

# Development of Exemplary Chatbot

R. Vignesh, S.Divya, R.Revathy, S.Deepa, P.Anitha



**Abstract:** Chatbots By the means of development and applications everyone needs to know the importance of chatbots. The goal is to answer after developing the chatbots by analysing existing platforms and technologies. Describing chatbots helps people to create chatbot and use them for showcasing and thereby accelerating the creation of the chatbot ecosystem. First need to define, the first half of the work by focuses on showing visible platforms, products and technologies, the second half of creation helps the development including user creation and system architecture.

**Keywords:** Chatbot.



Fig:1 The interface for Alison, On the Beach’s travel assistant.

## I. INTRODUCTION

First general introduction about chatbots, the purpose of using and developing it are shown. Then from media how chatbots are evolved in the industry. But don't know about chatbot usage. Even developers also don't know about this. By identifying the existing products use case of chatbots can be known. Usage of chatbots can be analysed by media. Development can be explained by creating real chatbot using it in real principles.

## LITERATURE SURVEY

### Alison: A virtual chatbot for booking beach holidays

During beach holidays, U.K based site giving permissions to users to book best hotel and flight deals. Alison a virtual chatbot is available to you around and also they will answer more common user questions.

## EXISTING WORK

Before working on new technology, one should analyse existing work and learn from existing ideas, both successful and failed attempts. This work and lot of events from the last

century, which helps the new ideas that initiate the present working definition of a chatbot. It is not only an attempt to give overview about the history of computing, but also the aim is to clarify where the interest if creating chatbots by understanding the concept by originating.

## ELIZA – THE FIRST CHATBOT

Joseph Weizenbaum started working on first program to pass a variation of the Turing Test after 14 years when the Turing Test was introduced. He started his work at MIT Artificial Intelligence Laboratory in year 1964 and deliver the ELIZA programming in 1966. This only considered as the first creation of a chatbot. Actually ELIZA creates a chatbot that responds to messages via a text-using mad slip programming language, the original version of ELIZA was written. One of the most famous implementation was called as DOCTOR and it simulates a Rogerian psychotherapist. It is a therapy intended helps clients to realize their own attitudes and behaviour.

## MATERIALS USED

My chatbot is based on Smart Travelling. The industry where chatbots are demand increasing is travel industry. So they introduced travel chatbot which either provides automated customer service websites or which operates through a messaging platform such as Facebook Messenger or WhatsApp app to help a traveller and guide them with booking travel. Few companies are influencing natural language processing and a constant messaging interface to invent virtual travel assistants that not only enforce like travel bots but also have other more familiar features, like providing finance departments, spending analytics about business traveller's. For project IBM cloud was used. This is quite easy when compared to any other clouds or websites or any other else.

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\* Correspondence Author

**R. Vignesh**, Assistant Professors, Sathyabama Institute of Science and Technology

**S.Divya**, Assistant Professors, Sathyabama Institute of Science and Technology

**R.Revathy**, Assistant Professors, Sathyabama Institute of Science and Technology

**S.Deepa**, Assistant Professors, Sathyabama Institute of Science and Technology

**P.Anitha**, Assistant Professors, Sathyabama Institute of Science and Technology

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# Development of Exemplary Chatbot

We have to create login id to access the IBM cloud. After creating access to the cloud search for the IBM Watson Assistant where we are going to build chatbot. To launch Watson Assistant we need some credentials which is safe and secure to access. Next process is to launch Assistant. After this process Watson Assistant will open. We can see the option as built a chatbot. By opening it we find Assistant and Skills option.

By entering into skills option we can build chatbot. In this way chatbots are being developed in IBM Watson Assistant. There is no use coding in this chatbot. We should have the knowledge in creating intents, entities and more. Once the chatbot is done it can be checked in try out session which is right side.

## PROCESS TO CREATE CHATBOT

First process in creating a chatbot is to identify the chatbot need to do. Need to identify all required features and also address the working tasks. Implementing this in beginning will result in a robust chatbot. Conversational User Interfaces (CUIs) are open-ended by design: in which the customer can text any messages by sending it. Chatbots are usually a continuous chat that allowing any unlimited interactions between the bot and the user.

