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PYTHON HEALTHCARE CHATBOT BASED ON IBM WATSON ASSISTANT

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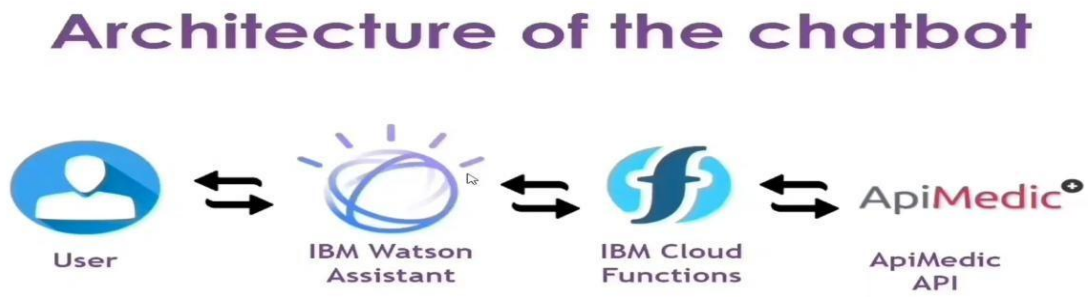
ABSTRACT
Healtcare and education, in my view, are next up for fundamental software based transformation. The Contribution of technology in health sector have become bigger and bigger day-by-day. The healthcare chatbot have become increasingly popular. Healthcare chatbot is a self diagnose tool for small and mild casses of health queries and issues. It can interact with us with our natural language with help of artificial intelligence and NLP. We have to improve it for our future generation.

Keywords:
Chatbot, Artificial intelligence, Natural language processing(NLP).

INTRODUCTION

A Healthcare Chatbot is an application that can communicate and interact with us with our natural language. The large amount of information and data that is available on the internet allows Chatbots to provide accurate information based on the our requirements. Chatbots are used in domains like Customer Support, Virtual Assistance,online payment system, Online Trainings, Online Reservations and also for general conversations. The proposed Medical Chatbot can interact with the users, giving them a realistic experience of chatting with a Medical Professional. Our Chatbot can detect human message patterns using IBM WATSON which is a based on **Artificial Intelligence** to build AI applications. It retrieves keywords from the initial messages to know the possible medical problems that the user has, based on their input.There are many latest technology used in our project like IBM cloud function,IBM Watson assistant and API Medic.IBM Watson assistant help to build,to deploy and to test our chatbot.IBM cloud function provide platform to run our application code.API medic provides medical data and information about the symptoms. There are few Medical Chatbots that already exist, but they do not provide users with medication to any illness but connect them with a Medical question answer Forum and show them similar questions to their symptoms that doctors may have previously answered.

Architecture of Healthcare Chatbot



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Featured technology

IBM Watson Assistant: Build, test and deploy a bot or virtual agent across mobile devices, messaging platforms, or even on a physical robot.

Python : Python is a programming language. Python can be used on a server to create web applications.
Python is a high-level, interpreted, interactive and object-oriented scripting language. Python is designed to be highly readable. It uses English keywords frequently where as other languages use punctuation, and it has fewer syntactical constructions than other languages.
IBM Cloud Function :- IBM Cloud function is a faas(function as a service) platform based on open whisk.
It provide the platform to run as application code without server and scale it automatically.
API Medic :- Api medic is an api which provide information about health issues we entered symptoms of the deseases.

Advantage :-

- Chatbot are able to give instant answering questions providing information.
- Healthcare chatbots are capable for providing suggestion treatment related to health.
- They are cost effective even most of the web applications chatbot provide free consultant.

