

HEALTHAI: Intelligent Healthcare Assistant using IBM Granite

1. INTRODUCTION

1.1 Project Overview

HEALTHAI: Intelligent Healthcare Assistant using IBM Granite is a generative AI-powered application designed to provide smart healthcare support to patients through an interactive and intuitive interface. The system leverages IBM's Granite language model to facilitate health-related conversations, predict diseases based on symptoms, suggest possible treatment plans, and display useful health analytics. Developed using Python and Streamlit, the application aims to simplify patient engagement and support early diagnosis and treatment planning through AI.

1.2 Purpose

The primary purpose of this project is to harness the power of Generative AI for delivering accessible, reliable, and intelligent healthcare support. HEALTHAI serves as a virtual health assistant that helps users:

- Get instant responses to general health queries.
- Predict diseases based on symptoms using AI.
- Receive relevant treatment suggestions.
- View simple, clear analytics on health trends.

This project also demonstrates the practical application of IBM Granite models in solving real-world healthcare problems, fulfilling academic and internship goals under the IBM Generative AI program.

2. IDEATION PHASE

2.1 Problem Statement

Date: 27 June 2025

Team ID: LTVIP2025TMID59371

Project Name: Health AI: Intelligent Healthcare Assistant Using IBM Granite.

Marks: 4 Marks

Customer Problem Statement Template

Create a problem statement to understand your customer's point & view. The Customer Problem Statement helps you focus on what matters to create experiences people will love.

A well-articulated customer problem statement allows your team and your users to find the ideal solution your business faces. Throughout the process, you'll also be able to empathize with your customers so you better understand your

Template: <https://miro.com/templates/customerproblem-statement/>

Example:

Problem Statement (PS)	(i am)	I'm trying to	But	Which makes me feel
PS-1	a patient	manage my health effectively	I face difficulty	frustrated and anxious about my well-being
I'm		manage my health effectively	I face continued and lacks processing and medicaic insdicas' the current healthcare system is fragmented and lacks proactive support	

2.2 Empathy Map Canvas

Date: 27 June 2025

Team ID: LTVIP2025TMID59371

Project Name: Health AI: Intelligent Healthcare Assistant Using IBM Granite Maximum

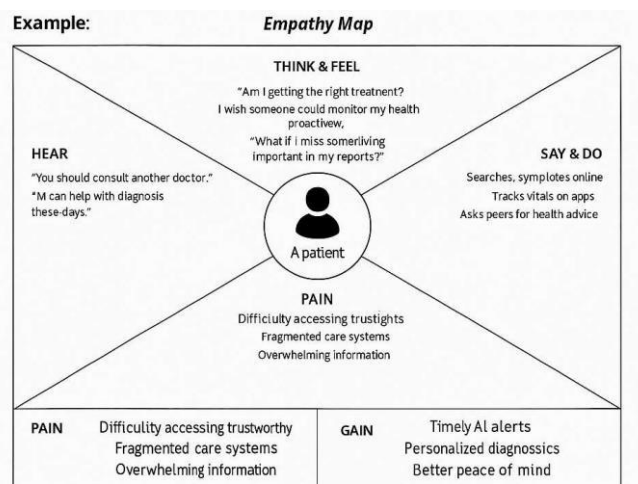
Marks: 2 Marks

Empathy Map Canvas

An empathy map a simple, easy-to-digest visual that captures knowledge about a user's behaviors and attitudes.

It is a useful to helping teams teams understand their users.

