
CAPSTONE PROJECT

AGENTIC AI HEALTH SYMPTOM CHECKER

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OUTLINE

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

PROBLEM STATEMENT

- Individuals often experience symptoms such as sore throat, fever, or fatigue but struggle to understand their causes or decide whether medical attention is needed.
- The abundance of online health information can be overwhelming and misleading. Increasing the risk of self-diagnosis.
- There is a need for a system that helps users interpret symptoms safely and responsibly using trusted health information.

PROPOSED SOLUTION

- Develop an AI-powered assistant using IBM Watsonx Assistant on IBM Cloud Lite
- Allow users to input symptoms in natural language (e.g., "I have a sore throat and fever")
- Suggest when to consult a doctor based on urgency or severity
- Analyze the input and provide likely causes, home remedies, and what to avoid
- Use trusted health sources(e.g., WHO , govt health portals) to avoid misinformation
- Support user- friendly and safe conversations with multiple symptom options
- Provide educational and referral-based guidance instead of direct diagnosis

SYSTEM APPROACH

- Platform : IBM Watsonx Assistant
- Intent-based design (e.g., report_symptoms)
- Actions for symptoms : fever, headache, sore throat, cough, body pain & fatigue
- Button-based multi-turn flow(consult a doctor, check another symptom)

RESULT

IBM watsonx Assistant Lite

Upgrade

Health Symptom ...

Learning resources

?

View all assistants

What's new

Documentation

Assistant Builder Home

Health Symptom Checker

Last updated on August 5, 2025 1:28:12 AM GMT+5:30

Enhance your assistant

Further improve and customize your assistant with these recommendations.

Build actions

Enhance and improve your assistant's actions.

→

Customize your greeting

Welcome your users in a unique way that aligns with your brand.

→

Create a fallback plan

Train your assistant to adapt to specific situations.

→

Set up search

Determine how your assistant extracts answers for your users' questions.

→

Preview & debug

Enable debug mode when you preview your assistant.

→

Assistant architecture

Here's an overview that depicts the structure of your assistant.

Default behavior

Conversational search

No content

Add →

Search

RESULT

IBM watsonx Assistant Lite Upgrade

Health Symptom ...

Learning resources ?

Actions

All items

Created by you

Set by assistant

Variables

Created by you

Set by assistant

Set by integration

Saved responses

Created by you / HEALTH /

Filter by Title or Display name

New action +

| Title | Display name | Last edited | Examples | Steps | Status |
|---|--------------|----------------|----------|-------|--------|
| <input type="checkbox"/> Check Symptoms | - | 16 minutes ago | 12 | 6 | ✓ |
| <input type="checkbox"/> Consult a doctor | - | an hour ago | 3 | 3 | ✓ |

Items per page: 50 Showing 1–2 of 2 items

1 1 of 1 pages

Preview

RESULT

IBM watsonx Assistant Lite Upgrade

Health Symptom ...

Learning resources ?

Check Symptoms

Editor Visualization

Customer starts with:
Check Symptoms

Conversation steps

1

Hello! I'm your Health Symptom Checker Assistant. You can tell me your symptoms like: "I..."
Headache Sore throat + 3
Continue to next step

1

is Fever
Possible causes: • Viral or bacterial infection (cold, flu, UTI, etc.) • Reaction to weather change o...
Check Anoth... Consult a do...
Continue to next step

1

is Sore throat
Possible causes: • Viral throat infection (cold, flu)
• Throat irritation from dry air or pollution Care...
New step +

Step 1

Is taken without conditions

Set variable values fx

Assistant says

B I @ fx ↺ ↻ 📷 🎵 📺 📺 📺 ⏸ </>

Hello! I'm your Health Symptom Checker Assistant.
You can tell me your symptoms like:
"I have a fever and cough" or "I feel body pain and fatigue."
I'll suggest possible causes, remedies, and tell you when to consult a doctor.
How can I help you today?

