

# CAPSTONE PROJECT

## AI HEALTH SYMPTOM CHECKER

### PRESENTED BY :-

**Student name : Aahad Khan**

**College Name : Jai Narain College of Technology, Bhopal**

**Department : Artificial Intelligence & Machine Learning (AIML)**

# 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.

---

# PROPOSED SOLUTION

Aarogya AI is an Agentic AI Health Symptom Checker, leveraging IBM Granite and a Retrieval-Augmented Generation (RAG) model. It intelligently analyzes symptoms provided by a user via text, voice, or images. The agent's conversational approach clarifies information to provide accurate, personalized insights on probable conditions and preventative advice. It retrieves data from a curated, multilingual knowledge base to offer localized, context-aware guidance and actionable next steps, enhancing user health literacy and promoting timely professional care.

---

# TECHNOLOGY USED

- ➡ IBM cloud lite services
- ➡ Natural Language Processing (NLP)
- ➡ Retrieval Augmented Generation (RAG)
- ➡ IBM Granite model

---

# IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model (granite-3-3-8b-instruct)

# WOW FACTORS

1. **Wellness and Preventive Care Suggestions:** Moving beyond reactive care, the agent will offer proactive wellness suggestions and preventative tips based on a user's health history to promote long-term well-being.
2. **Localized and Context-Aware Advice:** It provides personalized guidance by using the user's location to retrieve local advisories and suggest nearby, trusted healthcare facilities for immediate and relevant assistance.
3. **Interactive Dialogue and Symptom Clarification:** The AI will actively engage in a conversation, asking clarifying follow-up questions to refine the symptom profile and deliver a more accurate and personalized assessment.

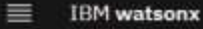
---

# END USERS

- General Public
- Individuals with health concerns
- People seeking guidance



# RESULTS



[Upgrade](#)[?](#)[🔔](#)[Aahad Khan's Account](#)[Dallas](#)


AK

[Projects](#) / [Agent: AI Health Symptom Checker](#) / [Agent Lab](#)


[Share feedback](#)

8

Unsaved



[New agent](#) +

Deploy 


Build >

Agent preview

AK

You: 11:06 PM

Hi



Aarogya AI 11:06 PM

Hello! I am Aarogya AI, your personal health assistant. To better assist you with your health concerns, could you please tell me:


1. What is your age range? (Infant 1-5, Child 6-12, Teenager 13-17, Young Adult 18-25, Adult 26-60, Senior 61+)


2. Your gender? (Male or Female)


3. Your place or country of residence?

4. What symptoms are you currently experiencing?

► How did I get this answer?







# RESULTS

IBM watsonx

Upgrade Aahad Khan's Account ▾ Dallas ▾

Projects / Agent: AI Health Symptom Checker / Agent Lab

Share feedback Unsaved ▾ New agent + Deploy

Build > Agent preview



You: 11:06 PM  
Hi

Aarogya AI 11:06 PM  
Hello! I am Aarogya AI, your personal health assistant. To better assist you with your health concerns, could you please tell me:  
  
1. What is your age range? (Infant 1-5, Child 6-12, Teenager 13-17, Young Adult 18-25, Adult 26-60, Senior 61+)  
2. Your gender? (Male or Female)  
3. Your place or country of residence?  
4. What symptoms are you currently experiencing?  
  
▶ How did I get this answer?

You: 11:08 PM  
20 Male India I have fever, headache and fatigue.

Aarogya AI 11:08 PM  
Thank you for providing that information. To help me understand better, could you please tell me:  
  
1. How long have you had these symptoms?


# RESULTS

 Upgrade ?  Aahad Khan's Account Dallas AK

Projects / Agent: AI Health Symptom Checker / Agent Lab

Share feedback Unsaved New agent + Deploy


Build > Agent preview

 Aarogya AI 11:08 PM


Thank you for providing that information. To help me understand better, could you please tell me:

1. How long have you had these symptoms?
2. Are you currently taking any medication for these symptoms?
3. Have you traveled recently or been in contact with anyone who has been diagnosed with an infectious disease?

► How did I get this answer?

 You: 11:10 PM

2 days No I don't remember doing it.


 Aarogya AI 11:10 PM




Thank you for the additional information. Based on your symptoms and the duration, here are some probable conditions that could be associated with fever, headache, and fatigue:

1. **Common Cold or Flu:** These viral infections are common and can cause fever, headache, and fatigue.
2. **Malaria:** Although less common in urban areas of India, malaria is a significant health concern in certain regions. Symptoms usually appear 10-15 days after the infective mosquito bite.
3. **Dengue Fever:** Another mosquito-borne disease prevalent in India, dengue can cause high fever, severe headache, and fatigue.





Precautionary Advice:


# RESULTS


 IBM watsonx

Upgrade ?  Aahad Khan's Account  Dallas  AK

Projects / Agent: AI Health Symptom Checker / Agent Lab

Share feedback  8 Unsaved   New agent + Deploy 

 Build > Agent preview



2. **Malaria:** Although less common in India, malaria is a significant health concern in certain regions. Symptoms usually appear 10-15 days after the infective mosquito bite.

3. **Dengue Fever:** Another mosquito-borne disease prevalent in India, dengue can cause high fever, severe headache, and fatigue.


**Precautionary Advice:**



- Stay well-hydrated by drinking plenty of fluids like water, coconut water, or clear broths.
- Get adequate rest.
- Over-the-counter medications such as paracetamol can help reduce fever and alleviate headache; however, always follow the recommended dosage.

**Urgency & Recommendation:** Given the symptoms and considering the possibility of infectious diseases like malaria or dengue (especially if you've been bitten by mosquitoes), it's crucial to seek medical attention promptly. If your symptoms worsen or you develop additional symptoms such as severe abdominal pain, persistent vomiting, cold sweats, or noticeable bruising or bleeding, seek immediate medical care.

Disclaimer: This information is for educational and informational purposes only and is not a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of a qualified health provider with any questions you may have regarding a medical condition.

► How did I get this answer?



Type something...  

---

# CONCLUSION

- The Agentic AI serves as a powerful, non-diagnostic tool designed to empower users by helping them understand their health conditions. By analyzing user-reported symptoms and leveraging a verified medical knowledge base, it provides information on probable causes.
- The solution is technically robust, utilizing a Retrieval-Augmented Generation (RAG) model grounded in trusted sources such as WHO guidelines, government health portals, and medical journals. This approach ensures that all responses are accurate, contextual, and directly tied to reliable data.

---

# FUTURE SCOPE

- Multi-Modal Interaction
- Localized and Context-Aware Advice
- Interactive Dialogue and Symptom Clarification
- Multilingual Support with Cultural Nuance
- Proactive Wellness and Preventative Care
- AI-Assisted Consultation and Advice

# IBM CERTIFICATIONS

In recognition of the commitment to achieve  
professional excellence



Aahad Khan

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 20, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/d21fa059-838e-4a0c-971b-91316b7dea4d>



# IBM CERTIFICATIONS

In recognition of the commitment to achieve  
professional excellence



Aahad Khan

Has successfully satisfied the requirements for:

Journey to Cloud: Envisioning Your Solution



Issued on: Jul 20, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/162c5d5f-a2ee-42eb-a65f-8ad50935deaa>





# IBM CERTIFICATIONS



---

# GITHUB LINK

Github Link :- <https://github.com/Aahad-Khan/Aarogya-AI/upload/main>



**THANK YOU**