Creating an effective solution requires understanding their the person who is experiencing it, it. Exele participants consider how participants consider uset highs, lows, goals, and challenges



Reference: <https://www.mural.co/templates/empathy-map-canvas>



2.3 Brainstorming

Date: 27 June 2025

Team ID: LTVIP2025TMID59371

Project Name: Health AI: Intelligent Healthcare Assistant Using IBM Granite Maximum

Marks: 4 Marks

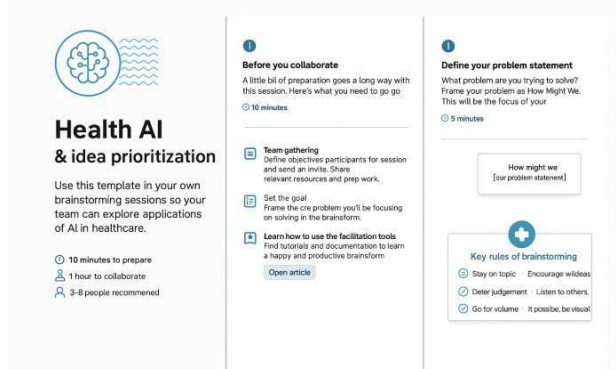
Brainstorm & Idea Prioritization in Health AI

Brainstorming in Health AI promotes free, creative thinking to generate innovative solutions for healthcare challenges using artificial intelligence. To collect a wide range of ideas from diverse team members, then prioritize based on impact, feasibility, and urgency. Encourage maximum idea generation, regardless of practicality at first.

Cross-functional team members (AI developers, clinicians, analysts) co-create ideas. Ideal for distributed teams using tools like Miro or Mural. AI-driven symptom checking, disease prediction, treatment plans, and patient engagement tools. Impact – Patient outcomes and healthcare system improvement. Feasibility – Technical readiness with health regulations.

Reference: Brainstorm and idea prioritization template | Mural

Step-1: Team Gathering, Collaboration and Select the Problem Statement



Step-2: Brainstorm, Idea Listing and Grouping



Health AI & idea prioritization

In a brainstorming session, list and group ideas for addressing your problem statement:

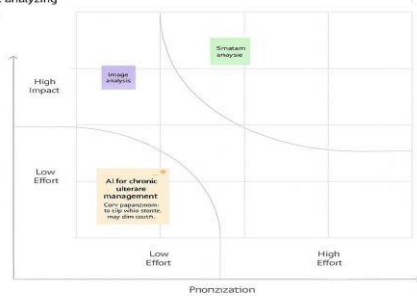
Health AI



Step-3: Idea Prioritization

In the quadrants shown below, plot the most valuable ideas, analyzing Impact on the problem vs. effort to implement

Prioritization
In the quadrant-
Shown below
plot the most
valuable ideas
analyzing
impact on implement



3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

Health AI



3.2 Solution Requirement

Solution Requirements (Functional & Non-functional)

Date	27 June 2025
Team ID	LTVIP2025TMID59371

Project Name	HealthAI-Intelligent Healthcare Assistant Using IBM Granite
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FRNo.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Disease Prediction	Symptom-based prediction Model scoring using IBM Granite AI
FR-4	Health Assistant Chat	Natural language query handling Context-aware health response
FR-5	Treatment Plan Recommendation	Display treatments based on disease Explain predicted outcome
FR-6	Health Analytics	View past predictions Graphs for health trends

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Functional Requirement	Sprint	Story ID	User Story / Task	Story Points	Priority
Registration	Sprint 1	US#4	As a user, I can register for the application (US3)	5	High
		US#2	As a user, oral responses can be analyzed using speech-to-text (US2)	8	High
Login	Sprint 1	US#3	As a user, health data can be input into system	7	High
		US#1	As a user, I can log in to the application	2	High
Dashboard	Sprint 2	US#1	As a user, I can view health data visualizations on the central (US5 dashboard	2	Medium