Choose an option

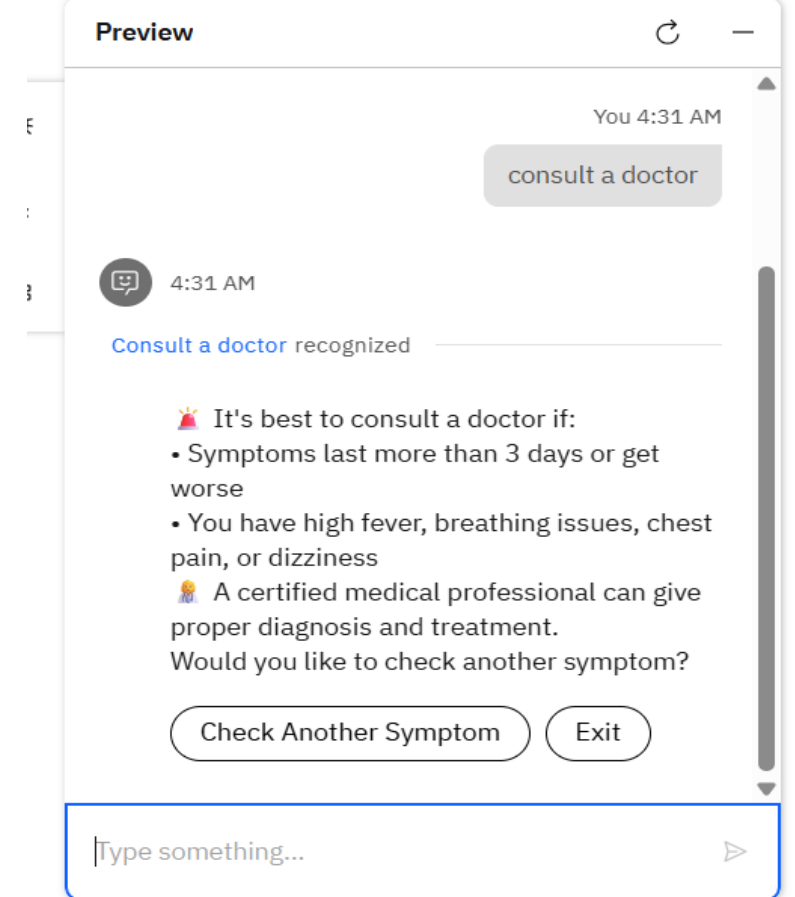
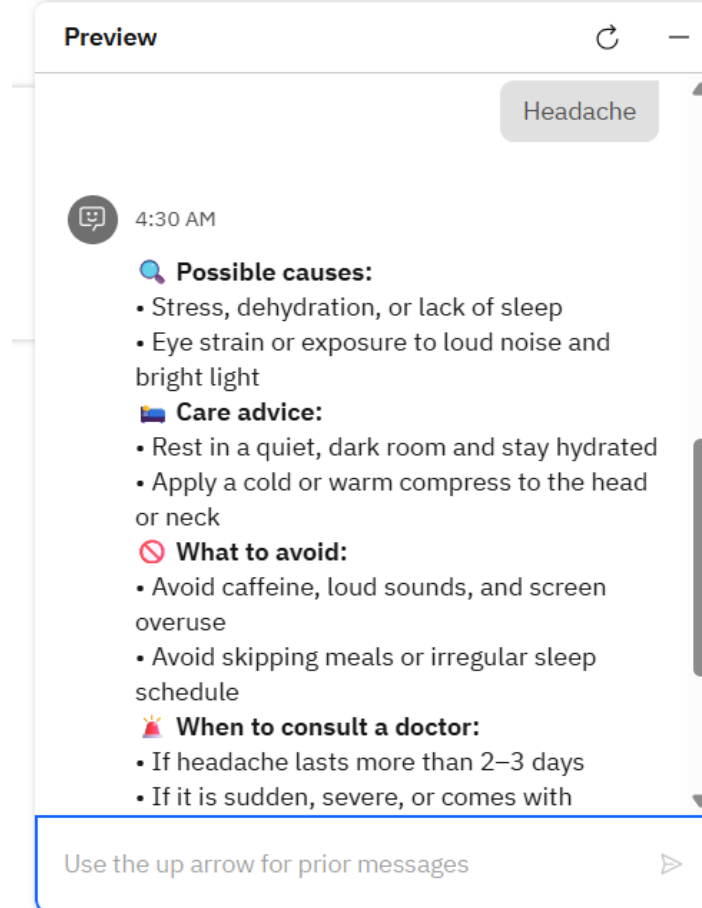
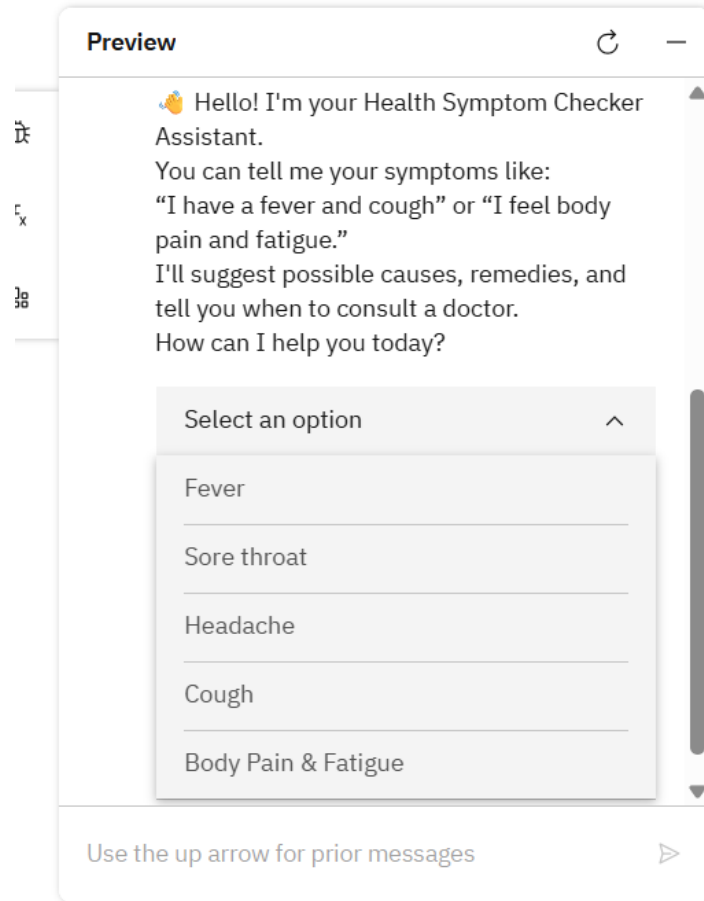
Edit response Edit validation

