

IBM AICTE PROJECT

AGENTIC AI HEALTH SYMPTOM CHECKER

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OUTLINE

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

PROBLEM STATEMENT

The Challenge

An Agentic AI Health Symptom Checker helps users understand their health conditions by analyzing symptoms and providing probable causes, preventive advice, and care recommendations. It retrieves verified medical data, symptom databases, and guidelines from trusted sources like WHO, government health portals, and medical journals. Users can input symptoms in natural language such as “I have a sore throat and fever,” and the agent provides possible conditions, urgency level, home remedies, and when to consult a doctor. It supports multi-language interaction and avoids self-diagnosis risks by offering educational and referral-based suggestions. This AI-driven assistant promotes early detection, reduces misinformation, and empowers users to take informed health actions.

TECHNOLOGY USED

Component

Tool/Tech Used

AI Model

IBM Granite LLM

Natural Language Processing

Built-in LLM capabilities to understand and generate response

Retrieval-Augmented Generation

For fetching verified medical info from trusted sources like WHO

Frontend

Streamlit / **Watson Assistant**

Hosting

IBM Cloud Lite

Language Support

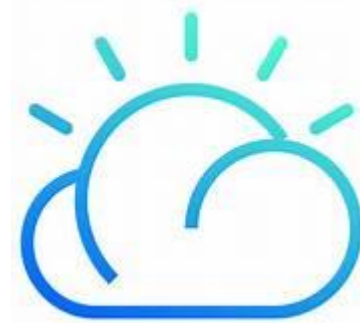
English



IBM CLOUD SERVICES USED

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

watsonx.ai™



WOW FACTORS

This project is simple, helpful, and built with real people in mind. Here's what makes it special:

- This project stands out for its **simplicity**, usefulness, and **focus on real people**.
- It was built completely **without coding**, using IBM Granite and Watson Assistant.
- It understands **natural language**, so users can describe their symptoms just like they would to a person.
- It can even read health reports and give helpful suggestions based on what's inside.
- It never diagnoses or recommends medicine — instead, it offers **safe, general advice**.
- It's made for everyone, whether they live in a city or a **remote village**.
- And it runs fully on IBM Cloud Lite, making it **free and easy to access**.

END USERS

- **Families** looking for quick, safe answers about their symptoms.
- **Caregivers** who want basic health guidance.
- **Rural communities** with limited access to doctors.
- **Students** and young adults curious about health.
- **Community workers** helping others stay informed.



RESULTS

- **Logged into IBM Cloud**
- **Opened Watsonx.ai Studio**
Searched for **Watsonx.ai Studio** and created my workspace.
- **Set Up My Project**
Gave my project a name, added cloud storage (Lite plan), and clicked "Create".
- **Connected the AI Runtime**
Linked Watsonx Runtime so my agent could actually run and respond.

The screenshot displays the IBM watsonx AI Studio interface. The top navigation bar includes the IBM watsonx logo, an Upgrade button, a help icon, a notification bell, and user account information for GEETIKA SINGH (Dallas, GS). The main content area welcomes the user back and offers three primary actions: 'Chat and build prompts with foundation models' (with a 'Start chatting...' input field and 'Open Prompt Lab' button), 'Build an AI agent to automate tasks' (with 'with Agent Lab' and a beta badge), and 'Tune a foundation model with labeled data' (with 'with Tuning Studio'). Below this, the 'Projects / GEETIKA's sandbox' section is visible, with tabs for Overview, Assets, Deployments, Jobs, and Manage. The 'Manage' tab is active, showing 'Services & integrations'. Under 'IBM services (1)', there is a section to 'Associate IBM Cloud services with this project to add tools, compute environments, or other capabilities. Learn more.' A search bar 'Find services' and an 'Associate service +' button are present. A table lists the associated service:

<input type="checkbox"/>	Name	Service type
<input type="checkbox"/>	WatsonMachineLearning	watsonx.ai Runtime

RESULTS

- **Started Building the Agent**
Chose a model like **IBM Granite**, and began my AI agent.
- **Tested and Added Tools**
Enabled tools like Search for smarter replies.

The image displays two side-by-side screenshots of the IBM watsonx Agent Lab interface, showing the configuration of an AI agent.

Left Screenshot (Model: granite-3-3-8b-instruct):


- Build** tab is active.
- Framework:** LangGraph
- Architecture:** ReAct
- Instructions:**
 - The Agent Should:
 - Understand symptoms described in natural language. E.g., "I feel tired and have body aches."
 - Provide general health information, such as:
- Knowledge:** (Collapsed)
- Tools:**
 - Buttons: Add a tool, Create custom tool
- Added tools (1):**
 - Google search



Right Screenshot (Model: llama-3-3-70b-instruct):

- Setup** tab is active.
- Name:** Agentic AI Health Symptom Checker
- Description:** Smart AI agent that explains symptoms, offers safe advice, and guides health decisions. (Character count: 87/100)
- Icon:** Placeholder image (A blue square with a white line graph icon)


RESULTS

- **Testing** the agent by giving related prompt.
- **Testing** the agent by giving unrelated prompt leads to a system generated reminder.


Share feedback 

Unsaved  


New agent +

Deploy 

Agent preview


 You: 07:41 PM



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

 Agentic AI Health Symptom Checker 07:41 PM

A sore throat and mild fever can be caused by various conditions, such as a common cold, flu, or strep throat. These symptoms might also be due to allergies or environmental irritants. Home care tips include staying hydrated, getting rest, and using warm liquids like soup or tea to soothe the throat. Over-the-counter pain relievers can help reduce fever and discomfort. However, if your symptoms persist for more than a few days, or if you experience severe pain, difficulty swallowing, or high fever, consult a doctor. This is not medical advice.

