
AGENTIC AI PROJECT

Agentic AI Health Symptom Checker

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OUTLINE

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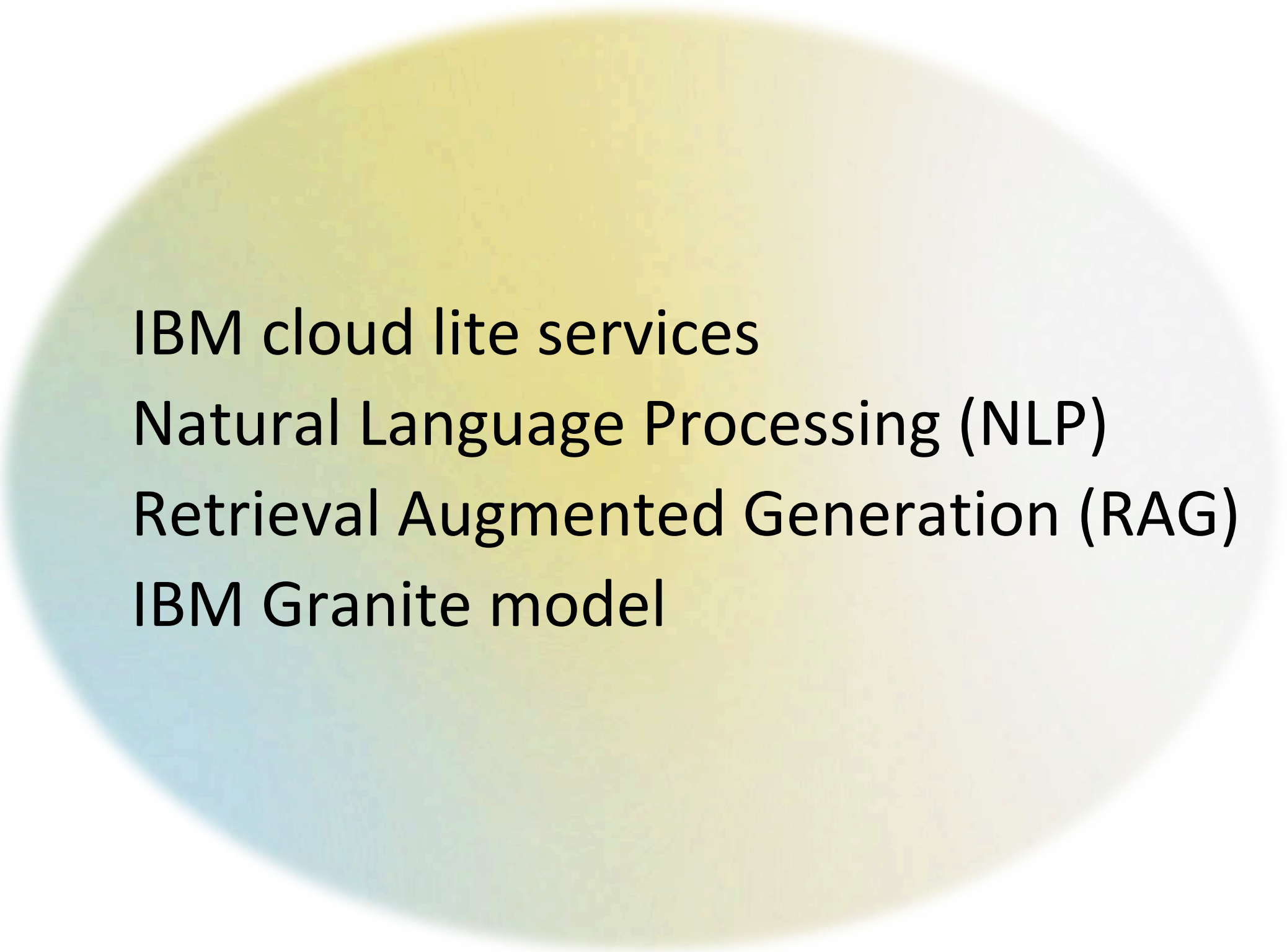
Problem Statement

