
CAPSTONE PROJECT

AGENTIC AI HEALTH SYMPTOM CHECKER

Presented By:

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OUTLINE

- **Problem Statement**
- **Proposed System/Solution**
- **System Development Approach** (Technology Used)
- **Deployment**
- **Result (Output Image)**
- **Github**
- **Conclusion**
- **Future Scope**
- **References**

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.

PROPOSED SOLUTION

- **System Architecture:** How the AI system would be structured (e.g., front-end user interface, back-end AI engine, database integration).
- **Key Features:** A detailed breakdown of the functionalities the checker would offer (e.g., symptom input, probable cause analysis, preventive advice, care recommendations, integration with telehealth).
- **Technology Stack:** The specific technologies and tools that would be used (e.g., Python for AI, specific ML/NLP libraries, cloud platforms, database systems).
- **Data Sources and Integration:** How verified medical data from sources like WHO, government health portals, and medical journals would be ingested and kept up-to-date.
- **User Experience (UX) Design:** How the user interface would be intuitive and user-friendly.
- **Ethical Considerations and Safeguards:** How the challenges like accuracy, bias, data privacy, and the need for human oversight would be addressed.
- **Scalability and Maintenance:** How the system would be designed to handle a large number of users and how it would be maintained and updated over time.
- **Implementation Roadmap:** A high-level plan for developing, testing, and deploying the solution.
- **Benefits and Impact:** Reiteration of the positive outcomes expected from the solution.

SYSTEM APPROACH

1. Set up the sandbox by creating the new project
2. Giving the storage for the Model
3. Associating the watsonx runtime server
4. Setup the agentic Ai build
5. Providing the instruction to the Agent
6. Selecting the model here the model selected is **granite-3-3-8b-instruct**
7. After the model selected tune the model parameters that is frequency, seeds, tokens
8. After the model is tested successfully create the new deployment space
9. After creating the deployment space deploy the model

DEPLOYMENT

Jump back in

Health Agent

22 minutes ago

View all (1)

Deployments

All

Deployed

1

Failed

0

[View deployments](#)

Job runs

Active

0

Failed last 24 hours

0

Space

No You

Deployment spaces /

1

2

3

4

5

6

Health assistance

Overview

Assets

Deployments

Jobs

Manage

▼

Q

Search

Name

Type

Status

Asset

Asset type

Tags

Last modified

↓

Health Agent

Online

Deployed

Health Agent

AI service

wx-agent

1 minute ago

Suraj Patel (You)

Items per page: 20

1-1 of 1 items

1 of 1 pages

MODEL USED

[Projects](#) / [AI_HEALTH_ASSISTANCE](#) / Agent Lab

[Share feedback](#) β Unsaved 📁 ▼ [New agent](#) + [Deploy](#) 🚀

Build

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

Setup

Name

Health Agent

Description 59/100

Provides Remedies Before visiting the Doctor as a first aid

Icon

Placeholder image

Quick start questions

Add up to 4 quick start questions that your users can select. +

Agent preview

SP You: 11:14 PM

hi

Health Agent 11:14 PM

Hello! How can I assist you with health-related information today?

► How did I get this answer?

SP You: 11:15 PM

I have a sore throat and fever

Health Agent 11:15 PM

I'm sorry to hear that you're not feeling well. These symptoms could be related to several common conditions, such as a viral infection (like the flu or a common cold), strep throat, or tonsillitis.

Here are some general recommendations based on your symptoms:

1. **Stay Hydrated:** Drink plenty of fluids to prevent dehydration. Water, clear broths, and herbal teas can soothe a sore throat.







2. **Rest:** Ensure you get plenty of rest to help your body fight off the infection.

Type something... 🗨️ ➤

edunet
foundation

RESULT

[Deployment spaces](#) / [Health assistance](#) / [Health Agent](#) /




Health Agent


✔ Deployed Online

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


[New chat +](#)

 You 11:35 PM


hi

 Health Agent 11:35 PM

Hello! How can I assist you with health-related information today? Please describe your symptoms or concerns.