METHODOLOGY

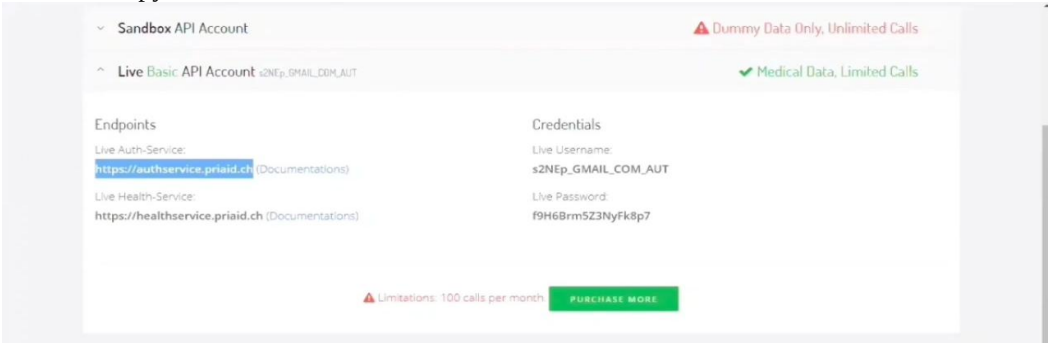
- **How to use API Medic in Python to get Medical data**

Step:1- Open an account in API Medic
Open browser →go to apimedic.com →click on sign up option→ Create an account
Step:2- Go to API Keys→ Click on live basic API accout → Get API credential.

- **How to use API Medic in python on IBM cloud function**

Step:1- Log in to IBM cloud function.
Open browser→go to cloud.ibm.com →create an account→log in
Step:2- Click on function→ action →Create → give the acion name → select run time Python 3.7 →Create → load Python script → save the python code → ends point →Enable web action→ save.

Step:3- Develop the code to call API in python and for user authentication and credential .Put the API credential in python code to access APIMedic.



Developing the chatbot using IBM WATSON Assistant.
Step: 1 - Login to IBM cloud account.

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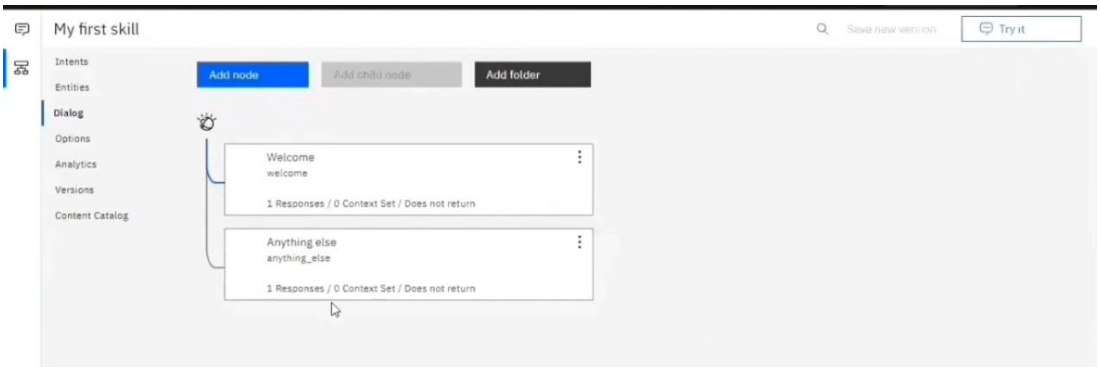
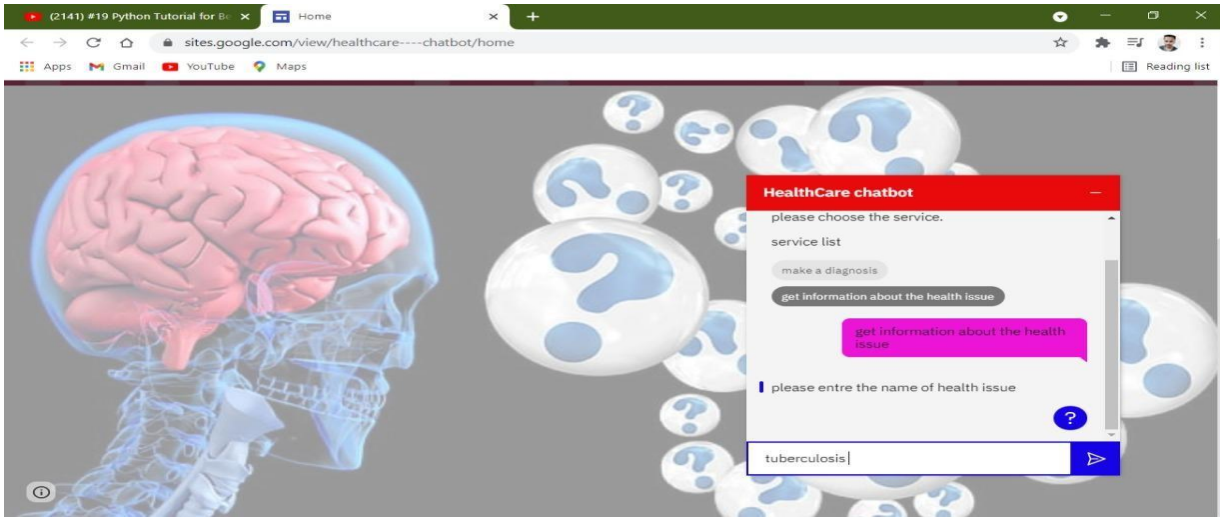
Step: 2 - Go to Dashboard.
Step: 3 - Click on WATSON ASSISTANT.
Step: 4 - Select the plan which you want.
Step: 5 - Click on create.
Step: 6 - Launch Watson Assistant.
Step: 7 - Develop the chatbot .
Step: 8 - Deploy the chatbot on website.