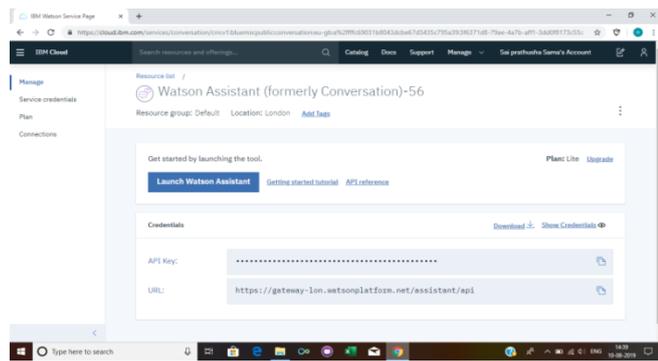


Fig 2 : Launch Watson Assistant

First open the IBM catalog page and then login with the credentials. Then search for the Watson Assistant. Watson Assistant will appear on the screen at where you can all the device credentials about Watson Assistant. Device credentials include API key, URL of the assistant. Above that you can observe Launch Watson Assistant. Start Watson Assistant it takes sometime to open the other page.

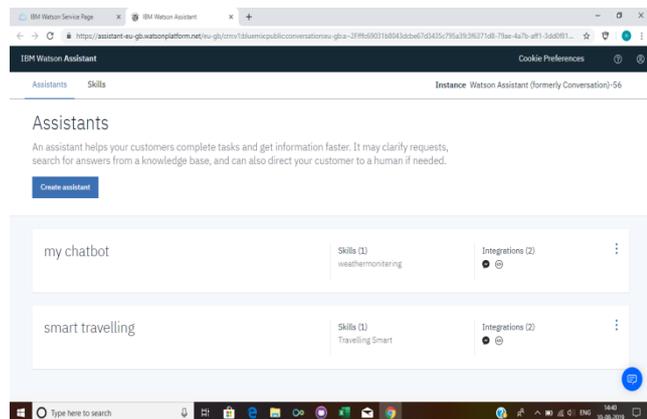


Fig 3: Assistants and skills

This page shows the existing chatbots that we have done earlier and the main thing is that these chatbots are connected to the link or Facebook Messenger. We have click the Assistant and import from the skill. At the end of the chatbot all will be shown here to go to the next level. In this page we can see assistants and skills. Assistants shows the existing chatbots whereas skills gives an opportunity to build a chatbot which we require.

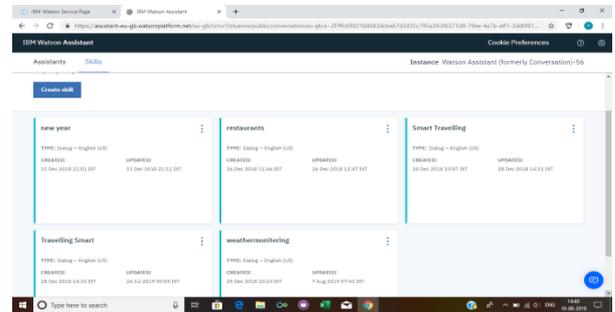


Fig 4 : Skills – Chatbot

Click on the create skill to create a new chatbot. The above picture shows the all created chatbots. Each and every chatbot are saved here. These chatbots will not have the connection with the Assistant until we import this chatbot to the assistant. This displays the date and time of the chatbot created and it also mentions the update when we have gone through. Skill also gives the information about the type of the chatbot prepared in a particular language. By creating skill we can see the following page.