 You 11:36 PM

i am having some stomach pain

 Health Agent 11:36 PM

I'm sorry to hear that you're experiencing stomach pain. It's important to understand that stomach pain can be caused by a variety of factors, ranging from minor and temporary issues to more serious conditions. Here are a few possibilities:

RESULT 2

[Deployment spaces](#) / [Health assistance](#) / [Health Agent](#) /



Health Agent ✓ Deployed Online

API reference

Test

Preview

New chat +



Health Agent 11:30 PM

I'm sorry to hear that you're experiencing stomach pain. It's important to understand that stomach pain can be caused by a variety of factors, ranging from minor and temporary issues to more serious conditions. Here are a few possibilities:

1. **Indigestion or Heartburn:** This can cause a burning sensation in the upper abdomen and may be caused by eating certain foods, stress, or irregular eating habits.
2. **Gas or Bloating:** Excessive gas can lead to discomfort and bloating, often accompanied by belching or flatulence.
3. **Constipation:** Infrequent bowel movements or difficulty passing stool can lead to stomach pain and discomfort.
4. **Food Poisoning:** Consuming contaminated food can lead to stomach pain, nausea, vomiting, and diarrhea.
5. **Stomach Flu or Viral Gastroenteritis:** This is an inflammation of the stomach and intestines caused by a virus, leading to symptoms like diarrhea, abdominal cramps, and vomiting.
6. **Irritable Bowel Syndrome (IBS):** A chronic condition that can cause abdominal pain, bloating, and changes in bowel movements.
7. **Ulcers or Gastroesophageal Reflux Disease (GERD):** These conditions can cause persistent pain, often worse when the stomach is empty.

RESULT 3

Urgency Level

Most stomach pains are not life-threatening, but it's crucial to pay attention to accompanying symptoms:

- **Severe, persistent pain**
- **Blood in stool**
- **High fever**
- **Vomiting**
- **Dizziness or weakness**

If you experience any of these, seek medical attention immediately.

Home Remedies

While waiting for symptoms to subside, you can try these home remedies:

- **Stay Hydrated:** Drink plenty of fluids to prevent dehydration, especially if you're experiencing diarrhea.
- **Avoid Triggers:** Identify and avoid foods that trigger your discomfort. Common culprits include fatty or spicy foods, caffeine, alcohol, and carbonated drinks.
- **Over-the-counter Medication:** Antacids or H2 blockers can help with heartburn and indigestion.
- **Probiotics:** They may help with digestive issues.

When to Consult a Doctor

It's advisable to consult a healthcare professional if:

RESULT 4

When to Consult a Doctor

It's advisable to consult a healthcare professional if:

- Stomach pain is severe or persistent.
- You notice blood in your stool.
- You have accompanying symptoms like high fever, vomiting, or dizziness.
- Pain interferes with your daily activities.
- You suspect food poisoning.

For personalized advice, consider using a medical search engine like [Google](#) or [Wikipedia](#) to look up specific conditions based on your symptoms.

Remember, this advice is general in nature, and individual cases may vary. Always consult with a healthcare provider for a proper diagnosis and treatment plan.

GITHUB

GitHub profile: <https://github.com/patilsurajcp>

Problem Statement Repo cloning: https://github.com/patilsurajcp/Agentic_AI_health_Assistance.git

Problem Project: https://github.com/patilsurajcp/Agentic_AI_health_Assistance

Other projects: https://github.com/patilsurajcp/EDUNET_INTERNSHIP

CONCLUSION

- The Agentic AI Health Symptom Checker, as a proposed solution, represents a significant stride towards democratizing preliminary health understanding and guidance. By leveraging cutting-edge AI technologies, particularly Natural Language Processing and Machine Learning, and integrating with a meticulously curated Medical Knowledge Base derived from trusted sources like the WHO and government health portals, this system promises to empower users with immediate, data-driven insights into their health conditions.

