

HEALTHAI PROJECT REPORT

INTRODUCTION

1.1 Project Overview

Health AI is an AI-driven web application that delivers smart and accessible healthcare services. It leverages the *IBM Granite 13B Instruct v2 * model to provide interactive, real-time responses across four healthcare modules like AI Health Chat, Disease Prediction, Treatment Plan Suggestions and Health Analytics .The application is built using Python and Stream lit, integrated with the Hugging Face API to access IBM's powerful AI model. The goal is to demonstrate how Generative AI can be used to Simplify health Care interactions, making them intelligent, personalized, and User - friendly.

1.2 Purpose

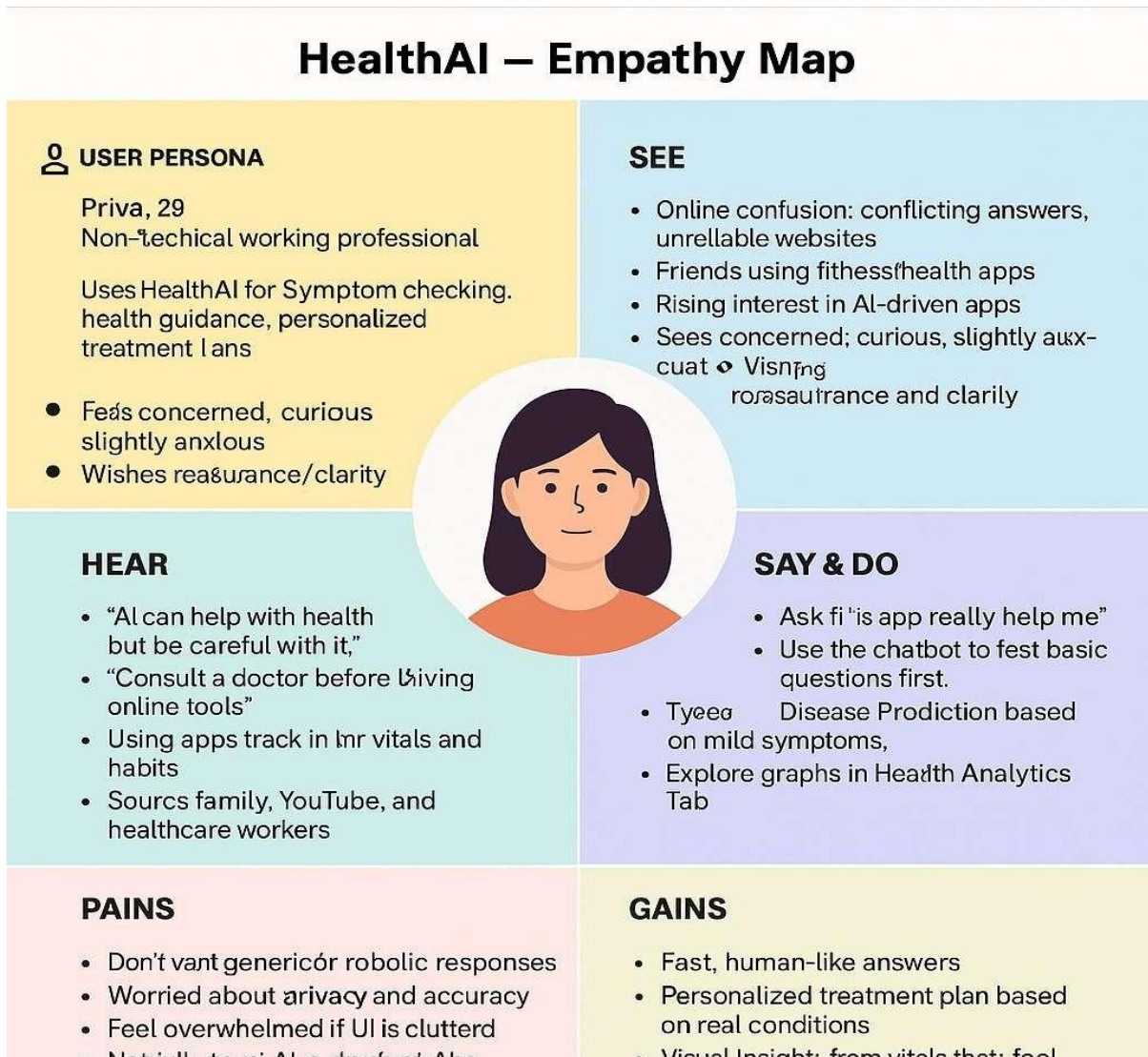
The main objective is to assist users in understanding their symptoms and obtaining personalized health insights using IBM Granite and modern AI. HealthAI does not replace medical professionals but empowers users to take informed actions toward better health.

