

Project Design Phase

Solution Architecture

Date	27 June 2025
Team ID	LTVIP2025TMID29210
Project Name	Health AI: Intelligent Healthcare Assistant Using IBM Granite
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture is a structured discipline that connects business needs with technological execution. In the context of Health AI, it plays a crucial role in designing a comprehensive and intelligent healthcare system that delivers personalized medical services to users.

The health AI system is built upon a multi-layered architecture:

- **User Interface Layer:** Developed using Stream lit, this layer serves as the interaction point for users accessing Patient Chat, Disease Prediction, Treatment Plans, and Health Analytics modules.
- **Application Layer:** Handles core logic, module orchestration, and feature-specific functionalities written in Python.
- **Data Layer:** Stores structured patient information, health metrics, and dynamic session data.
- **AI Service Layer:** Powered by IBM Watson ML (Granite 13B Instruct v2), this layer provides intelligent processing, natural language understanding, and medical inference capabilities.

Example - Solution Architecture Diagram:

