Solution Architecture – Health AI Project

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Project Name: HealthAI: Intelligent Healthcare Assistant

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- - Find the best tech solution to solve existing business problems.
- - Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- - Define features, development phases, and solution requirements.
- - Provide specifications according to which the solution is defined, managed, and delivered.

Health AI Solution Architecture Overview

The proposed Health AI system uses a modular architecture integrating user input through a chatbot interface, real-time disease prediction models, and treatment suggestion modules. Key components include:

- - Front-end: Web interface using Gradio for patient interaction
- - Backend: Python-based Flask API integrated with AI/ML models
- - AI Models: Trained disease classification models (e.g., Logistic Regression, SVM)
- - Database: Patient history and feedback storage using SQLite or Firebase
- - External APIs: Integration with health information APIs and home remedy resources

Development Phases

- - Phase 1: Frontend-Backend setup with chatbot UI
- - Phase 2: Integration of AI models for diagnosis
- - Phase 3: Addition of treatment suggestions and home remedies
- - Phase 4: Database integration and feedback loop system

This architecture ensures scalability, modularity, and real-time response to user queries in a healthcare context.