2. IDEATION PHASE

2.1 Problem Statement

Many individuals experience common symptoms or have health questions but lack instant access to reliable medical guidance. The absence of early understanding can lead to panic or neglect.

2.2 Empathy Map Canvas



2.3 Brainstorming

Ideas explored:

- AI chatbot trained on medical data
- Symptom input with condition prediction
- Treatment plan suggestions
- Multilingual support
- Voice/text input
- Real-time interaction using IBM Granite

3. REQUIREMENT ANALYSIS

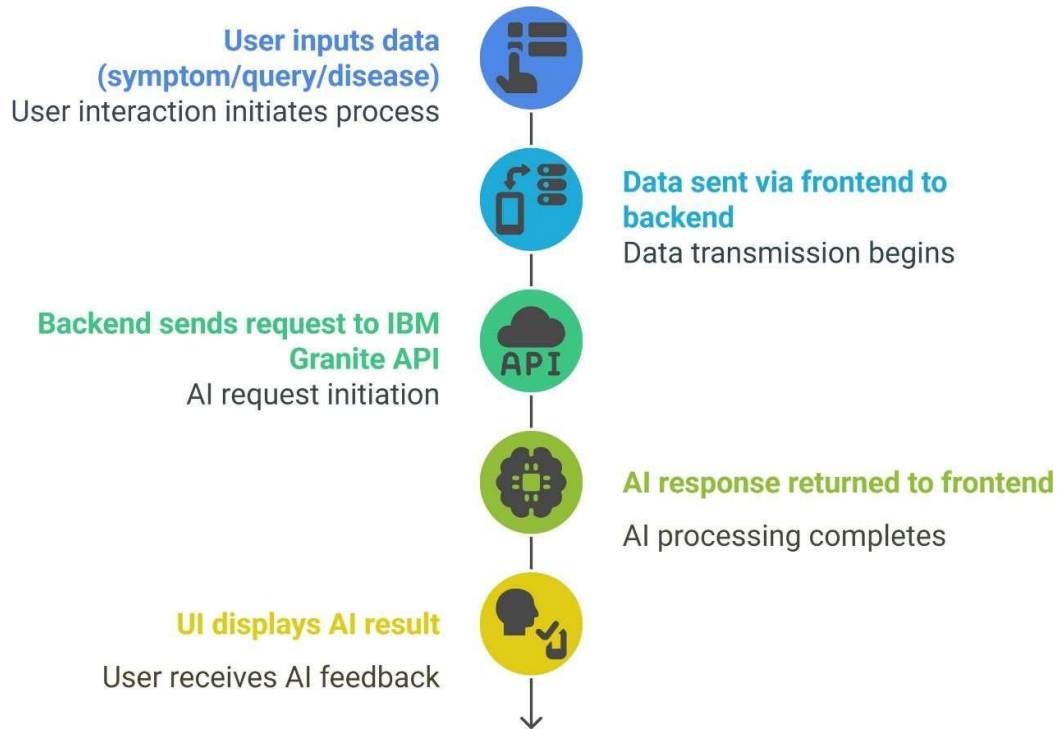
3.1 Customer Journey Map



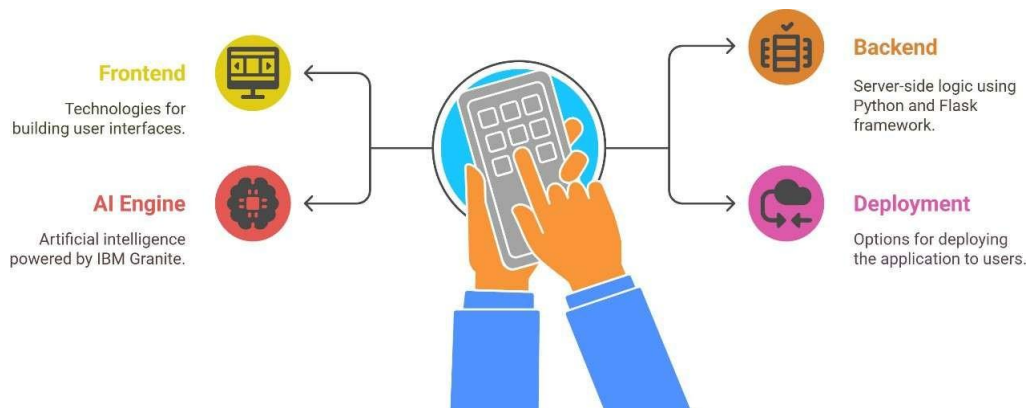
3.2 Solution Requirement

- Real-time AI model (IBM Granite) integration
- Frontend with HTML/CSS/JavaScript
- Flask-based backend
- RESTful API endpoints for symptoms, chat, and treatment

