☑ Solution Requirements – HealthAI

To effectively address the identified healthcare access problem and deliver a seamless AI-driven experience, the **solution requirements** of HealthAI are grouped into **functional** and **non-functional** categories:

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1. Functional Requirements

Feature	Requirement Description
Patient Chat	Users should be able to type health-related questions and receive empathetic, medically-relevant AI responses.
Disease Prediction	Based on symptoms and user profile (age, gender, history), the system should predict likely conditions with explanations and next steps.
Treatment Plan Generation	For a given diagnosis, generate a personalized, evidence-based treatment plan covering medication, lifestyle, follow-up, and diet.
Health Analytics Dashboard	Display trends of health metrics (heart rate, blood pressure, blood glucose) with visual indicators and AI-generated summaries.
Profile Management	Allow users to update their age, gender, medical history, medications, and allergies for accurate predictions.
Session State Handling	Maintain user session data to track chat history, prediction results, and updated profiles during usage.

🛡️ 2. Non-Functional Requirements

Category	Requirement
Performance	AI responses should be generated within 2–3 seconds to maintain real-time interactivity.
Usability	The interface should be intuitive, responsive, and accessible without technical background.
Security	API keys must be managed securely via .env files or cloud secrets; sensitive user data must not be logged.
Scalability	Architecture should allow adding new features like voice support, user authentication, or doctor teleconsultation.
Maintainability	Modular code structure for core logic, UI, and model prompting allows easy updates and testing.