3.3 Data Flow Diagram

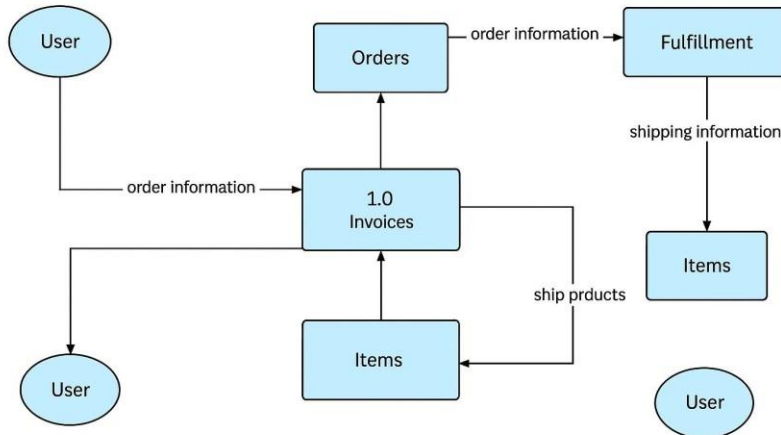
Data Flow Diagram & User Stories

Date	27 June 2025
Team ID	LTVIP2025TMID59371
Project Name	HealthAI-Intelligent Healthcare Assistant Using IBM Granite
Maximum Marks	2 Marks






Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Example: DFD Level 0 (Industry Standard)



Health AI

User Type	Functional Requirement	User Story / Task	Acceptance criteria	Priority	Rele
 Customer (Mobile user)	Registration	As a user, I can register by providing an email and password.	Email and password can be used to log in	High	Spr 1
	USS1	As a user, I will receive confirmation email	Confirmation email received	High	Spr 1
 Tester	USS2	As a user, I can enable systemwide speech-t-o-text	Speech-to-text is active throughout the app	Low	Spr 2
 Administrator	USS3	As a tester, I can analyze speech responses	Speech responses are analyzed correctly	Medium	Spr 1
	USS4	As an admin, I can view health data visualizations		Sprint 1	Spr 1
 Administrator	US4	As a tester, I can analyze speech responses	Speech responses are analyzed correctly	Medium	Spr 1
 Visualizaation	US5	As a tester, I can analyze speech responses	Health data visualizations are available	High	Spr 1

3.4 Technology Stack

Technology Stack (Architecture & Stack)






Date	27 June 2025
Team ID	LTVIP2025TMID59371
Project Name	HealthAI-Intelligent Healthcare Assistant Using IBM Granite
Maximum Marks	4 Marks

Technical Architecture – HealthAI

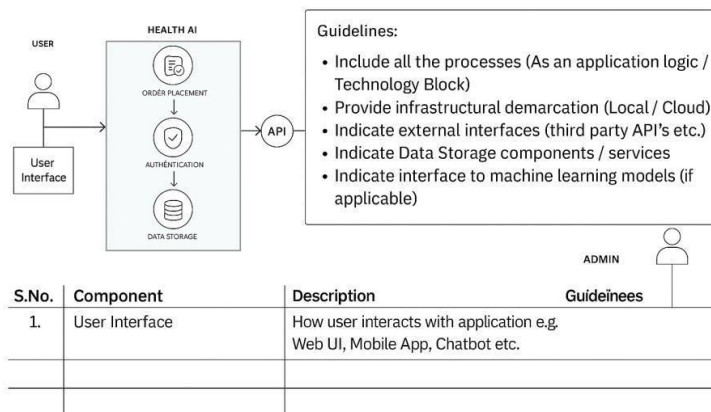
HealthAI's technical architecture is designed to provide intelligent, personalized, and accessible healthcare assistance using IBM's AI capabilities. The architecture bridges the gap between healthcare user needs and AI-driven digital solutions by clearly defining modules, workflows, and technology integrations.

It follows principles of modular design, AI integration, secure backend logic, and interactive frontend experiences.

References – Adapted for HealthAI

1. C4 Model – Software Architecture Visualization Used as the base modeling approach to define different levels of HealthAI's architecture (context, container, component). 
<https://c4model.com/>
2. IBM Order Processing System (Pandemic Reference) Inspired HealthAI's backend design by using modular components and AI-powered services similar to order-processing use cases. 
<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>
3. IBM Cloud Architecture Center Provided best practices and patterns for integrating AI models and deploying cloud-based healthcare applications.  <https://www.ibm.com/cloud/architecture>
4. AWS Architecture Best Practices Used as a comparative reference to validate HealthAI's scalability, resilience, and service-based integration approach. 
<https://aws.amazon.com/architecture>
5. How to Draw Useful Technical Architecture Diagrams Guided the creation of simplified, functional diagrams for HealthAI's backend and AI data flow.  <https://medium.com/the-internalstartup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>