3.3 Data Flow Diagram



3.4 Technology Stack

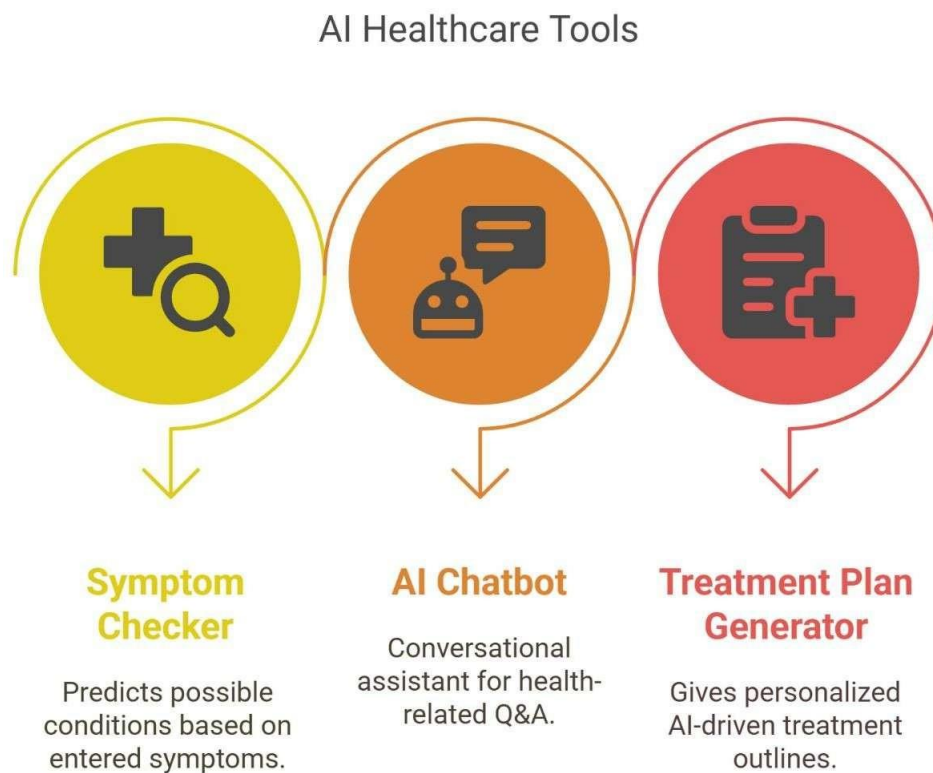


4. PROJECT DESIGN

4.1 Problem-Solution Fit

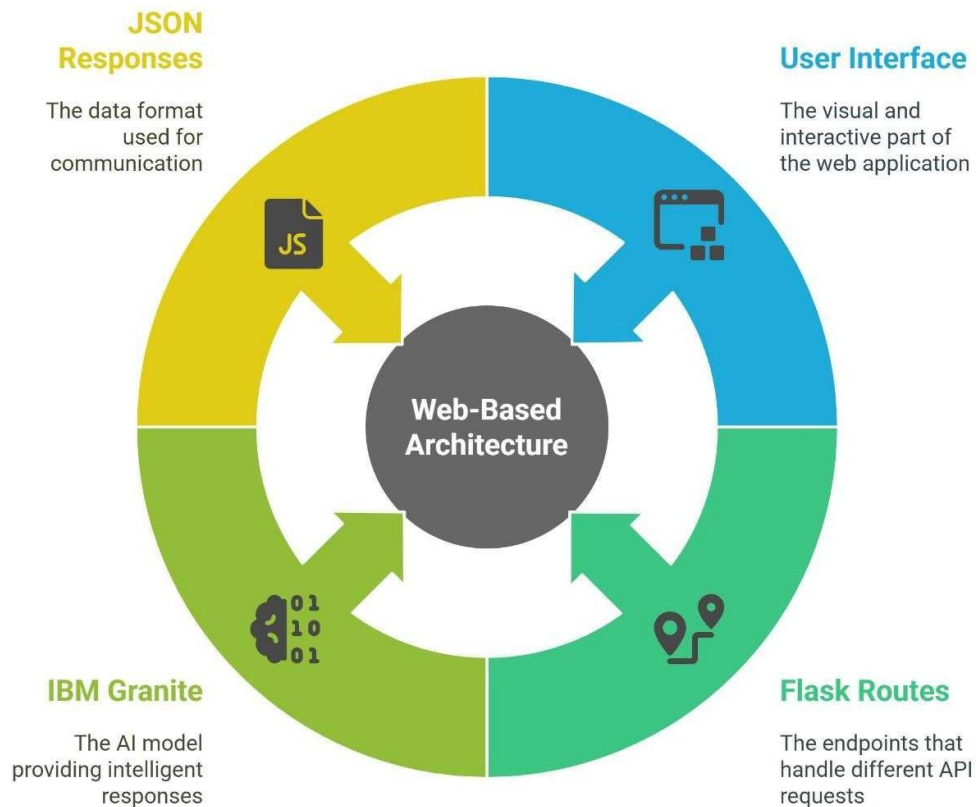
There is a rising demand for accessible, AI-based health assistants that do not require login, are easy to use, and provide instant answers.

4.2 Proposed Solution



4.3 Solution Architecture

Components of a Web-Based Architecture



A web-based architecture:

- User Interface (HTML/CSS/JS)
- Flask routes (/api/chat, /api/predict, /api/treatment)
- IBM Granite for intelligent responses
- JSON responses and dynamic UI updates

5. PROJECT PLANNING s SCHEDULING

5.1 Project Planning

Task	Team Member(s)	Start Date	End Date	Duration
Requirement Analysis	Reshma	June 10	June 11	2 days
Ideation & Brainstorming	Sreevalli	June 12	June 14	3 days
Model Integration & API	Alekhya	June 15	June 17	3 days
UI/UX Design in Gradio	Aakarsha	June 18	June 20	3 days
Health Analytics & Testing	Reshma & Alekhya	June 21	June 23	3 days
Documentation & Report	Sreevalli & Aakarsha	June 24	June 26	3 days