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



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



IBM cloud

IBM cloud services used

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

**2.LLaMA 3.3
Instruct (70B)**

1.Granite 3.3 (IBM)

**11.Ibm Cloud
Stotage**

**3.LLaMA 3.2 Vision
Instruct (90B)**

1. AI Models (LLMs & Vision)

**10.OCR / Image-to-
text (e.g.,
PaddleOCR,
Tesseract)me
science**

4.Mistral Large

2. Frameworks / Agents / Inference Engines

9.Ibm Cloud Object

**5.LangChain /
LlamaIndex**

**6.OpenAI Function
Calling / Tool Use**

**7. Vector DBs
(Pinecone,
Weaviate, Chroma)**

**8.Transformers /
HuggingFace**

Wow factors

Two-Factor Advantage of Agentic AI Health Symptom Checker

1. Clinical Intelligence Powered by Trusted Models

- Uses top-tier, instruction-following LLMs (Granite, LLaMA 3, Mistral) with vision & multilingual support.
- Combines reasoning + retrieval from CDC, WHO, MedlinePlus, Mayo Clinic, and more.
- Handles symptom analysis, medical report parsing, and multilingual, context-aware health assistance.

2. Human-Centric, Safe, and Ethical by Design

- Aligns with HIPAA / GDPR for privacy and safety.
- Only responds to health, fitness, and wellness queries — rejects unrelated content with empathy.
- Responds with citations, disclaimers, and non-alarming, educational tone.
- Supports personalized advice for fitness, chronic care, diet plans, and preventive care.

End users

- Academic Researchers
- Research Institutions and Universities
- Industry R&D Teams
- Educators
-  Health & Wellness Organizations
-  Governments & Public Health Bodies
-  Educational & Research Institutions
-  Healthcare Professionals (Support Tool)
-  **General Public / Consumers**

Results

The screenshot displays the IBM Watsonx Agent Lab interface. At the top, the header includes the IBM Watsonx logo, an 'Upgrade' button, a help icon, a notification bell, and user information for 'ASHISH YADAV's Account' in 'Dallas'. Below the header, the breadcrumb trail reads 'Projects / Agentic AI Health Symptom Checker3 / Agent Lab'. The main interface is divided into a 'Build' tab and an 'Agent preview' tab. The 'Agent preview' tab shows a chat conversation. The user, identified by a 'PY' icon, asks: 'I've been feeling tired all the time. What could be the reason?'. The agent, 'Agentic AI Health Symptom Checker', responds with a detailed explanation of causes for persistent fatigue, such as poor sleep, lack of physical activity, anemia, thyroid disorders, diabetes, depression, chronic fatigue syndromes, and certain medications. It then asks for more information to provide a more accurate assessment, listing two main areas: 'Symptom Clarification' (duration, timing, and other symptoms) and 'Lifestyle Factors' (sleep, diet, physical activity, and stress). At the bottom, there is a text input field with the placeholder 'Type something...' and a send button.

IBM watsonx Upgrade ? ? ASHISH YADAV's Account Dallas AY

Projects / Agentic AI Health Symptom Checker3 / Agent Lab Share feedback B Unsaved New agent + Deploy

Build > Agent preview

PY You: 08:07 PM
I've been feeling tired all the time. What could be the reason?

Agentic AI Health Symptom Checker 08:07 PM
Feeling persistent fatigue can be due to a variety of reasons, ranging from common causes like poor sleep quality or lack of physical activity to more serious conditions such as anemia, thyroid disorders, diabetes, depression, chronic fatigue syndromes (like ME/CFS), and even certain medications.