Health AI



Health AI Technology Stack

- Application Logic-1: Patient intake and triage processing Python / Java
- Application Logic-2: Voice transcription for patient interactions IBM Watson STT
- Database MySQL / MongoDB
- Cloud Database IBM DB2 / IBM Cloudant
- File Storage: Medical imaging and document IBM Block Storage / Local Filesystem
- External API-1 IBM Weather API
- External API-2 Aadhaar API
- Machine Learning Model Custom Object Recognition Model
- Infrastructure Cloud Foundry / Kubernetes / Local Server
- Scalable deployment for clinical environments

4. PROJECT DESIGN

4.1 Problem Solution Fit

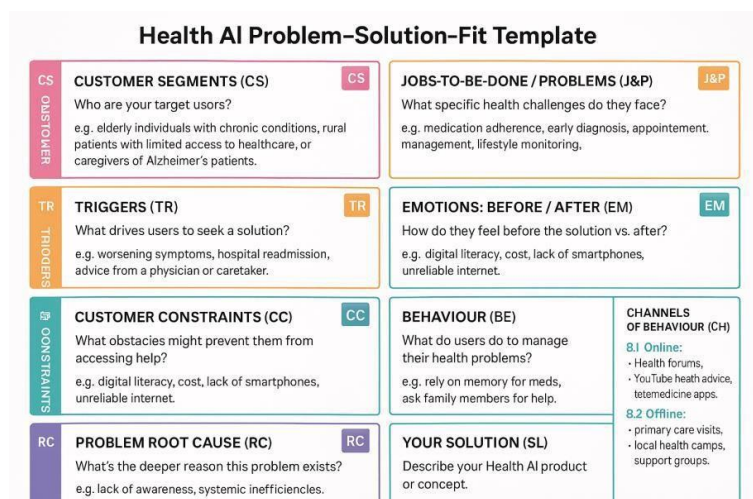
Problem – Solution Fit Template :

Date	27 June 2025
Team ID	LTVIP2025TMID59371
Project Name	HealthAI-Intelligent Healthcare Assistant Using IBM Granite
Maximum Marks	2 Marks

Problem – Solution Fit Template : HealthAI solves a frequent and urgent problem: lack of easy access to valid healthcare information and insights. It taps into the existing behavior of users searching for medical information online and replaces it with a credible, AI-powered platform.

Purpose :

- ☒ Solve complex health-related problems using intelligent and accessible AI assistance
- ☒ Increase solution adoption by reflecting how users already seek medical information online
- ☒ Improve communication using conversational chat and visual analytics
- ☒ Build user trust with consistent, evidence-based responses



References :

1. <https://www.ideahackers.network/problem-solution-fit-canvas/>
2. <https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe>

4.2 Proposed Solution

Date	27 June 2025
Team ID	LTVIP2025TMID59371
Project Name	HealthAI-Intelligent Healthcare Assistant Using IBM Granite
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Identify a pressing issue in healthcare your AI aims to adress
2.	Idea / Solution description	Summarize your Health AI solution and how it works
3.	Novelty / Uniqueness	What makes your idea different from existing healthcare technologies?
4.	Social Impact / Customer Satisfisfaction	How will it improve lives, patient outcomes, or user experience?
5.	Business Model (Revenue Model)	How will your solution generate revenue or remain sustainable?

4.3 Solution Architectur

Date	27 June 2025
Team ID	LTVIP2025TMID59371
Project Name	HealthAI-Intelligent Healthcare Assistant Using IBM Granite
Maximum Marks	2 Marks

✓ Solution Architecture – HealthAI

Solution architecture in HealthAI serves as the bridge between real-world healthcare challenges and advanced AI-driven technology. It outlines how HealthAI is built to deliver accurate, personalized, and responsive medical support.

