



Project Report



Name of the Project : Chatbot to Shop for essentials during pandemic using Watson Assistant

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Introduction :

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.

The current pandemic has given rise to so many issues. There is a need for a chatbot in almost anything. Recently this has given rise to lockdown due to which essential services are effected.

Project Scope:

This project is intended to develop a chatbot which shows the list of essentials available. The chatbot is trained to greet the humans using it. It then shows the list of available items. The chatbot also shows the Special discounts and offers available. Not only this but the chatbot is also able to display cost of items, payment options. Lastly the bot is also able to take the order.

Literature Survey :

Following literature survey is done and papers are reviewed :

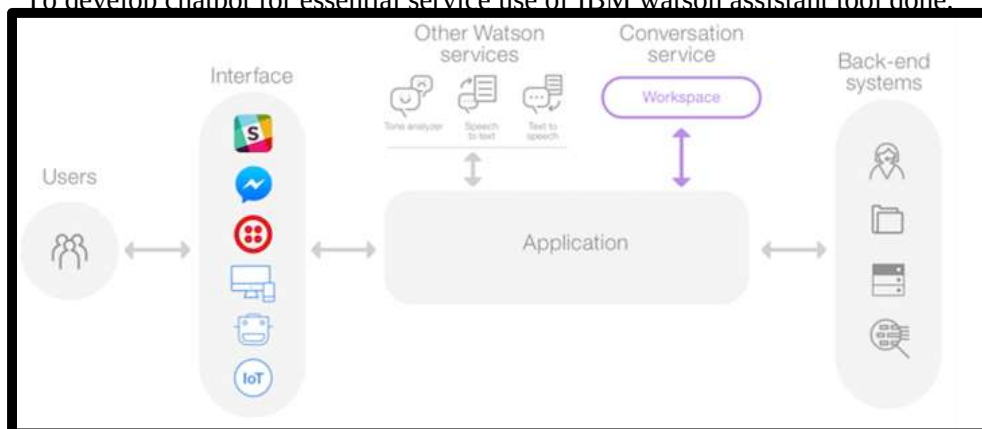
[1] The paper A Survey on Chatbot Implementation in Customer Service Industry through Deep Neural Networks, presents a survey on existing chatbots and techniques applied into it. It discusses the similarities, differences and limitations of the existing chatbots;.This paper also presented why current chatbot models fails to take into account when generating responses and how this affects the quality conversation.

[2]The paper ,A chatbot assistant for writing good quality technical reports ,describes a solution to help both students and supervisors detecting basic quality errors in FDP reports. Based on a chatbot front-end called Ikastenbot, students can upload their reports while they are writing them and spot, before publication, possible errors in spelling and grammar, text and images reuse, and lack of proper referencing. We applied the techniques described on the memories of our university FDP repository. Results show that Ikastenbot is able to detect errors in almost every report. The source code of our solution has been published under an open-source license

Project Implementation and working :

Services used :

To develop chatbot for essential service use of IBM watson assistant tool done.



Building Blocks of the Chatbot :

Intents ,Entities and Dialog

- ✓ For the current project following entities, Intents and dialogs are created

Dialog

My first skill

LANGUAGE: English (US) **TRAINED DATA:** 3 Intents | 7 Entities | 25 Dialog nodes **VERSION:** **DESCRIPTION:** ---

LINKED ASSISTANTS (1): My first assistant

Screenshots and Results:

- ✓ Intents Created :

| <input type="checkbox"/> Intents (3) ↑ | Description |
|--|-------------|
| <input type="checkbox"/> #enquiry | |
| <input type="checkbox"/> #Greetings | |
| <input type="checkbox"/> #order | |

- ✓ Entities Created :

| | |
|-----------------------------------|--|
| IBM Watson Assistant Lite Upgrade | |
| My first skill | |
| Intents | |
| Entities | |
| My entities | |
| System entities | |
| Dialog | |
| Options | |
| Analytics | |
| Versions | |
| Content Catalog | |

| <input type="checkbox"/> Entity (6) ↑ | Values |
|---------------------------------------|--|
| <input type="checkbox"/> @enquiry | items, offers, special items |
| <input type="checkbox"/> @greetings | good afternoon, good morning, good evening |
| <input type="checkbox"/> @items | Eggs, Milk, bread, Sugar |
| <input type="checkbox"/> @order | order |
| <input type="checkbox"/> @payment | COD, card |
| <input type="checkbox"/> @specials | Bread, Eggs, Milk |