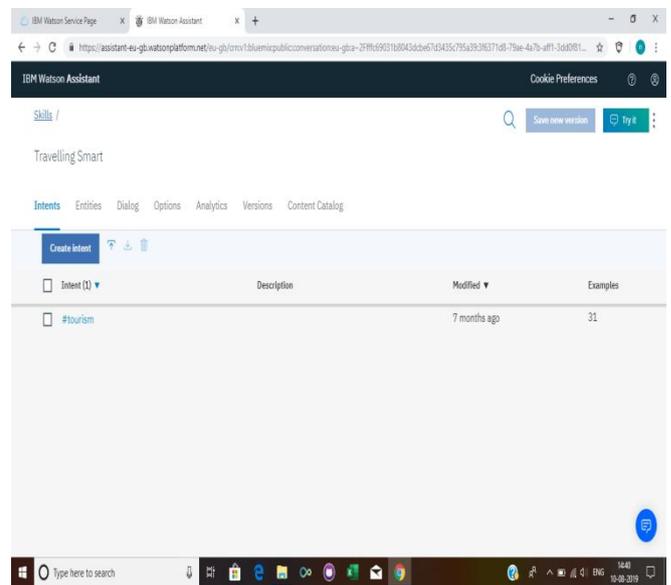
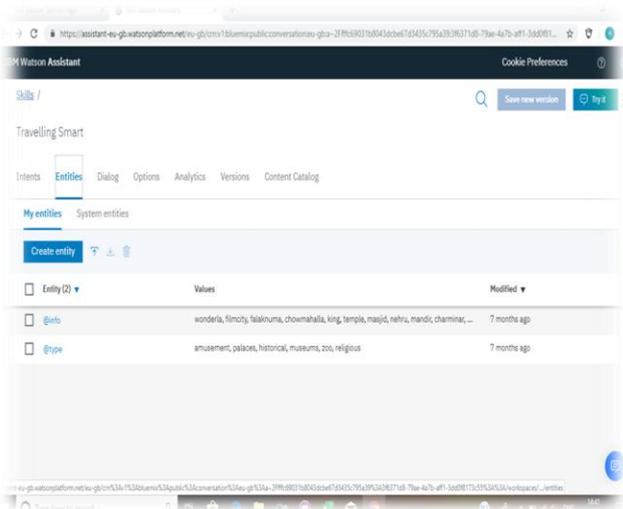


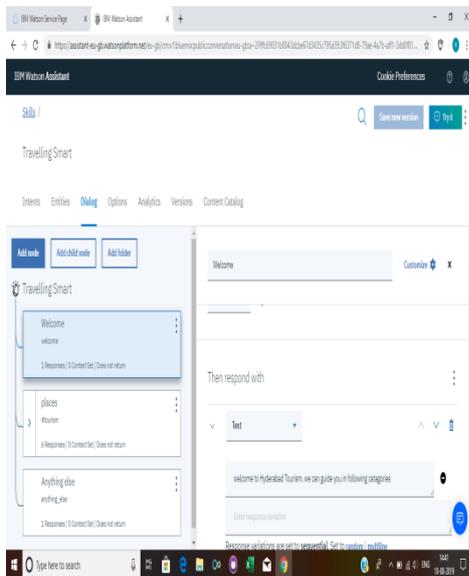
Fig 5. CreateIntents

After opening the skills we can the above page. We have Intents, Entities, Dialog to create the Chatbot. This helps us to follow step by step procedure. We have to create an Intent. This means that the user may ask any type question. So, some of the questions have been given to the system to identify the entities and provide answers for the users.



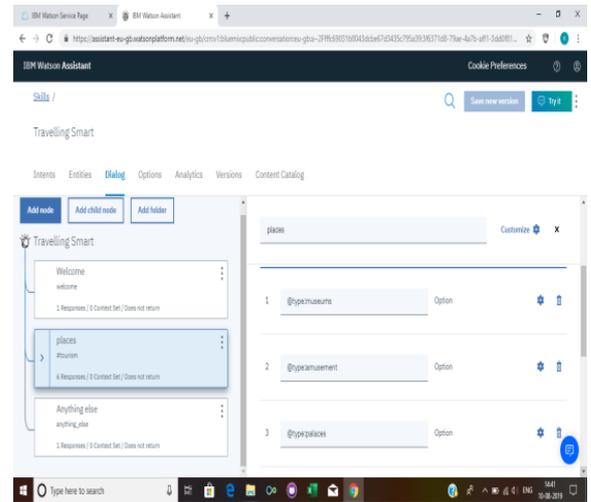
**Fig 6: Create Entities**

Click on the create Entity. We can create many entities according to our chatbot requirement. I have created the information of list of all tourist places located in Hyderabad. One of the entity is @type. This includes the places like amusement parks, zoo, museums, palaces, religious places, historical places. These all should be written in the dialog option which enables the chatbot to create the multiple responses. These entities are identified at the try out session when we make a trail on the chatbot. It particularly mentions which entity and intents have been used.