🎯 Goals of HealthAI's Solution Architecture:

1. Identify the most effective AI-driven technology to solve the problem of inaccessible or unreliable healthcare information.
2. Design the complete structure — from user input (like symptoms or questions) to backend AI processing using IBM Granite and secure API handling.
3. Define key features and development phases, including modules like:
 - Patient Chat
 - Disease Prediction
 - Treatment Plan Generation
 - Health Analytics

📌 Key Characteristics of the HealthAI Architecture:

🔹 **Modular and Scalable Design:** Each core functionality is independently built using Python and Streamlit.

🔹 **AI Integration:** IBM Granite (13B Instruct v2) is used to process all medical queries and generate accurate, natural-language responses.

🔹 **User Interface:** Streamlit provides an intuitive frontend with form-based inputs, chatbot interfaces, and dynamic visualizations using Plotly.

🔹 **Data Flow:** User inputs are sent to the AI model via a central shared function (`shared_model.py`), processed securely, and returned in structured output.

🔹 **Security:** Environment variables (`.env`) are used for API key management to protect sensitive credentials.

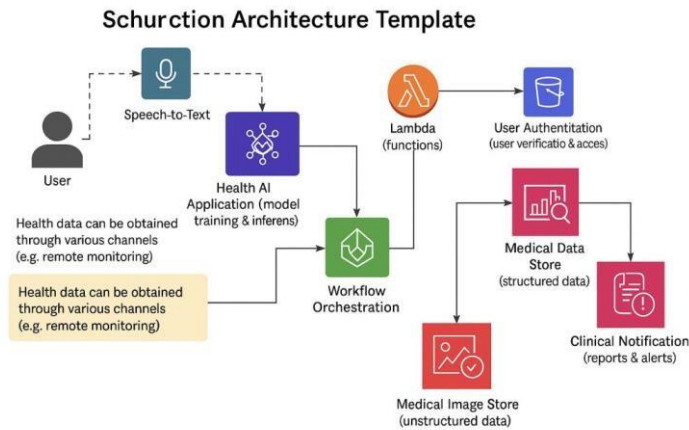


Figure 1: Architecture and data flow of the health AI system

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

Date	27 June 2025
Team ID	LTVIP2025TMID59371
Project Name	HealthAI-Intelligent Healthcare Assistant Using IBM Granite
Maximum Marks	4 Marks

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint).

Let's calculate the team's average velocity (AV)

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Functional Requirement	Sprint	User Story / Task	Story Points	Priority
Registration	Sprint 1	As a user, I can register for the application (US1)	5	High
Registration	Sprint 1	As a user, real responses can be analyzed using speech-to-text (US2)	8	High
Login	Sprint 1	As a user, health data can be input into system (US3)	7	High
Dashboard	Sprint 2	As a user, I can log in to the application (US4)	4	Medium
Dashboard	Sprint 2	As a user, I can view health data visualizations on the central dashboard (US5)	2	Medium

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Functional Requirement	Sprint	Story ID	User Story / Task	Story Points	Priority
Registration	Sprint 1	US#4	As a user, I can register for the application (US3)	5	High
		US#2	As a user, oral responses can be analyzed using speech-to-text (US2)	8	High
Login	Sprint 1	US#3	As a user, health data can be input into system	7	High
		US#1	As a user, I can log in to the application	2	High
Dashboard	Sprint 2	US#1	As a user, I can view health data visualizations on the central (US5 dashboard)	2	Medium

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

Functional & Performance Testing Template

Date	27 June 2025
Team ID	LTVIP2025TMID59371
Project Name	HealthAI-Intelligent Healthcare Assistant Using IBM Granite
Maximum Marks	

Model Performance Test


Test Scenarios & Result

Health AI Test Scenarios & Results

Test Case	Scenario (What to test)	Expected Result	Result
HT-A1	Input Validation	Valid inputs accepted	Pass
HT-A2	Name Input	Accepts alph, values	Accepts valid values
HT-A3	Symptom Input	Logg correctly	Symptoms log correcty
HT-A4	Content Generation	Created accurately	Generated accurately
HT-A5	API Connection	API responds	API responds
HT-A6	Response Time	Should be acceptable	Within an acceptable
HT-A7	User submittity multiple inputs	Should not slow	Pass
HT-A8	Upload transfer speed during micage	Should not lag	Should not lag