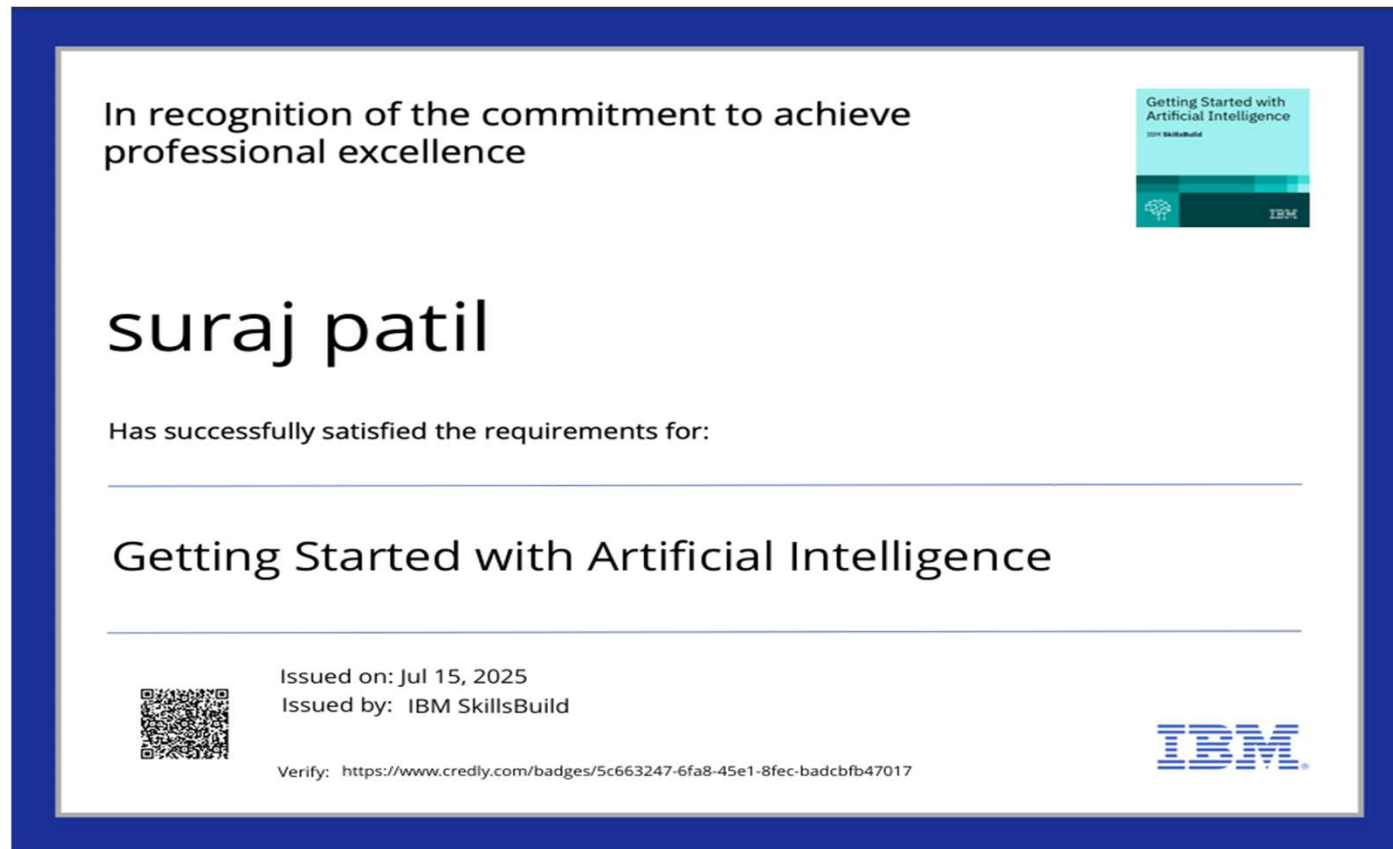
FUTURE SCOPE

- **Integration with Wearable Devices & IoT:** Connecting with smartwatches, fitness trackers, and other health IoT devices to continuously collect physiological data (heart rate, sleep patterns, activity levels). This real-time, personalized data can significantly improve the accuracy of symptom analysis and enable proactive health monitoring.
- **Prescription Management Integration:** For non-prescription recommendations, providing direct links to pharmacies or online drugstores; for prescription needs, facilitating communication with healthcare providers.
- **Hospital and Specialist Referral Networks:** Building integrated networks for direct referrals to specialists or hospitals based on the AI's severity assessment and recommendation.
- **Multilingual Support:** Expanding language capabilities to serve a global user base, including culturally sensitive medical advice.
- **Wellness and Lifestyle Coaching:** Moving beyond just illness, offering personalized recommendations for nutrition, exercise, stress management, and sleep based on user profiles and goals.
- **Mental Health Support:** Expanding the scope to include preliminary assessment of mental health symptoms and guidance on seeking appropriate professional help or resources.

REFERENCES

- World Health Organization (WHO)-Website
- Government Health portals
- Ministry of Health and Family Welfare (MoHFW), India
- Mayo Clinic: Known for its extensive symptom checker and detailed medical information.
- World Health Organization (WHO) Guidelines on AI in Health
- Wikipedia-articles

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