Report On

Development of a Cloud based Information Chatbot System

Submitted in partial fulfillment of the requirements of the Course project in
Semester VI of Third Year Computer Engineering

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(A.Y. 2023-24)

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CERTIFICATE

This is to certify that the Course Project entitled **" Development of a Cloud based Information Chatbot System "** is a bonafide work of **Vipul Bhoir (Roll No. 07), Mrudul Chaudhari (Roll No. 12), Abhinav Desai (Roll No. 14)** submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of **"Bachelor of Engineering"** in Semester VI of Third Year **"Computer Engineering" .**

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Course Project Approval

This Course Project entitled " **Development of a Cloud based Information Chatbot System** " is a bonafide work of **Vipul Bhoir (Roll No. 07), Mrudul Chaudhari (Roll No. 12), Abhinav Desai (Roll No. 14)** is approved for the degree of **Bachelor of Engineering** in Semester VI of Third Year **Computer Engineering .**

Examiners

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Date
Place:

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Abstract

The amalgamation of age-old Ayurvedic principles with modern healthcare technology has resulted in the creation of the Ayurvedic Chatbot. This paper examines how traditional Ayurvedic wisdom is combined with advanced chatbot technology to offer personalized wellness insights.It discusses the chatbot's role as a preventive healthcare companion and a facilitator of remote healthcare, particularly beneficial for areas lacking access to Ayurvedic practitioners. Emphasizing user empowerment and heightened self-awareness, the paper highlights the chatbot's potential to foster a community of wellness enthusiasts advocating holistic health practices.

This chatbot project is a Ayurvedic solution providing a chatbot which is used by patients who want to get information related to ayurvedic medicine. The ayurvedic solution enquiry Chatbot has the capacity to make friendly conversations; respond to disease and problems give the solution for the patient who wants ayurvedic solution; answer the frequently asked questions; analyzed the disease based on the patient query ; and give the ayurvedic medicinal information, yoga tips. To build the chatbot botpress platforms are used. Ayurvedic Information Chatbot provides to patients so that patients can use ayurvedic medicine . This website is very useful for the patients who want to know about ayurvedic and who believe that in today's world also ayurveda plays an important role. patients need not to go to the hospital and also want the information about hospitals. Patients can use the chat bot to get the answers to their questions. Patients can use these web based system for making queries at any point of time.

Introduction

The emergence of technology has paved the way for innovative solutions in the realm of healthcare, bridging ancient wisdom with modern advancements. In this context, the Ayurveda Chatbot represents a fusion of traditional Ayurvedic principles with cutting-edge artificial intelligence technology, revolutionizing the way individuals access personalized wellness guidance. Ayurveda, a holistic healing system originating from ancient India, emphasizes the balance of mind, body, and spirit to achieve optimal health.The Ayurveda Chatbot harnesses this profound knowledge to offer tailored wellness insights and guidance to users.Through this personalized interaction, the chatbot provides recommendations on dietary adjustments, lifestyle modifications, herbal remedies, and holistic practices tailored to the individual's disease.Beyond its role as a virtual wellness advisor, the Ayurveda Chatbot serves as a catalyst for empowering individuals to take charge of their health and well-being. By facilitating easy access to Ayurvedic principles and practices, the chatbot enables users to integrate ancient wisdom into their modern lifestyles seamlessly.The emergence of technology has paved the way for innovative solutions in the realm of healthcare, bridging ancient wisdom with modern advancements.

