumbai, India

[4]. Jeesoo Bang, Hyungjong Noh, Yonghee Kim, Gary Geunbae Lee, "Example- based Chat-oriented Dialogue System with Personalized Long-term Memory",2015 IEEE, Pg 238 - 243

[5]. R. D. SCHRAFT, C. SCHAEFFER , T.MAY, "Care-O-botTM: The Concept of a System for Assisting Elderly or Disabled Persons in Home Environments" , IEEE 1998, Pg 2476 –2481