IBM HACKATHON PROJECT

MEDISAGE – YOUR AI POCKET HEALTH ASSISTANT

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OUTLINE

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

PROBLEM STATEMENT

- **Problem Statement No.28 –** Agentic AI Health Symptom Checker
- **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** – Use of IBM Cloud Lite services / IBM Granite is mandatory.

TECHNOLOGY USED

- IBM cloud lite services
- Natural Language Processing (NLP)
- 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

WOW FACTORS

1. Agentic AI in Action

- Uses an IBM Granite-based Large Language Model via watsonx.ai.
- Not just reactive, but provides contextual, multi-step health guidance — embodying true agentic behaviour.

2. Natural Language Input

- Users can type symptoms like "I have chest pain and fatigue" in plain English, and the system intelligently interprets them — no need for medical jargon.

3. Conversational, Human-Centric Design

- Sleek chatbot UI built with JavaScript and Flask.
- Includes dot loader animation, dynamic prompt suggestions, and a modern hamburger menu — giving users a mobile-app-like feel in a browser.

4. Educational, Not Diagnostic

- Avoids risky self-diagnosis by offering: Urgency levels, Home remedies, Doctor referral cues
- Promotes safe, informed health actions without crossing ethical lines.

WOW FACTORS

5. Built on Trusted Tech

- Fully powered by IBM Cloud Lite services — ensuring scalability, security, and professional-grade deployment.
- Leverages verified sources like WHO and peer-reviewed medical journals.

6. Tech Stack Highlights

- Frontend: Responsive HTML, CSS, and JavaScript with interactive components.
- Backend: Lightweight Flask server handling secure API requests.
- Deployment Ready: Can be hosted on IBM Cloud without relying on local resources.

7. Aligned with Real-World Problem Statement

- Directly addresses AICTE-IBM SkillsBuild Problem Statement 28.
- Tackles misinformation, accessibility, and preventive healthcare — all using AI for public good.

8. Scalable and Multi-Language Ready

- Architecture allows for future expansion into multi-language support, regional health info, and even voice input.

END USERS

- **General Public**
  Anyone experiencing symptoms and seeking initial guidance or clarity.
- **People in Remote or Underserved Areas**
  Individuals with limited access to nearby doctors or clinics.
- **Busy Working Professionals & Students**
  Users needing quick health insights without scheduling appointments.
- **Elderly Individuals**
  Especially those who struggle with navigating healthcare apps or need simple, conversational interfaces.
- **Non-English Speakers / Multilingual Communities**
  Those who benefit from natural language interaction in regional languages.
- **Caregivers and Family Members**
  Who use the assistant on behalf of children, seniors, or others in their care.
- **Health-Conscious Users**
  People tracking symptoms or proactively managing their wellness.

RESULTS


MediSage
Your AI Pocket Health Assistant.
Hi there! I'm MediSage – your personal AI health assistant.
You can ask me about symptoms, treatments, or general medical advice. Try typing:
"What are the signs of dehydration?"
Ask a medical question...
Send

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CONCLUSION

- MediSage is a smart, accessible, and scalable AI health assistant designed to empower individuals with early, accurate, and reliable health information.
  By combining the power of IBM Watson with a lightweight Flask-based web interface, this project addresses the urgent need for responsible digital health tools in today's world.
- It supports informed decision-making, reduces dependency on unverified sources, and promotes proactive health management — all without replacing professional medical advice.
- A step toward AI for public good.

GITHUB LINK

- https://github.com/akashmakam/MediSageAI

FUTURE SCOPE

- Voice-based Interaction: Integrate voice input and text-to-speech for inclusive usage, especially for elderly and visually impaired users.
- Medical Integration: Connect with verified health APIs (like Symptoma, Infermedica) for broader diagnostic accuracy.
- Doctor Referral System: Suggest nearby verified healthcare professionals or clinics based on user location and symptoms.
- User History Tracking: Maintain symptom history to monitor recurring patterns and give better personalized suggestions.
- Mobile App Development: Expand to Android/iOS platforms for on-the-go health checks.
- AI Model Fine-tuning: Train on localized health data to improve relevance and cultural appropriateness of responses.

IBM CERTIFICATIONS

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IBM **SkillsBuild** Completion Certificate

This certificate is presented to

Akash M R

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 01 Aug 2025 (GMT) **Learning hours:** 20 mins

THANK YOU

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