And then

Continue to next step

Preview ▶

RESULT



RESULT

Preview

You 4:31 AM

consult a doctor

4:31 AM

Consult a doctor recognized

🔥 It's best to consult a doctor if:

- Symptoms last more than 3 days or get worse
- You have high fever, breathing issues, chest pain, or dizziness

👨‍⚕️ A certified medical professional can give proper diagnosis and treatment.

Would you like to check another symptom?

Check Another Symptom

Exit

Type something...

Preview

- You have high fever, breathing issues, chest pain, or dizziness

👨‍⚕️ A certified medical professional can give proper diagnosis and treatment.

Would you like to check another symptom?

Check Another Symptom

Exit

You 4:32 AM

Check Another Symptom

4:32 AM

Sure! Please select the symptom you want to check:

Select an option

Use the up arrow for prior messages

Preview

worse

- You have high fever, breathing issues, chest pain, or dizziness

👨‍⚕️ A certified medical professional can give proper diagnosis and treatment.

Would you like to check another symptom?

Check Another Symptom

Exit

You 4:32 AM

Exit

4:32 AM

Thank you for using the Health Symptom Checker. Stay safe and take care!

💡 There are no additional steps for this action. Add a new step or end the action.

Type something...






CONCLUSION

- Empowers users to better understand their health by analyzing symptoms
- Provides reliable guidance including remedies, precautions, and when to consult a doctor
- Reduces the risk of self-diagnosis and misinformation
- Encourages safe, informed health decisions using trusted medical sources
- Built using IBM Watsonx Assistant on IBM Cloud Lite
- Demonstrates the role of AI in early detection and preventive healthcare

FUTURE SCOPE

- Integrate multi-language and voice-based input for better accessibility
- Add support for more symptoms, conditions, and medical scenarios
- Connect with real-time doctor consultation platforms or telemedicine APIs
- Include user feedback to improve response accuracy and personalization
- Add emergency detection and auto-referral for high-risk symptoms
- Enable integration with health wearables for real-time health tracking

REFERENCES

1. IBM SkillsBuild Platform
 <https://skillsbuild.org>
2. IBM Watsonx Assistant Documentation
 <https://cloud.ibm.com/docs/watsonx-assistant>
3. World Health Organization (WHO) – Health Topics
 <https://www.who.int/health-topics>
4. Ministry of Health and Family Welfare, Government of India
 <https://www.mohfw.gov.in>
5. National Institutes of Health (NIH) – Symptoms and Health Conditions
 <https://www.nih.gov>

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Learning hours: 20 mins



THANK YOU