6. FUNCTIONAL PERFORMANCE TESTING

6.1 Performance Testing

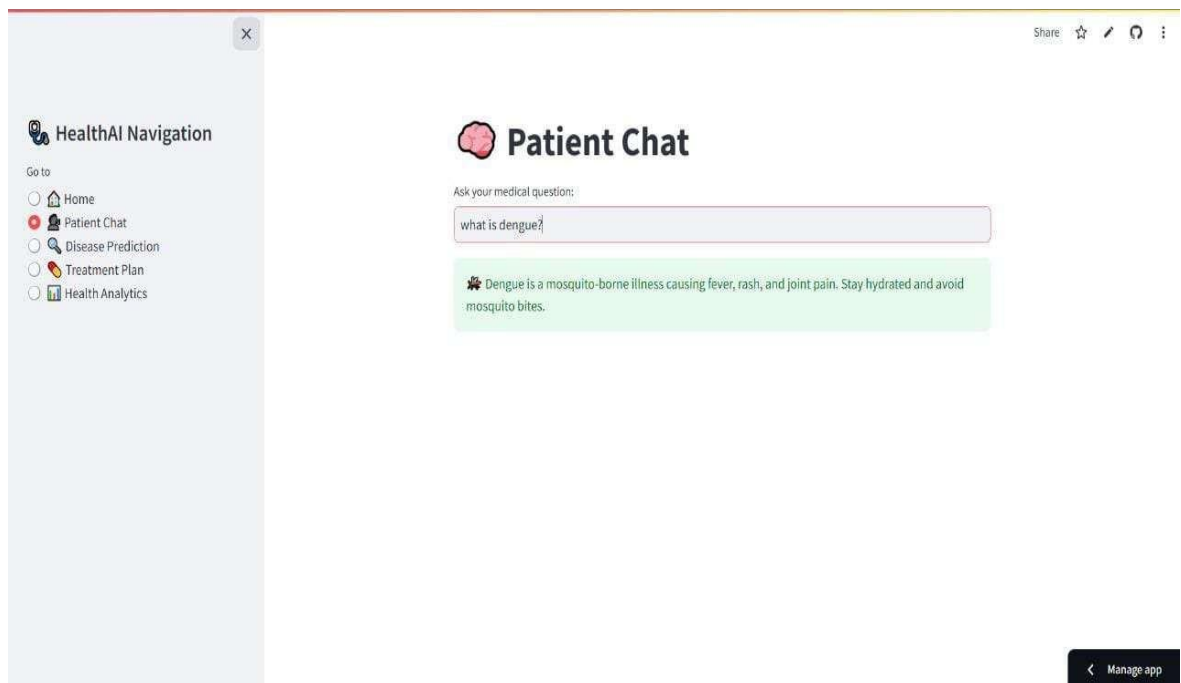
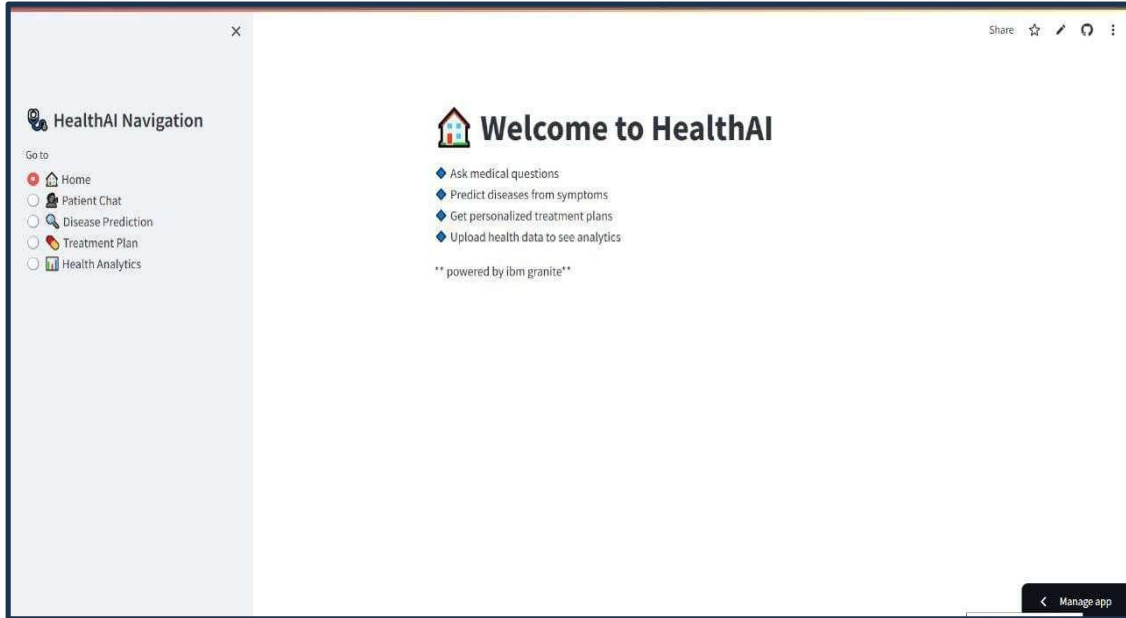
- Load tested APIs using Postman C browser console
- AI responses averaged under 1.5s per request
- Frontend responsive across mobile C desktop