7. RESULTS

7.1 Output Screenshots



HealthAI - Intelligent Healthcare Assistant

Deploy



Navigation

- ☒ Patient Chat
- ☐ Disease Prediction
- ☐ Treatment Plan
- ☐ Health Analytics

Developed by Divya Reddy

Data Secure - IBM Watsonx Powered

Patient Profile

Name

Age

Gender

Medical History

prior illnesses, surgeries, hospitalizations, and other relevant health events


Current Medications

current health status, including any

Patient Chat Assistant

Ask a medical question:

- while urinating
- while defecating
- when you sneeze
- when you get a sunburn
- when you're about to sneeze



Navigation

- ☐ Patient Chat
- ☒ Disease Prediction
- ☐ Treatment Plan
- ☐ Health Analytics

Developed by Divya Reddy

Data Secure - IBM Watsonx Powered

HealthAI - Intelligent Healthcare Assistant

Patient Profile

Name: rani

Age: 30

Gender: Male

Medical History: prior illnesses, surgeries, hospitalizations, and other relevant health events

Current Medications: a detailed account of a patient's current health problems, including


Disease Prediction Based on Symptoms & Profile

Enter symptoms (comma-separated):

fatigue, swelling in the extremities, changes in urination, foamy or bloody urine, and itchy skin

[Predict Disease](#)

The patient presented with fatigue, swelling in the extremities, changes in urination, foamy or bloody urine, and itchy skin. The symptoms have developed over time. The patient is most likely suffering from a chronic condition, such as kidney disease or diabetes, and they should consult with a physician as soon as possible to receive a proper diagnosis and treatment.



Navigation

- ☐ Patient Chat
- ☒ Disease Prediction
- ☒ Treatment Plan
- ☐ Health Analytics

Developed by Divya Reddy

Data Secure - IBM Watsonx Powered

HealthAI - Intelligent Healthcare Assistant

Patient Profile

Name: rani

Age: 30

Gender: Male

Medical History: prior illnesses, surgeries, hospitalizations, and other relevant health events

Current Medications: a detailed account of a patient's current health problems, including


Generate Personalized Treatment Plan

Enter diagnosed condition:

common illnesses like the flu, hypertension, and appendicitis, as well as more complex condi

[Get Treatment Plan](#)

for a patient with a chronic condition. I will focus on the patient's history, allergies, and current medications. I will also consider the patient's age, gender, and other relevant factors. The goal of treatment is to improve the patient's quality of life and help them manage their chronic condition. I will recommend a treatment plan that includes lifestyle changes, medication, and possibly surgery or other procedures. I will also encourage the patient to be active and participate in their own care.



Navigation

- ☐ Patient Chat
- ☒ Disease Prediction
- ☐ Treatment Plan
- ☒ Health Analytics

Developed by Divya Reddy

Data Secure - IBM Watsonx Powered

HealthAI - Intelligent Healthcare Assistant

Patient Profile

Name: rani

Age: 30

Gender: Male


Medical History: prior illnesses, surgeries, hospitalizations, and other relevant health events

Current Medications: a detailed account of a patient's current health problems, including the

Patient Health Analytics

Select a metric to visualize

HeartRate



[Generate AI Insight](#)

8. ADVANTAGES & DISADVANTAGES

Advantages:

- ☒ **24/7 Accessibility:** Users can access healthcare assistance anytime without waiting for a doctor.
- ☒ **AI-Powered Responses:** Quick and intelligent answers using IBM Granite enhance user experience.
- ☒ **Early Disease Prediction:** Helps in identifying potential health issues at an early stage.
- ☒ **Modular System:** Divided into four independent modules for better organization and usability.
- ☒ **User-Friendly Interface:** Built using Streamlit, it provides a simple and intuitive experience.
- ☒ **Cost-Effective:** Reduces the need for continuous human supervision in basic healthcare queries.



