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# **CAPSTONE PROJECT**

## **SYMPSERVE AI AGENT**

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# OUTLINE

- Problem Statement
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Git-hub Link
- Future scope
- IBM Certifications

# PROBLEM STATEMENT

Individuals often face difficulties in understanding their health conditions due to the overwhelming amount of complex medical information, lack of access to reliable resources, or delayed consultations with healthcare professionals. Self-diagnosis from unverified sources can lead to anxiety or mismanagement of health issues.

## **Proposed Solution:**

SympServe AI is a health advisory agent powered by Natural Language Processing (NLP) and Large Language Models (LLMs). It interacts with users in natural language to assess symptoms, provide preliminary health insights, suggest lifestyle improvements, and recommend when to seek professional medical advice. By limiting its scope strictly to health-related queries, it ensures focused, ethical, and context-aware guidance for better personal health understanding and decision-making.

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# TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM Granite model

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## IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model

# WOW FACTORS

SympServe AI transforms the way individuals approach their personal health by offering instant, intelligent, and empathetic guidance. It empowers users with AI-driven health insights that were once accessible only through time-consuming consultations or vague internet searches. This agent helps bridge the gap between curiosity and clarity, promoting proactive well-being.

## **Unique features:**

- Symptom Interpretation: Converts user-described symptoms into probable health conditions using NLP.
- Health Risk Assessment: Flags potentially serious issues and recommends immediate attention if necessary.
- Personalized Advice: Offers lifestyle tips and general health suggestions tailored to user inputs.
- User-Friendly Interface: Chat-based design makes health information accessible without medical jargon.

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## END USERS

- Individuals Seeking Preliminary Health Guidance
- Health & Wellness Enthusiasts
- Rural or Underserved Populations
- Primary Caregivers & Family Members
- Health-Tech Startups & NGOs

# RESULTS

## SympServe AI Agent

IBM watsonx


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[API reference](#) [Test](#) [Preview](#)

New chat +

 SympServe\_AI 06:15 PM

Welcome to SympServe\_AI  
I'm your AI health assistant. Share your symptoms, and I'll guide you with care and advice.



Quick start samples

I have a sore throat and fever. What could it be? →

Should I see a doctor for a headache and dizziness? →

What are some home remedies for a cold? →

I have stomach pain. Is it serious? →

Type something... →



# RESULTS

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Welcome to SympServe\_AI  
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Quick start samples

I have a sore throat and fever. What could it be? →

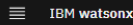
Should I see a doctor for a headache and dizziness? →



What are some home remedies for a cold? →

I have stomach pain. Is it serious? →



Type something... ➤

# RESULTS




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API referenceTestPreview

New chat +

 You 06:15 PM

I have a sore throat and fever. What could it be?

 SympServe\_AI 06:15 PM

I'm sorry to hear that you're not feeling well. A sore throat and fever can be caused by a variety of conditions, including common colds, flu, strep throat, or tonsillitis. They can also be symptoms of COVID-19.

Home care tips include:

- Staying hydrated by drinking plenty of fluids.
- Getting adequate rest.
- Using over-the-counter pain relievers to reduce fever and discomfort, like acetaminophen or ibuprofen.
- Gargling with warm salt water to soothe a sore throat.

However, it's important to consult a doctor if:

- Your fever is high (over 101°F or 38.3°C) and persistent.
- Your sore throat is severe and doesn't improve within a few days.
- You experience difficulty swallowing, drooling, or a rash.
- You suspect you may have been exposed to COVID-19.

Please remember that I'm an AI and cannot provide a definitive diagnosis. This information is for general guidance only and doesn't replace professional medical advice.

► How did I get this answer?

# RESULTS

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Share feedback β Autosave on New agent + Deploy

Build

AI Model: granite-3-3-8b-instruct

Knowledge

Tools

Add a tool Create custom tool

Added tools (4)

Google search

Retrieve information from the internet with the Google search engine.

DuckDuckGo search

Retrieve information from the internet with the DuckDuckGo search engine.

Wikipedia search

Retrieve information from Wikipedia articles.

Webcrawler

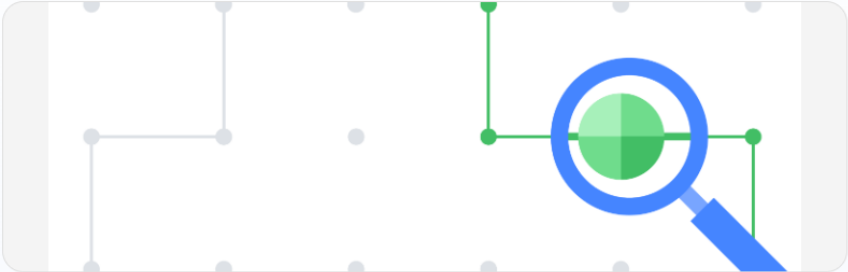
Retrieve information from a website.

Agent preview

SympServe\_AI 06:11 PM

Welcome to SympServe\_AI

I'm your AI health assistant. Share your symptoms, and I'll guide you with care and advice.



Sample questions

I have a sore throat and fever. What could it be?

Should I see a doctor for a headache and dizziness?

Type something...

# RESULTS

## Deployed AI Agent

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SympServe\_AI

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Name	Type	Status	Asset	Asset type	Tags	Last modified	↓
 SympServe_AI	Online	✔ Deployed	SympServe_AI	Ai service	wx-agent 	52 minutes ago Aniket Lende (You)	⋮

Items per page: 20 ▾ 1-1 of 1 items

1 of 1 pages ⏪ ⏩

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## CONCLUSION

- SympServe AI empowers users with accessible, AI-driven preliminary health insights—offering symptom analysis, wellness suggestions, and decision support.
- It reduces reliance on unverified online information and bridges gaps in early diagnosis and health awareness.
- By automating initial assessments and providing intelligent, empathetic recommendations, SympServe enhances both personal well-being and public health engagement.

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## GITHUB LINK

[https://github.com/Aniket-M-L/SympServe\\_AI](https://github.com/Aniket-M-L/SympServe_AI)

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## FUTURE SCOPE

- **Multilingual Symptom Support:** Expand accessibility by enabling symptom analysis and advice in multiple languages.
- **Voice-Activated Health Assistant:** Allow users to describe symptoms via speech for a hands-free experience, Real-Time Collaboration Features
- **Wearable Device Integration:** Sync with smartwatches and fitness trackers for real-time health data insights. Integration with Publishing Platforms.

# IBM CERTIFICATIONS





# IBM CERTIFICATIONS

In recognition of the commitment to achieve  
professional excellence



## Aniket Lende

Has successfully satisfied the requirements for:

### Getting Started with Artificial Intelligence



Issued on: Jul 16, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/7cfff99e-4bfb-4b0e-9641-5eec52f5872b>




# IBM CERTIFICATIONS

7/18/25, 11:35 PM

Completion Certificate | SkillsBuild

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Aniket Lende

for the completion of

**Lab: Retrieval Augmented Generation with  
LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

**Completion date:** 18 Jul 2025 (GMT)

**Learning hours:** 20 mins

[https://skills.yourlearning.ibm.com/certificate/ALM-COURSE\\_3824998](https://skills.yourlearning.ibm.com/certificate/ALM-COURSE_3824998)

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**THANK YOU**