Results and Discussion

- This is our resultant interface.



- There are two medical facilities provide by our application one is information about the health issues and the second is to make a diagnosis.

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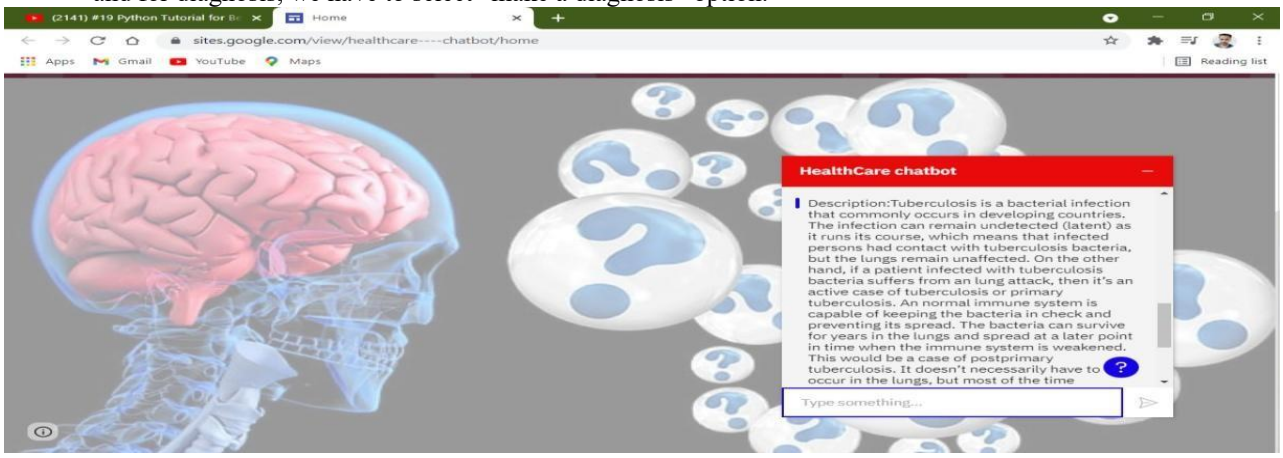
- For the purpose of information, we have to select the option ,"get information about the health issues "and for diagnosis, we have to select "make a diagnosis" option.



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Conclusion

This research is aimed to provide free diagnose by detecting user symptoms and queries. In this project, we used the IBM cloud function which, provides hosting without a server. We are focused to made our project simple that new students and coders will understand without any complexity. This project will help people to reduce their expenses by which they spent on doctor consultant fees for their normal and mild symptoms.

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