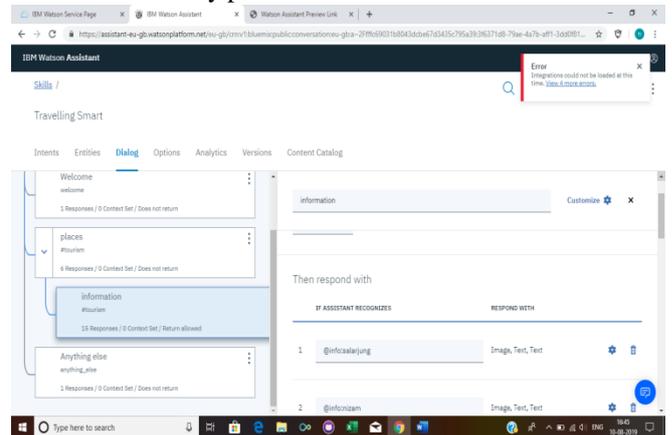
**Fig 7 : Create Dialog**

In this dialog we have some nodes. It has the inbuilt welcome and anything else node. We can add child nodes for the parent node and we can also add next node below the other node. In welcome dialog box we can create our own welcome address as well as we can write text, create option and add image to the welcome node. In my Chatbot I have used text option and wrote a dialog according to the chatbot



**Fig:8 Parent node**

and created the welcoming address. Below the welcome node add another node and give a name to the created new node. We should give either intent name or entity name to identify the particular intent or entity whether it is created or not. Then customize the dialog box into multiple responses. At each response add the entity and add the value of the entity. Beside this box we have settings option again click the multiple responses to add the option. For each and every entity I have added the option according to the entity. For amusement parks I have created the places which comes under that category in Hyderabad like Snow world, Ramoji Film city etc. For zoo places are Nehru zoological park etc. In this every entity is defined in such a way that user without texting he can click the option to see the results. Not only option we can also create text, add image to that dialog to create an effective chatbot. This chatbot can be done in many ways that a user can able to use in a simple and attractive manner without any problem.



**Fig 9: Child node**

We have added a child node below to the parent node add given a name accordingly. We have to give the intent name and entity name to identify whether it is present or not. Above we have given the places as option so we have created the dialog for the option when the user clicks on it. There is another entity for all the places where we have created another dialog node as child node. In this we have given multiple responses.

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Each and every response contains places names. These places are added with images and some information about the history, timings, travel time and distance etc. We can add any other features which are required. This looks attractive to the user to interact with the chatbot. With this chatbot creation is completed and we can try it out which in the right side of the page. It takes sometime to train the chatbot that is each and every part is well trained so that the chatbot can understand the user requirements to show the search results.

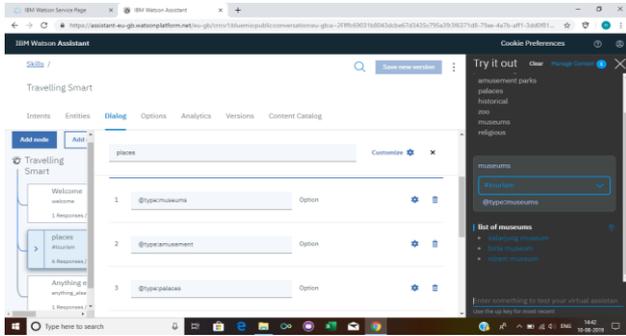


Fig 10: Resulting Chatbot

After completing the dialog option try it out whether the chatbot is trained or not. It shows the result of our chatbot. Welcome address will be shown first and the list of options that the user needs and the result will be displayed as above. In this we will have some key words to identify the user needs. User may ask any question but keywords which we have given will play major role. With that keywords chatbot identifies the user data and display the result. In the above the user asked about the museums. This keyword has been identified in the intent as well as in the entity which is displayed above the result and the search result comes out.