In this context, the Ayurveda Chatbot represents a fusion of traditional Ayurvedic principles with cutting-edge artificial intelligence technology, revolutionizing the way individuals access personalized wellness guidance. Ayurveda, a holistic healing system originating from ancient India, emphasizes the balance of mind, body, and spirit to achieve optimal health. Central to Ayurveda is the concept of "Prakriti," which categorizes individuals into distinct constitutional types based on their unique blend of Vata, Pitta, and Kapha doshas.The Ayurveda Chatbot harnesses this profound knowledge to offer tailored wellness insights and guidance to users. By leveraging natural language processing and machine learning algorithms, the chatbot engages users in interactive conversations, understanding their health concerns, lifestyle habits, and wellness goals. Through this personalized interaction, the chatbot provides recommendations on dietary adjustments, lifestyle modifications, herbal remedies, and holistic practices tailored to the individual's Prakriti.Beyond its role as a virtual wellness advisor, the Ayurveda Chatbot serves as a catalyst for empowering individuals to take charge of their health and well-being. By facilitating easy access to Ayurvedic principles and practices, the chatbot enables users to integrate ancient wisdom into their modern lifestyles seamlessly. Furthermore, the chatbot fosters a sense of community by connecting users with like-minded individuals on a journey towards holistic wellness.In essence, the Ayurveda Chatbot represents a transformative approach to healthcare, blending age-old wisdom with contemporary technology to deliver personalized wellness solutions. As society increasingly prioritizes holistic health and preventive care, the Ayurveda Chatbot emerges as a beacon of innovation, guiding individuals towards a harmonious and balanced life.

Problem Statement and Objectives

3.1 Problem Statement:

Ayurveda is a natural health care system that emphasizes the treatment of disease in a highly individualized manner as it believes that every individual is unique having a different constitution. It classifies all individuals into different 'Prakruti' types based on the theory of tridosha and each type has a varying degree of predisposition to different diseases. This is independent of racial, ethnic, or geographical considerations. Knowing which particular Prakruti one belongs to, enables them to decide the preference of food which suits them best. By following the rules and regulations regarding food and lifestyle, one can prevent themselves from getting inflicted with various diseases. A Chatbot that has information stored whenever the user will ask the question through provided information bot will give the solution to the particular disease or problem asked by the user.

3.2 Objectives:
- Personalized Dietary Advice:
  To recommend suitable food choices based on a user's identified Prakruti type.
  This would involve the chatbot asking the user questions to determine their Prakruti and then suggesting foods that are believed to be in balance with their individual constitution.
- General Ayurvedic Knowledge Dissemination:
  To serve as a resource for users to learn more about Ayurveda, including the concept of Prakruti and the tridosha theory.The chatbot could answer user questions about various Ayurvedic practices and principles beyond just diet.
- Awareness of Ayurveda:To raise awareness about Ayurveda as a complementary or alternative healthcare system.

Module Description

Module description and details of our project is given below:

Introduction to Botpress : Botpress is an open-source conversational AI platform that enables developers to build, deploy, and manage chatbots and conversational experiences. It provides a range of tools and features for creating chatbots with natural language understanding (NLU), dialogue management, integrations with messaging platforms, analytics, and more. It provides features like Bot Building, Natural Language Understanding (NLU), Multi-Channel Support, Extensibility, Deployment, etc.

Storage as Service: The cloud services used by Botpress for uploading text files would typically fall under the categories of Storage as a Service (STaaS) or Object Storage as a Service (OSaaS). These storage services provide scalable and reliable storage for various types of data, including text files, images, videos, and more. They offer features such as high availability, durability, security, and scalability, making them suitable for storing files used by Botpress bots.

Knowledge Base: We have created two knowledge bases for this chatbot. There is an option in the botpress to create a Knowledge Base for each different chatbot. We have created one knowledge base for Ayurvedic Medicine including How to create a particular solution. Another knowledge base is about Yoga tips for particular diseases. These knowledge bases can be in the form of web pdfs, text files, web pages, etc. We have uploaded more than 5 files for each knowledge base. After uploading the files Botpress itself made to train these files to the chatbot. Hence chatbot gets insights from the knowledge base and responds accordingly.

Bot Working Diagram: After creating a knowledge base the main step is to create the flow diagram for the chatbot. It is the working diagram for the chatbot which follows the path defined in this diagram. We have to add Standards as per our requirements and knowledge bases. For each standard we have defined a separate knowledge base. One is for ayurvedic medicine, another is for yoga tips.

Inference Engine: The inference engine is responsible for making decisions and reasoning based on the information stored in the knowledge base and working memory. It determines the appropriate response to user inputs by processing the current context, user intents, and available data. In our case we have inbuilt Inference Engine of Botpress which makes reasoning and decisions on the basis of Ayurveda data which is provided.