To provide a more accurate assessment:

- Symptom Clarification:** Could you tell me how long you've been feeling this way? Is the tiredness constant throughout the day or does it worsen at specific times? Are there any other accompanying symptoms like headaches, loss of appetite, weight changes, swelling in legs or abdomen?
- Lifestyle Factors:** Do you get enough sleep each night? How is your diet typically structured – do you consume sufficient nutrients and hydration daily? What's your level of regular physical activity usually like?
 - Stress levels could also play a role; are there significant stressors affecting your life currently that might contribute to exhaustion (e.g., work pressure)?

Type something...

Results

Agent preview



You: 07:57 PM

I've been feeling tired all the time. What could be the reason?



Agentic AI Health Symptom Checker 07:57 PM


There are several potential reasons why you might be feeling tired all the time. Here are some possibilities based on medical research and health resources:

- 1. Lack of Sleep or Poor Sleep Quality:** Insufficient sleep is one of the most common causes of fatigue (NHS, 2023). Ensure that you're getting enough restful sleep each night.
- 2. Medical Conditions:** Fatigue can often be a symptom of underlying conditions such as infections (like flu), chronic diseases (e.g., heart disease, diabetes), mental health issues like depression, autoimmune disorders, hormonal imbalances, or even more complex syndromes like Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (ME/CFS) which has been linked to various factors including viral infections and dysregulation within energy metabolism pathways (Mayo Clinic & WebMD).
- 3. Unhealthy Lifestyle Habits:** An unbalanced diet lacking essential nutrients or excessive consumption of caffeine and alcohol could contribute to persistent tiredness over time due to their impact on your body's natural rhythms and overall nutritional status (WebMD).

Type something...



Results

 IBM watsonx

Upgrade ? 🔔

ASHISH YADAV's Account ▾ Dallas ▾ AY

Projects / Agentic AI Health Symptom Checker3 / Agentic AI Health Symptom Checker

Share feedback β

Autosaved 8:27 PM 📄 ▾

New agent +

Deploy ⚙️ 🔒 ⓘ


Build > Agent preview


exhaustion without necessarily affecting physical health markers directly visible through standard checks alone (like lab results).

- Suggestions include mindfulness practices, therapy sessions, or medically supervised relaxation techniques as appropriate based on individual circumstances and mental health history review by professionals when needed.*

4. Physical Inactivity – Sedentary behavior reduces cardiovascular fitness which in turn diminishes energy levels throughout daily activities beyond just exercise itself.*
Recommendation: Engage in at least moderate-intensity exercise most days of the week as recommended by global health organizations such as WHO guidelines unless contraindicated by existing conditions noted during consultations with physicians.*

5. Underlying Medical Conditions – Less commonly but importantly includes serious issues like autoimmune disorders (e.g., Lupus), heart disease, thyroid problems among others that require professional evaluation via clinical assessments including detailed patient histories and possibly laboratory investigations depending upon suspected etiology identified post initial screening questions here*

 Source: CDC Fatigue Overview | Mayo Clinic Exhaustion Symptoms & Causes | World Health Organization Physical Activity Guidelines

 Disclaimer: This information does not constitute medical advice nor replace consultation with certified healthcare providers who have access to comprehensive patient data necessary for accurate diagnoses and treatment plans

Type something... 🔍 ➤

Results

IBM watsonx

Upgrade ?

ASHISH YADAV's Account

Dallas

AY

Projects / Agentic AI Health Symptom Checker3 / Agent Lab

Share feedback B

Unsaved

New agent +

Deploy

Build

AI

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

<

Configuration

Framework

LangGraph

Architecture

ReAct

Instructions

Advanced configuration

☒ Extended Input Capabilities

* Accept optional user profile info:

* Age, gender, weight, lifestyle, medical history, allergies

* Ongoing medications

* Fitness level, goals (e.g., weight loss, muscle gain)