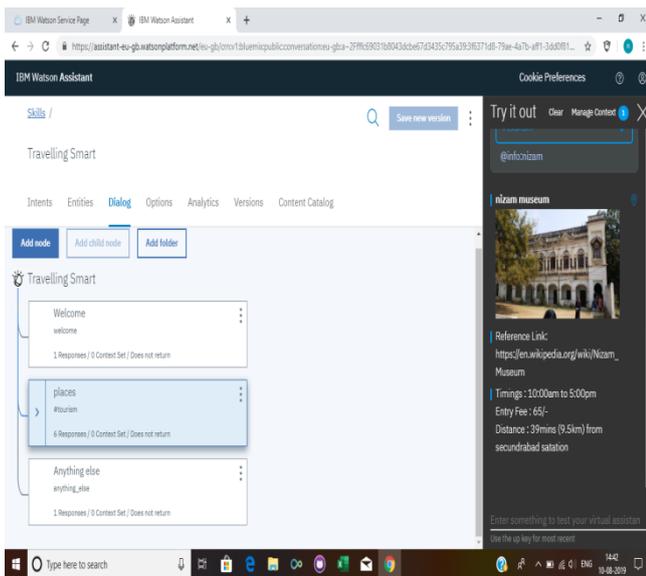


Fig 11: Search Result

As the user gave the input as museums there was a list of museums displayed on try it out. If the user types museum name or else if he clicks the name of the museum the above picture will be displayed. Search result contain details about

the museum like image, Wikipedia link, timings, travel time and distance. So this is the final result of chatbot.

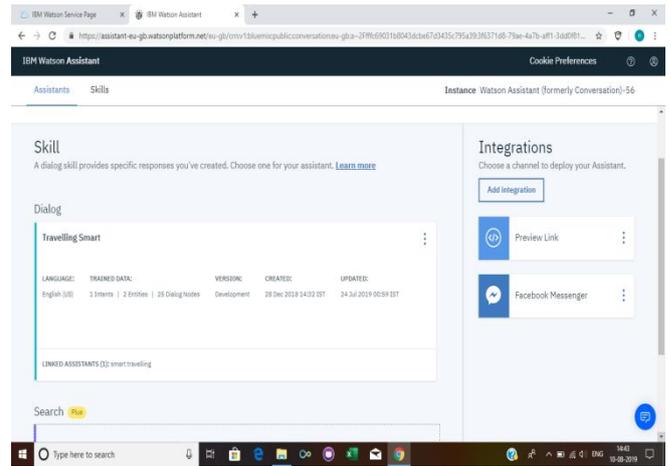


Fig 12: Adding Dialog to Assistant

Then the Dialog is added to the assistant after adding we can see the preview link and Facebook messenger option. We can connect chatbot to the Facebook messenger. Using facebook create a page and link it to the messenger. Click the preview link we can see the link which is a chatbot page. By clicking the link new tab will be opened and the chatbot will appear on the screen. This will be same as the try it out box with some changes. This looks like messenger chat. The user can chat comfortably with the system. Its easy to chat with chatbot rather than searching in google. Chatbot is the collection of all the information which the user requires. Preview link will be as shown in the below figure.