User Interface: Botpress provides interactive as well as user friendly interface for the chatbot which has functionalities such as Enter the Question in the textbox (user Query) and press enter or Enter button provided in the user interface. Also the output will be provided in the concise manner in designated format. Users can see their past conversations in the

ChatBot interface. While loading the Answer user can see the loading pop up animation on the screen.

Hardware & Software Requirements

5.1 Hardware Requirements:

1. Windows/ Linux / MacOS Operating System.
2. Processor : Standard Processor with a speed of 1.6 GHz.
3. RAM : 256 MB RAM or more.
4. Hard Disk : 20 GB or more sufficient storage space.
5. Monitor : Standard Color Monitor.
6. Internet Connection: Good internet connection with at least 4 mbps speed.

5.2 Software Requirements:

1. Web browser (for eg. chrome, firefox)
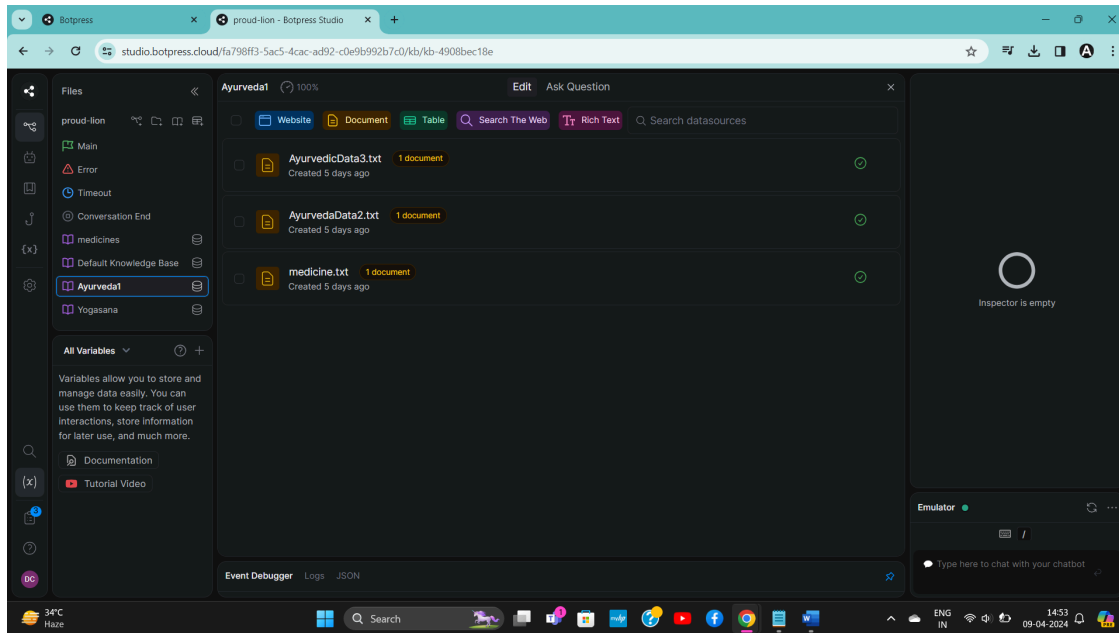2. Text editor

Implementation

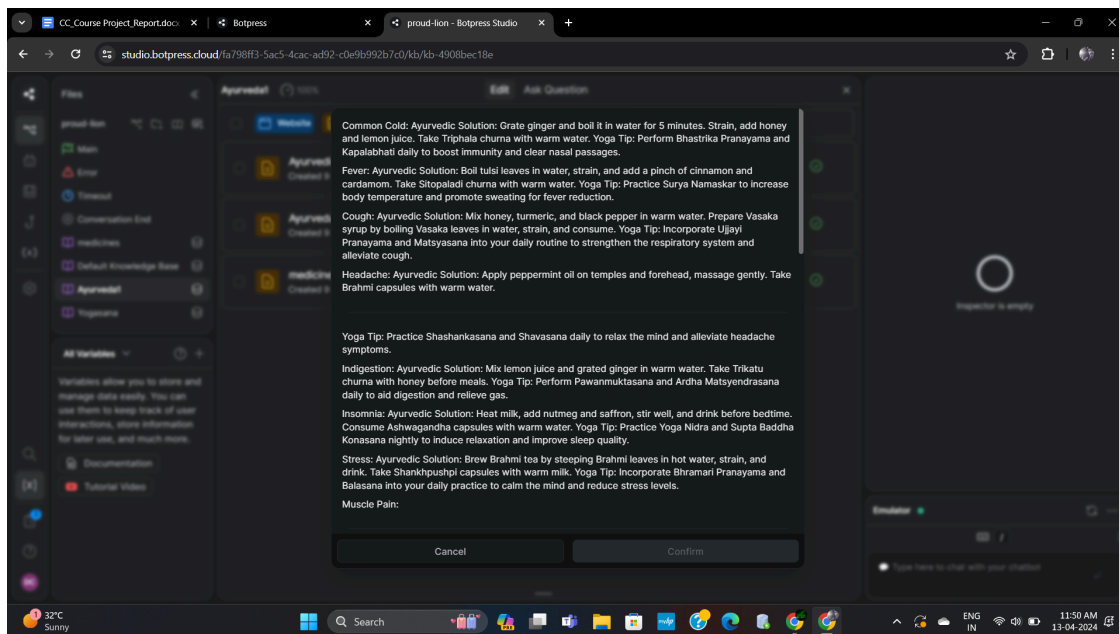fig. 1: Creating knowledge base 1 using ayurveda data (Ayurvedic syrup)

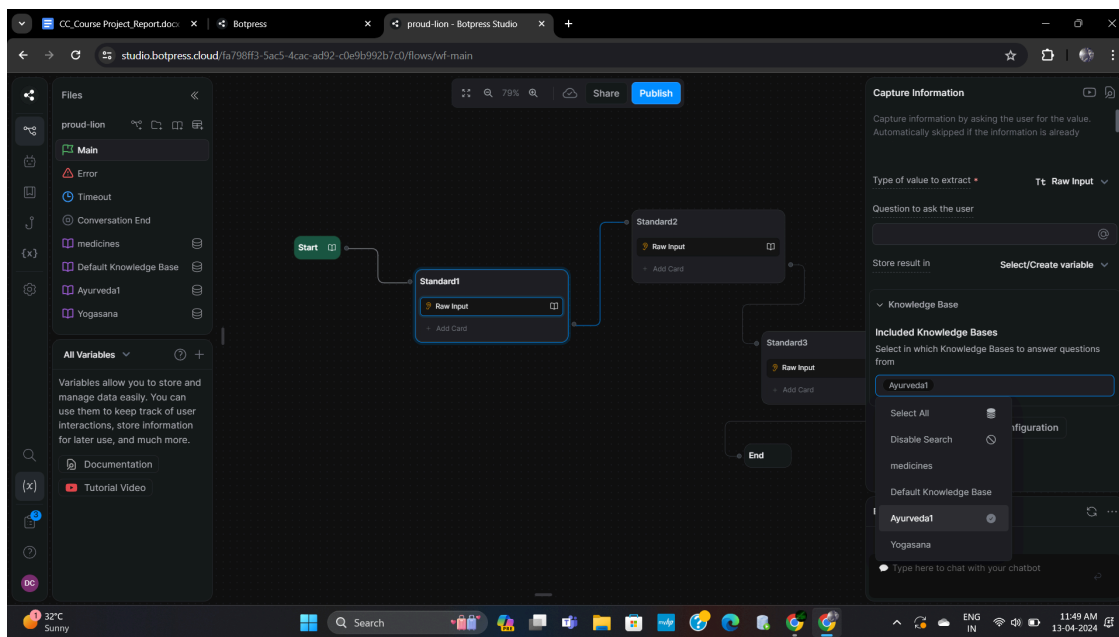fig. 2: Creating knowledge base 2 using ayurveda data (yoga tips)