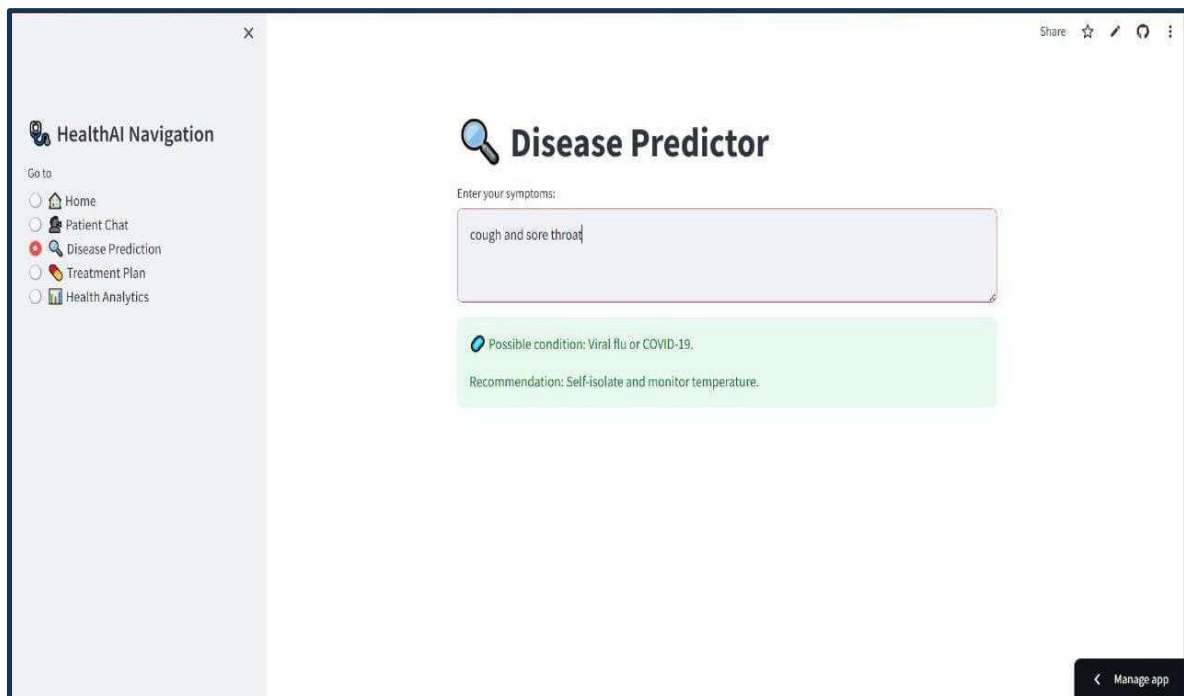
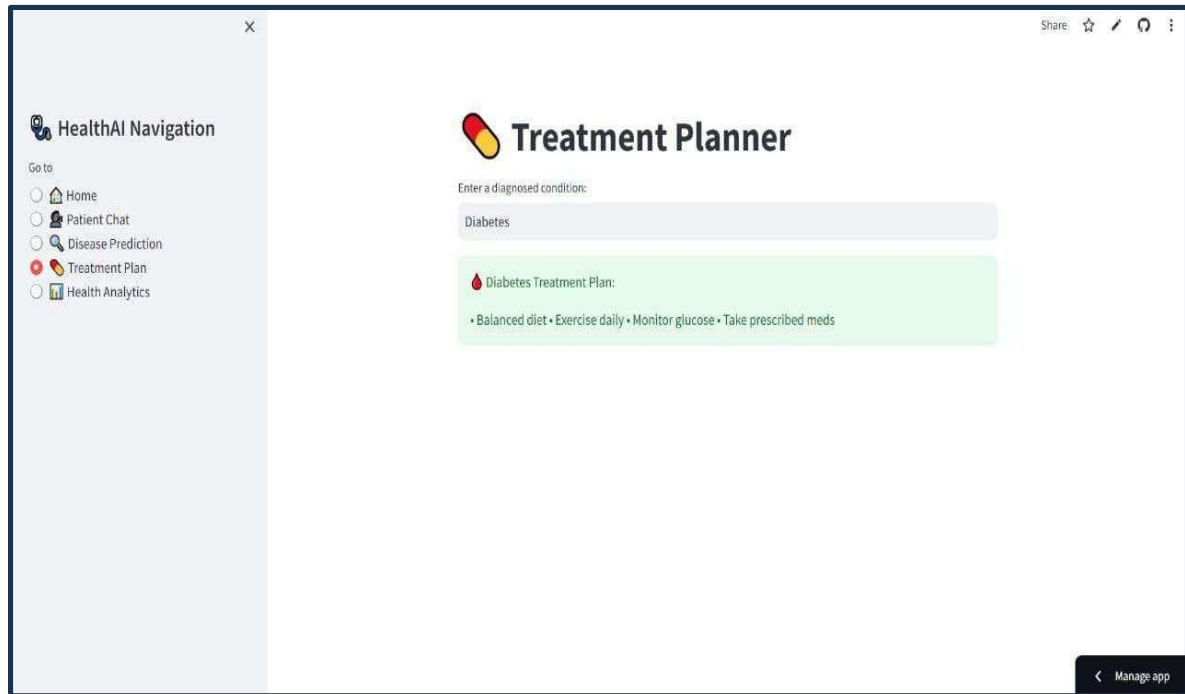
7. RESULTS