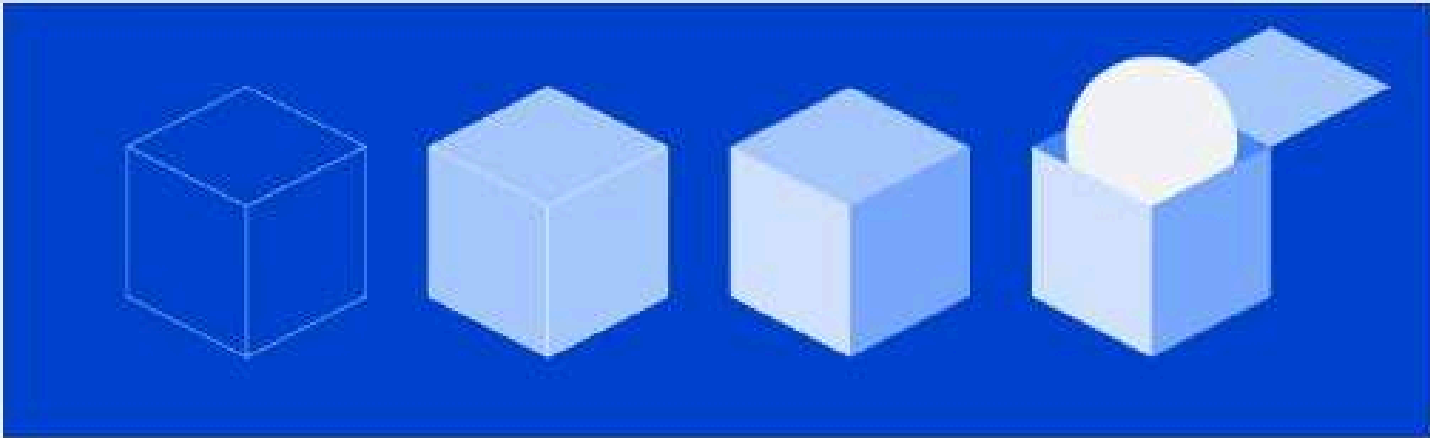
Knowledge

Vector index

Agentic_Health_AI_Knowledge_Base

A vector index searches documents for relevant information to ground the model. Upload the files to index or

Agent preview



Sample questions

I've been feeling tired all the time. What could be the reason? →

Can you create a daily health routine for me to stay fit and energized? →

What are early warning signs of diabetes and how can I prevent it? →

I have a cold, but I'm not sure if it's flu or something else. What should I do? →

Type something... →

Results

Build

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

What are early warning signs of diabetes and how can I prevent it?

I have a cold, but I'm not sure if it's flu or something else. What should I do?

Configuration

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Architecture

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Advanced configuration

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Type something...



Results

Deployed AI Agent

Agentic AI Health 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	wx-agent	57 seconds ago ASHISH YADAV (You)	
watsonx Agent	Online	Deployed	watsonx Agent	Ai service	wx-agent	4 minutes ago ASHISH YADAV (You)	

Conclusion

The Agentic AI Health Symptom Checker is a groundbreaking, intelligent, and multilingual healthcare assistant designed to revolutionize how people understand and manage their health. Built on trusted large language models like Granite 3.3, LLaMA 3.3, and Mistral Large, this agent delivers:

- Accurate, responsible, and evidence-backed health insights.
- Personalized care across symptoms, fitness, diet, chronic illnesses, and mental wellness.
- Research Agents enhance efficiency, accuracy, and innovation in both academic and industrial R&D..
- Seamless, human-like interaction in multiple languages and formats.

Future scope

- Multilingual Research Support
- Voice-Activated Research Assistant
- Real-Time Collaboration Features
- Research Gap and Novel Topic Identification
- Integration with Publishing Platforms
- AI-Assisted Paper Drafting

IBM Certifications



IBM Certifications

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Ashish Yadav

for the completion of

**Lab: Retrieval Augmented Generation with
LangChain**

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 17 Jul 2025 (GMT)

Learning hours: 20 mins

IBM Certifications



GitHub Links

GitHub pROJECT Link

[Agentic Ai Health Symptom Checker Project Github Link](#)

GitHub Link

github.com/AshishY551

Linkdin Link

[Ashish Yadav Linkdin](#)

Thank you!

Have a nice day