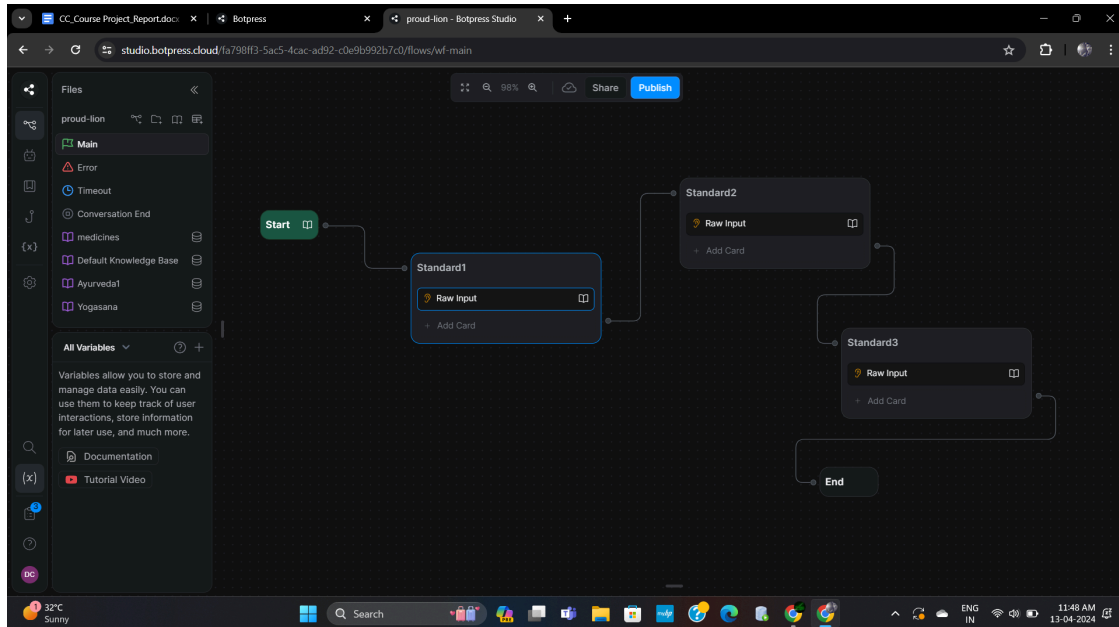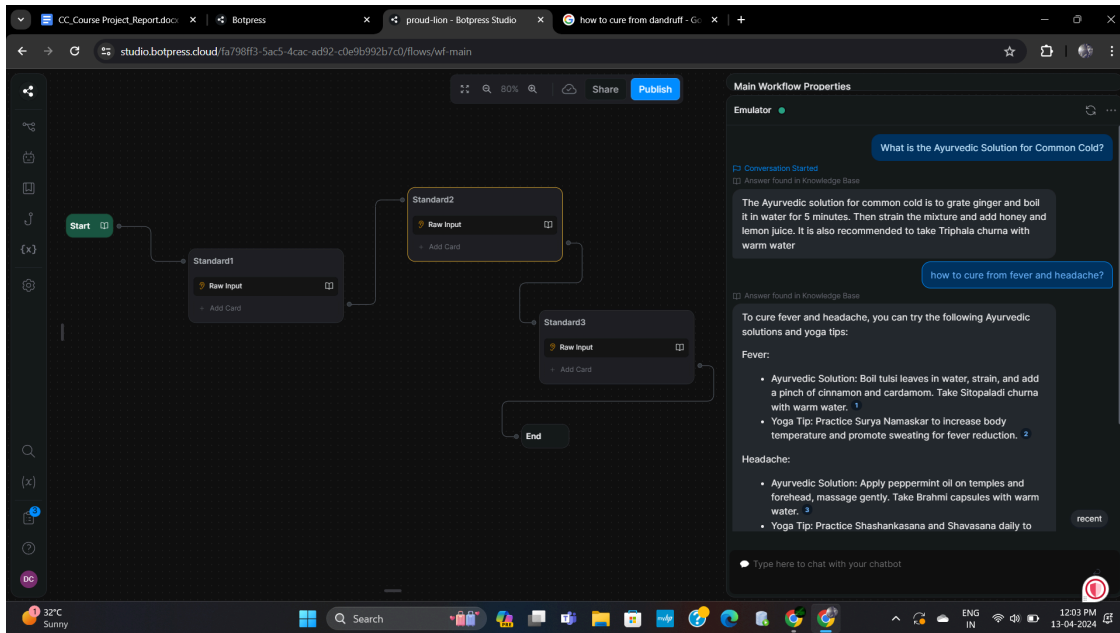fig. 3: Creating Flow Diagram with Standard nodes for Bot
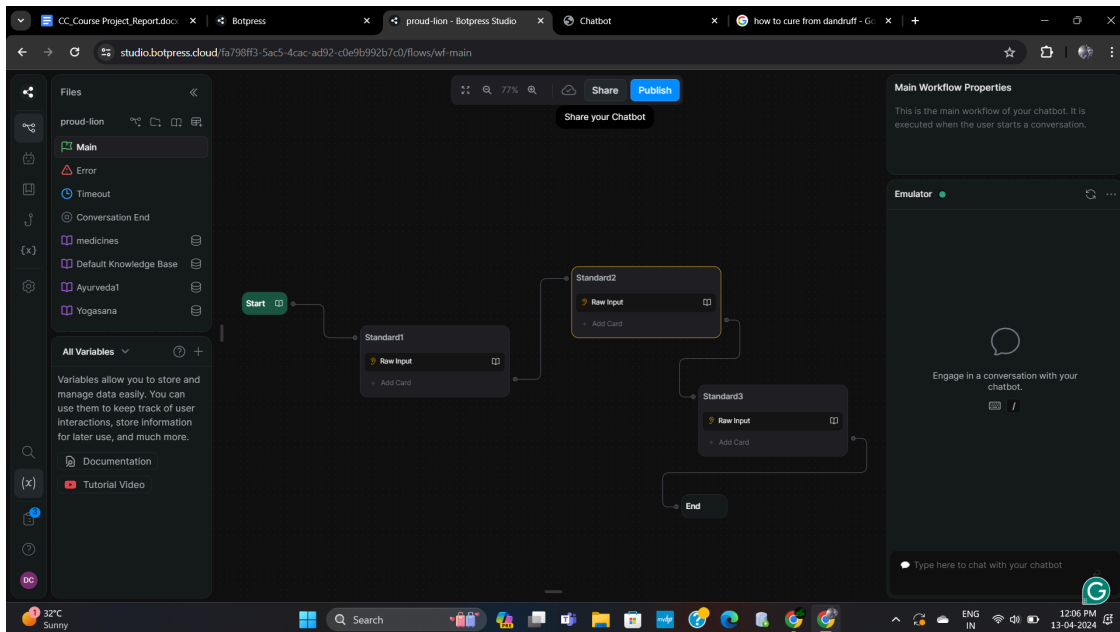
fig. 5: Bot testing