7.1 Output Screenshots

Include screenshots of:

Homepage of the HealthAI





HealthAI Navigation

Go to

Home


Patient Chat

Disease Prediction

Treatment Plan


Health Analytics

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Health Analytics Dashboard

Upload a health data CSV

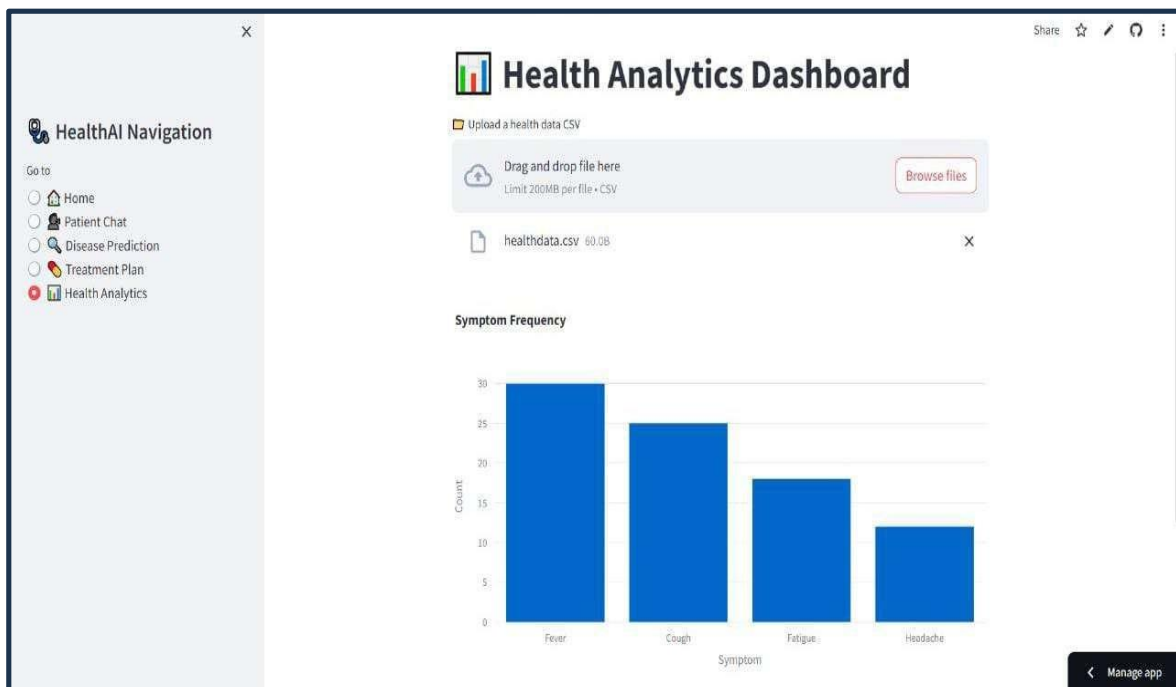
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Limit 200MB per file • CSV