Disadvantages:




- ☒ **Not a Replacement for Doctors:** Cannot replace actual medical consultation or diagnosis.
- ☒ **Depends on Internet Connection:** Requires stable internet to function effectively.
- ☒ **Limited to Pretrained Knowledge:** IBM Granite model may not always be updated with the latest medical information.
- ☒ **Security & Privacy:** Requires strict handling of user data for ethical and legal compliance.

9. CONCLUSION

The HEALTHAI project demonstrates how generative AI, specifically IBM Granite, can be effectively integrated into healthcare applications. By providing intelligent responses to user queries, disease prediction, treatment suggestions, and health analytics, this system can assist users in managing their health proactively. Though it is not a substitute for professional medical advice, it acts as a supportive tool that can bridge the gap between users and healthcare information in real time.

10. FUTURE SCOPE

-  **Integration with Real Medical Records:** In future, the system can be connected to Electronic Health Records (EHR) for more personalized responses.
-  **Mobile App Development:** A dedicated mobile version can improve accessibility on smartphones.
- ☐ **More Advanced AI Models:** Upgrading to future IBM Granite versions or fine-tuning with medical datasets for better accuracy.

-  Multi-Language Support: Expanding to regional languages can make it more inclusive.
-  Enhanced Security Measures: Implementing data encryption and secure login to protect user privacy.
-  Doctor Integration: Providing live chat features with real doctors or teleconsultation options.

Source Code(if any)

```

app (2).py  app (6).py  app.py  X
C:\Users\Divya Siva Naga > OneDrive > Desktop > FST > healthai_project_updated > healthai > app.py
1  import streamlit as st
2  import pandas as pd
3  from utils.ai import get_ai_response
4  from utils.core import predict_disease, generate_treatment_plan
5  from utils.visualizer import display_health_analytics
6
7  # ---- Page Config ----
8  st.set_page_config(page_title="🧠 HealthAI", layout="wide")
9  st.markdown("<h1 style='text-align: center;'>🏥 HealthAI - Intelligent Healthcare Assistant</h1>", unsafe_allow_html=True)
10
11 # ---- Sidebar Navigation ----
12 with st.sidebar:
13     st.image("https://cdn-icons-png.flaticon.com/512/3774/3774299.png", width=80)
14     menu = st.radio("📁 Navigation", ["💬 Patient Chat", "🔍 Disease Prediction", "💊 Treatment Plan", "📊 Health Analytics"])
15     st.markdown("----")
16     st.markdown("👤 Developed by Divya Reddy")
17     st.caption("🔒 Data Secure - IBM Watsonx Powered")
18
19 # ---- Session for Patient Profile ----
20 if "profile" not in st.session_state:
21     st.session_state.profile = {}
22
23 # ---- Left Panel: Patient Profile Form ----
24 col1, col2 = st.columns([1, 2])
25
26 with col1:
27     st.markdown("### 👤 Patient Profile")
28     with st.form("profile_form"):
29         name = st.text_input("Name", st.session_state.profile.get("name", ""))
30         age = st.number_input("Age", min_value=0, max_value=120, step=1, value=st.session_state.profile.get("age", 30))
31         gender = st.selectbox("Gender", ["Male", "Female", "Other"], index=["Male", "Female", "Other"].index(st.session_state.profile.get("gender", "Male")))
32         history = st.text_area("Medical History", st.session_state.profile.get("history", ""))
33         medications = st.text_area("Current Medications", st.session_state.profile.get("medications", ""))

```

```

app (2).py  app (6).py  app.py  X
C:\Users\Divya Siva Naga > OneDrive > Desktop > FST > healthai_project_updated > healthai > app.py
26     with col1:
27         with st.form("profile_form"):
33             medications = st.text_area("Current Medications", st.session_state.profile.get("medications", ""))
34             allergies = st.text_input("Allergies", st.session_state.profile.get("allergies", ""))
35
36             submitted = st.form_submit_button("💾 Save Profile")
37             if submitted:
38                 st.session_state.profile = {
39                     "name": name,
40                     "age": age,
41                     "gender": gender,
42                     "history": history,
43                     "medications": medications,
44                     "allergies": allergies
45                 }
46                 st.success("✅ Profile saved!")
47
48             if st.session_state.profile:
49                 st.markdown("#### 📁 Saved Info")
50                 st.json(st.session_state.profile)
51
52 # ---- Right Panel: Functional Modules ----
53 with col2:
54
55     profile = st.session_state.profile
56     profile_summary = f"""
57     Patient Info:
58     - Age: {profile.get('age')}
59     - Gender: {profile.get('gender')}
60     - History: {profile.get('history')}
61     - Medications: {profile.get('medications')}
62     - Allergies: {profile.get('allergies')}
63     """