fig. 6: Bot Publishment

Results and Discussion

● Conversation with Bot

fig. 7

Bot
This chatbot was built surprisingly fast with Botpress

any new treatments.

> can you suggest ayurvedic dava for heartburn?

Ayurvedic Solution: Chew fennel seeds after meals for immediate relief. Take Avipattikar churna with warm water.

> which yoga should i perform in muscle pain?

Here are some yoga poses that can help with muscle pain:

- Bhujangasana (Cobra Pose)
- Pavanmuktasana (Wind-Relieving Pose)
- Vajrasana (Thunderbolt Pose)
- Paschimottanasana (Seated Forward Bend)

Remember to practice these poses

Chat with bot

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Bot
This chatbot was built surprisingly fast with Botpress

> how to perform balasana?

To perform Balasana (Child's Pose), follow these steps:

1. Start by kneeling on the mat with your knees hip-width apart.
2. Sit back on your heels and bring your big toes together, allowing your knees to widen.
3. Exhale and lower your torso down between your thighs, resting your forehead on the mat.
4. Extend your arms forward, placing them on the mat in front of you with your palms facing down.
5. Relax your head and neck, allowing them to hang freely between your arms.
6. Hold the pose for 5-10 breaths, actively pressing into the palms and engaging your core muscles.

Chat with bot

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Bot
This chatbot was built surprisingly fast with Botpress

any new exercises or treatments.

> which capsule should i consume in insomnia?

For insomnia, you should consider consuming:

- Ashwagandha supplements to help reduce stress and promote relaxation, which can support healthy sleep.
- Brahmi capsules to support mental clarity and focus, reduce stress, and improve overall brain function, which may contribute to better sleep.
- Chamomile tea to promote relaxation and support healthy sleep.