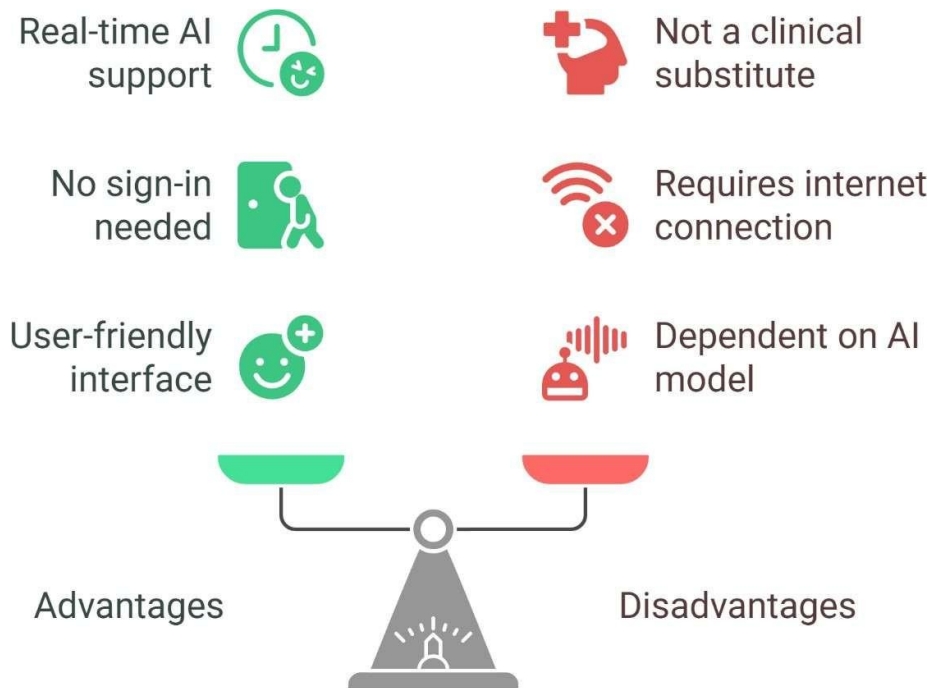
Browse files

Upload a CSV file like: Fever,30 Cough,25...

< Manage app



8. ADVANTAGES s DISADVANTAGES



9. CONCLUSION

HealthAI bridges the gap between health concerns and actionable information by using AI to educate and empower users. It offers a seamless, responsive, and human-centered experience for health awareness.

10. FUTURE SCOPE

- Add PDF export for plans
- Enable multilingual chat
- Integrate voice input/output
- Connect with real doctors for hybrid AI+human responses
- Store history securely with user consent

11. APPENDIX

- **SourceCode:** <https://github.com/reshma-5/HealthAi>
- **Dataset Link:** Not applicable (live AI via IBM Granite)
- **ProjectDemo:** <https://youtu.be/nsW2YwRz4VQ?si=kzSOjts3191NPQiy>