## II. RESULTS AND PERFORMANCE ANALYSIS

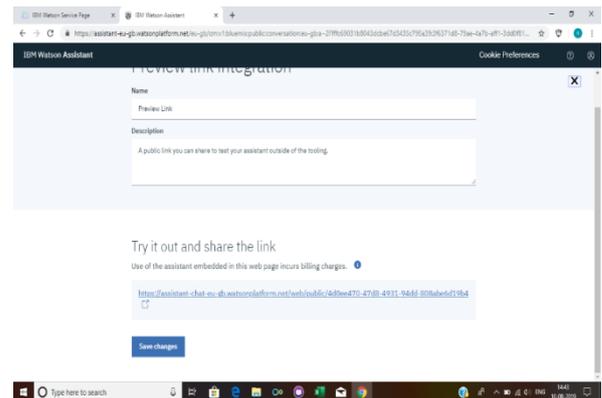


Fig 13: Preview Link

The above link will display the chatbot which was created. We can create name for the preview link and can add the description to it if needed. We can also share the link to show the chatbot display .

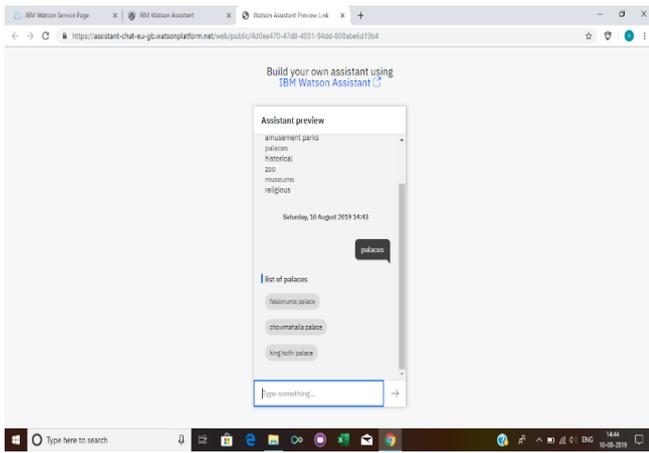


Fig 14 : Chatbot Page

The above picture of page will be displayed after clicking the link. In this user can chat in that page and can share information who ever needs.

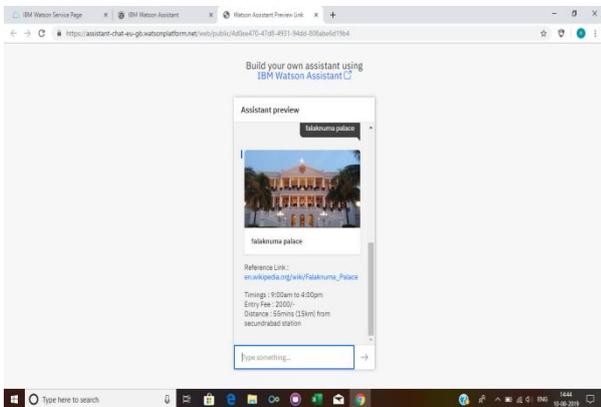


Fig 15: Result

Fig 15: All primary interactions are covered in the example chatbot

### III. CONCLUSION

Overall work gave an overview about ideas, products and platforms from the past and available chatbots available today. present interest in chatbots, its use cases and its limitations have been explained in detail. many aspects of its implementation and its working with interacting interfaces has been presented which includes user interaction also by use exemplary chatbot, While not all aspects can be covered within the context of this work, the goal was to give an overview about what chatbots are, their use cases and how to create them This knowledge will increase further possibilities of its usage.

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### AUTHORS PROFILE



**R.Vignesh** working as an Assistant Professor in sathyabama institute of science and technology, completed M.E in 2017 and pursuing my Ph.D in cloud domain. I published around 13 research papers in various domains.



**Divya.S** working as an Assistant Professor in sathyabama institute of science and technology, completed M.E in 2017 and pursuing my Ph.D in Machine Learning field.



**R.Revathy** working as an Assistant Professor in sathyabama institute of science and technology, completed M.E having 12 years of teaching experience and pursuing my Ph.D in Machine Learning field.



**Deepa.S** working as an Assistant Professor in sathyabama institute of science and technology, completed M.E in Anna University and pursuing my Ph.D in Machine Learning field



**Anitha.P** working as an Assistant Professor in sathyabama institute of science and technology, completed M.E Gold medallist in Anna University 2017 and pursuing my Ph.D in Machine Learning field.