Chat with bot

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Bot
This chatbot was built surprisingly fast with Botpress

before starting any new treatment or practice regimen. These suggestions are not intended to replace medical advice or treatment.

> which yoga is useful to reduce stress?

To reduce stress, the following yoga poses can be useful:

- Bhramari Pranayama
- Balasana

Remember to consult with a qualified yoga instructor before starting any new practice regimen. These suggestions are not intended to replace medical advice or treatment.

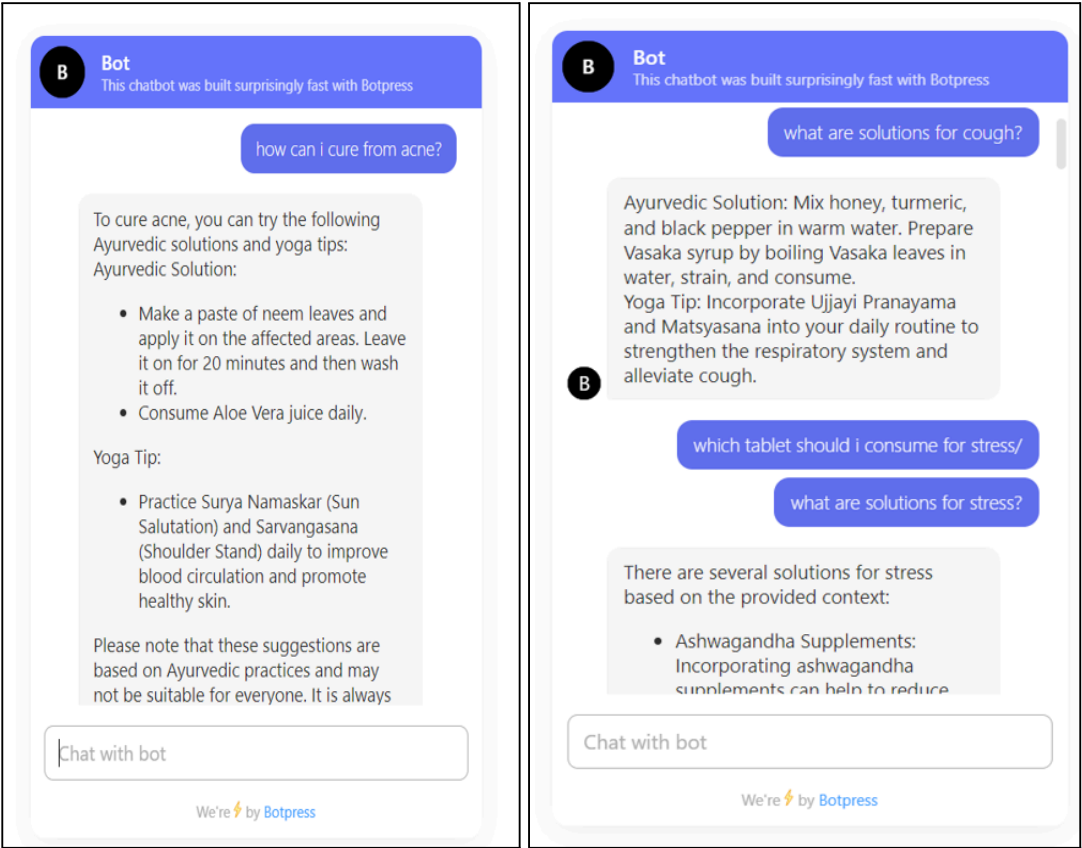> how to perform balasana?