```

```

app (2).py  app (6).py  app.py  X
C: > Users > Divya Siva Naga > OneDrive > Desktop > FST > healthai_project_updated > healthai > app.py
53 with col2:
65 # ---- Patient Chat ----
66 if menu == "Patient Chat":
67     st.subheader("Patient Chat Assistant")
68     user_input = st.text_area("Ask a medical question:")
69
70     if st.button("Get AI Response"):
71         if user_input.strip():
72             with st.spinner("Consulting HealthAI..."):
73                 prompt = f"You are a healthcare assistant. Respond based on the following profile and question:\n{profile_summary}\n\nQuestion: {user_input}"
74                 response = get_ai_response(prompt)
75                 st.success(response)
76         else:
77             st.warning("Please enter a question.")
78
79 # ---- Disease Prediction ----
80 elif menu == "Disease Prediction":
81     st.subheader("Disease Prediction Based on Symptoms & Profile")
82     symptoms = st.text_input("Enter symptoms (comma-separated):")
83
84     if st.button("Predict Disease"):
85         if symptoms.strip():
86             with st.spinner("Analyzing symptoms..."):
87                 prompt = f"Given the patient profile:\n{profile_summary}\n\nSymptoms: {symptoms}\n\nPredict possible diseases and next steps."
88                 result = get_ai_response(prompt)
89                 st.success(result)
90         else:
91             st.warning("Please enter symptoms.")
92
93 # ---- Treatment Plan ----
94 elif menu == "Treatment Plan":
95     st.subheader("Generate Personalized Treatment Plan")
96     disease = st.text_input("Enter diagnosed condition:")

```

```

app (2).py  app (6).py  app.py  X
C: > Users > Divya Siva Naga > OneDrive > Desktop > FST > healthai_project_updated > healthai > app.py
53 with col2:
94 elif menu == "Treatment Plan":
97     if st.button("Get Treatment Plan"):
98         if disease.strip():
99             with st.spinner("Creating treatment guidance..."):
100                 prompt = f"Generate a treatment plan for this patient:\n{profile_summary}\n\nCondition: {disease}"
101                 plan = get_ai_response(prompt)
102                 st.success(plan)
103         else:
104             st.warning("Enter a condition to continue.")
105
106 # ---- Health Analytics ----
107 elif menu == "Health Analytics":
108     st.subheader("Patient Health Analytics")
109
110     try:
111         df = pd.read_csv("data/patient_data.csv")
112         metric = st.selectbox("Select a metric to visualize", df.columns[1:])
113         st.line_chart(df.set_index(df.columns[0])[metric])
114
115         if st.button("Generate AI Insight"):
116             summary = df[metric].describe().to_string()
117             prompt = f"Given the patient's profile:\n{profile_summary}\n\nAnd health data summary:\n{summary}\n\nProvide analysis and insights."
118             ai_insight = get_ai_response(prompt)
119             st.info(ai_insight)
120     except FileNotFoundError:
121         st.error("data/patient_data.csv not found.")
122
123 # ---- Footer ----
124 st.markdown("<hr>", unsafe_allow_html=True)
125 st.markdown("<center><small>© 2025 HealthAI · Built with ❤️ using Streamlit and IBM Watsonx</small></center>", unsafe_allow_html=True)
126
127

```

Dataset Link GitHub & Project Demo Link

Both the dataset and the project demo video are uploaded to the GitHub repository and can be accessed via the following link:

🔗 <https://github.com/DivyaReddy011/health-AI>