► How did I get this answer?



Share feedback 

Unsaved  

New agent +

Deploy 

Agent preview

 You: 07:45 PM

what is python

 Agentic AI Health Symptom Checker 07:45 PM

Python is a high-level, interpreted programming language known for its readability and simplicity. It's widely used for web development, data analysis, machine learning, artificial intelligence, and automation. Python's extensive libraries and frameworks make it a popular choice for beginners and professionals alike. However, as a health-focused assistant, I'm unable to provide more detailed technical information about Python. This is not medical advice.

► How did I get this answer?



RESULTS

- Tested adding a document vector
- Deployed by Ccreating a Deployment Space, hit “Deploy”, and made my AI live!.

[Deployment spaces](#) /

Vector index

Report-_DEBRAJ_GHOSH_21Mar2023_

Clear chat

If you want to add a vector index to the agent, clear the agent preview chat.

Tools

Add a tool

Create custom tool

Added tools (2)

Google search

Retrieve information from the internet with the Google search engine.

Document search - Report-_DEBRAJ_GHOSH_21Mar2023_

Search documents with vector indexes.

↕

▼

ⓘ

Symptom checker

Overview



Assets

Deployments

Jobs

Manage

  Search

Name	Type	Status	Asset	Asset type	Tags	Last modified
 Agentic AI Health Symptom Checker	Online	 Deployed	Agentic AI Health Symptom Checker	Ai service	<div>wx-agent</div>	1 minute ago GEETIKA SINGH (You)

RESULTS

Deployed AI Agent

- **Previewed and Shared**
Used the **Preview** button to chat with it, and shared the link to let others try it too.

The screenshot shows the IBM watsonx web interface for the 'Agentic AI Health Symptom Checker'. The top navigation bar includes the IBM watsonx logo, an 'Upgrade' button, and icons for help, notifications, and user profile. The breadcrumb trail reads: 'Deployment spaces / Symptom checker / Agentic AI Health Symptom Checker /'. The main heading is 'Agentic AI Health Symptom Checker' with a green checkmark and 'Deployed' status, and a grey 'Online' button. Below this are four tabs: 'API reference', 'Test', 'Evaluations', and 'Preview' (which is selected and underlined). A 'New chat +' link is on the right. The chat history shows a user message at 03:38 PM asking 'What should I do if I have a headache and feel dizzy?'. The AI response, also at 03:38 PM, expresses sympathy and provides three general considerations: 1. **Hydration:** Sometimes, dehydration can cause headaches and dizziness. Ensure you're drinking enough fluids throughout the day. 2. **Rest:** If you're feeling unwell, your body might be signaling that it needs rest. Try to lie down in a quiet, cool, and dark room. 3. **Over-the-counter pain relief:** Non-prescription pain relievers like ibuprofen or acetaminophen can help with headaches. At the bottom is a text input field with the placeholder 'Type something...' and a send button.

IBM watsonx Upgrade ? 🔔 GEE

Deployment spaces / Symptom checker / Agentic AI Health Symptom Checker /

Agentic AI Health Symptom Checker ✓ Deployed Online

API reference Test Evaluations **Preview**

[New chat +](#)

G You 03:38 PM
What should I do if I have a headache and feel dizzy?

🗣️ Agentic AI Health Symptom Checker 03:38 PM
I'm sorry to hear that you're not feeling well. Headaches and dizziness can have various causes, ranging from mild to serious. Here are some general considerations:

1. **Hydration:** Sometimes, dehydration can cause headaches and dizziness. Ensure you're drinking enough fluids throughout the day.
2. **Rest:** If you're feeling unwell, your body might be signaling that it needs rest. Try to lie down in a quiet, cool, and dark room.
3. **Over-the-counter pain relief:** Non-prescription pain relievers like ibuprofen or acetaminophen can help with headaches.

Type something... ➤

CONCLUSION

- This AI agent makes it easier for people to understand their symptoms without fear or confusion.
- It avoids self-diagnosis and shares helpful, general advice in a friendly tone.
- Designed with empathy, it's especially helpful for those with limited access to healthcare.
- Built using IBM Granite and Cloud Lite, it's lightweight, accessible, and cost-free.
- It empowers users to take informed steps toward better health, safely and responsibly.

GITHUB LINK

- Github Repository
- Project Link : https://github.com/geetika-singh04/ai_symptom_checker.git



FUTURE SCOPE

- Add support for **multilingual input** (Hindi, Marathi, etc.)
- Integrate **WHO / Govt portals** via RAG (advanced version)
- Enable **voice-based interaction**
- Incorporate **health report auto-analysis** (with vector-based search)
- Introduce user profile memory (for follow-up queries)

IBM CERTIFICATIONS

- Screenshot/ credly certificate(getting started with AI)



IBM CERTIFICATIONS

- RAG LAB certificate

IBM SkillsBuild	Completion Certificate
	<p>This certificate is presented to</p> <p>GEETIKA SINGH</p> <p>for the completion of</p> <p>Lab: Retrieval Augmented Generation with LangChain</p> <p>(ALM-COURSE_3824998)</p> <p>According to the Adobe Learning Manager system of record</p>
Completion date: 17 Jul 2025 (GMT)	Learning hours: 20 mins



THANK YOU