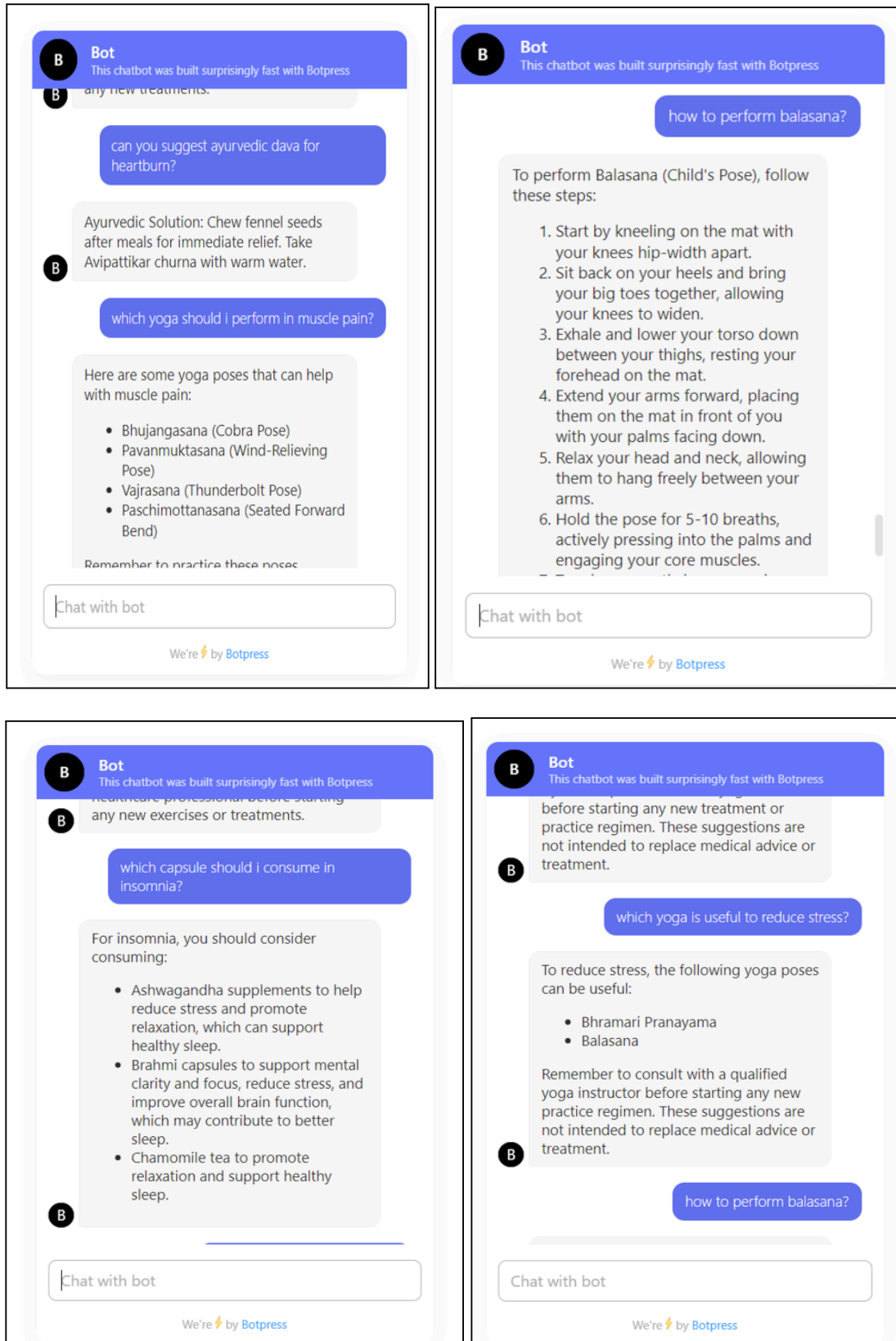Chat with bot

We're ⚡ by Botpress

fig. 8

Conclusion

In conclusion, The development of an Ayurveda chatbot represents a significant advancement in healthcare technology, offering personalized and accessible guidance in natural healing methods. By harnessing the principles of Ayurveda, this chatbot empowers users to understand their unique body constitutions, ailments, and holistic remedies tailored to their individual needs. With its ability to provide reliable information, suggest herbal remedies, yoga recommendations, and lifestyle modifications, the Ayurveda chatbot serves as a valuable companion in promoting wellness and preventive healthcare practices. As technology continues to evolve, integrating artificial intelligence and natural language processing, the chatbot holds promise in reaching a wider audience, fostering a deeper understanding of Ayurvedic principles, and promoting well-being across diverse communities.

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