- ✓ Dialog created :

IBM Watson Assistant Lite

Upgrade

My first skill

Intents

Entities

Dialog

Options

Analytics

Versions

Content Catalog

Add node

Add child node

Add folder

Welcome

welcome

1 Responses / 0 Context Set / Does not return

Greetings

#Greetings || @greetings

4 Responses / 0 Context Set / Does not return

#enquiry || @enquiry

3 Responses / 0 Context Set / Does not return

order

#order || @order:(order)

1 Responses / 3 Context Set / 3 Slots / Does not return

Anything else

anything_else

1 Responses / 0 Context Set / Does not return

Screenshots :

✓ Creation of Preview Link

Preview link integration

Integration name

Preview link

Description

A public link you can share to test your assistant outside of the tooling.

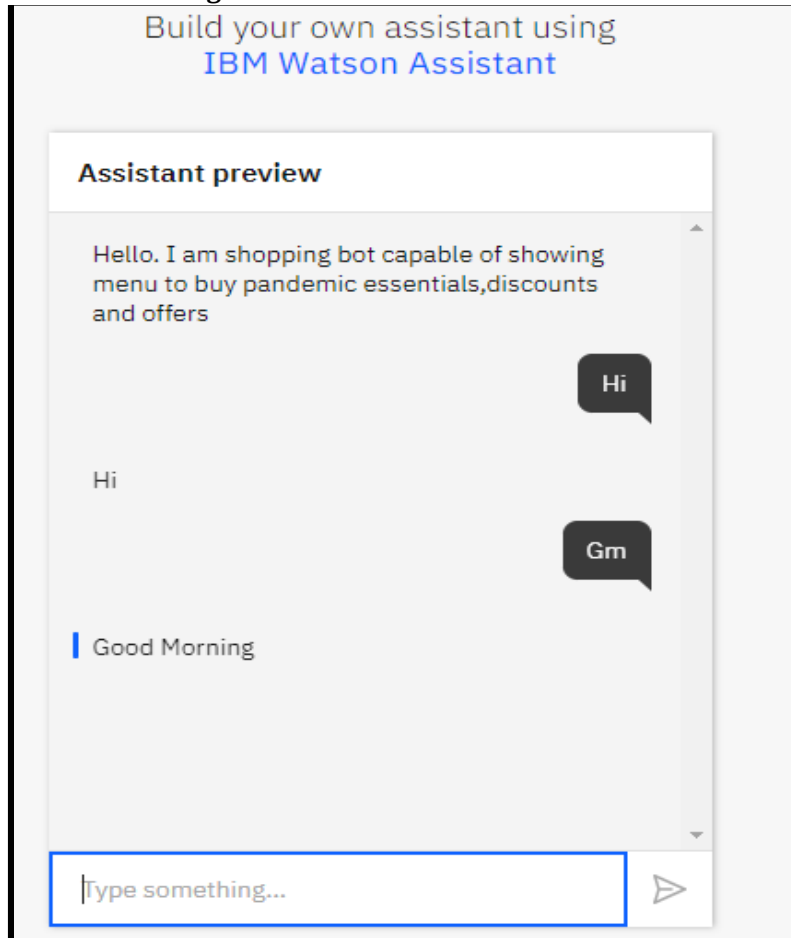
Try it out and share the link

Size of the assistant embedded in this web page incurs billing charges.

<https://web-chat-global.assistant.watson.cloud.ibm.com/preview.html?region=eu-gb&integrationID=455ecc51-4025-438f-b873-f90de4686265&serviceInstanceID=2566e1f1-2c22-4bb7-8857-3cc3c9960ef5>

Other Working Screenshots :

✓ **Greetings :**



List of Items,Offers discounts and Special Items

Build your own assistant using IBM Watson Assistant

Assistant preview

Good morning

Please show the list of items

Grains

- ☐ Brown or white rice
- ☐ Oatmeal
- ☐ Barley
- ☐ Corn meal or grits
- ☐ Store brand pasta

Dairy

- ☐ Skim milk
- ☐ Yogurt

Protein

- ☐ Beans and lentils
- ☐ Eggs
- ☐ Whole chicken
- ☐ Peanut butter

Fruits and Veggies

- ☐ Cabbage
- ☐ Potatoes
- ☐ Romaine
- ☐ Leaf lettuce
- ☐ Cauliflower
- ☐ Carrots
- ☐ Zucchini
- ☐ Cucumber
- ☐ Corn
- ☐ Bananas
- ☐ Melon
- ☐ Oranges
- ☐ Apples
- ☐ Frozen veggies on sale

Type something...



Offers:

Build your own assistant using IBM Watson Assistant

Assistant preview

What are the offers

We are having 10% off on fruits

We are having 5% off on Veggies

What are special items available

Special items

Milk

Eggs

Bread

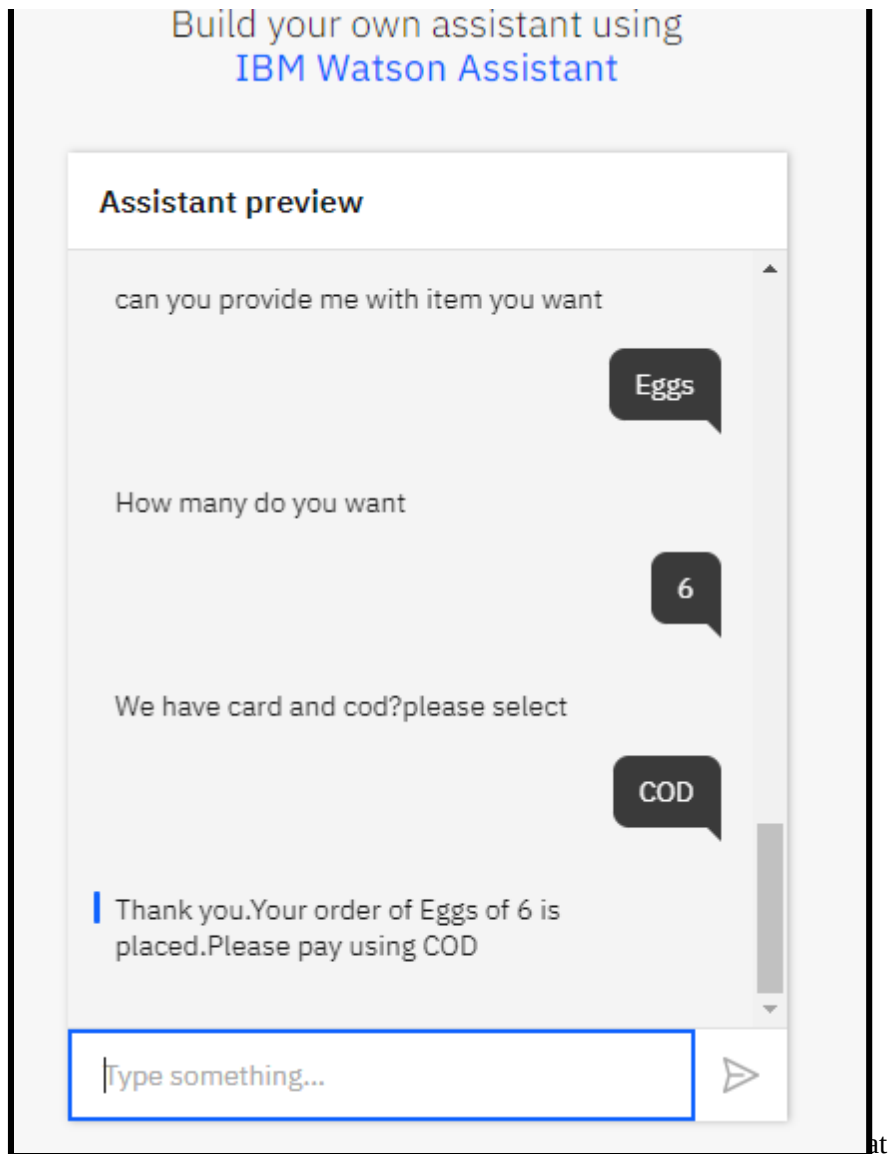
Milk

cost is 60

Type something...



Placing Order :



Conclusion and Future Scope :The chatbot can be used to order for essentials like milk bread and others during pandemic.IBM watson assistant is a nice tool to create chatbots .It provied easy integration too.In future we can generate bills and give to user .