

## Project Design Phase Solution Architecture

Date	28 February 2026
Team ID	LTVIP2026TMIDS46423
Project Name	Intelligent SQL Querying with LLMs Using Gemini Pro
Maximum Marks	4 Marks

### Solution Architecture:

Solution architecture is a structured process that bridges the gap between business challenges and technical implementation. It defines how system components interact to deliver an efficient and scalable solution.

For the SQL-LLM project, the architecture integrates Artificial Intelligence with relational database systems to enable natural language-based data retrieval.

The goals of the SQL-LLM solution architecture are to:

- ❖ Find the best AI-driven solution to simplify SQL query generation.
- ❖ Describe the structure, components, data flow, and behavior of the system to stakeholders.
- ❖ Define system features, development phases, and requirement mapping.
- ❖ Provide technical specifications for implementation, deployment, and management.

### Example - Solution Architecture Diagram:

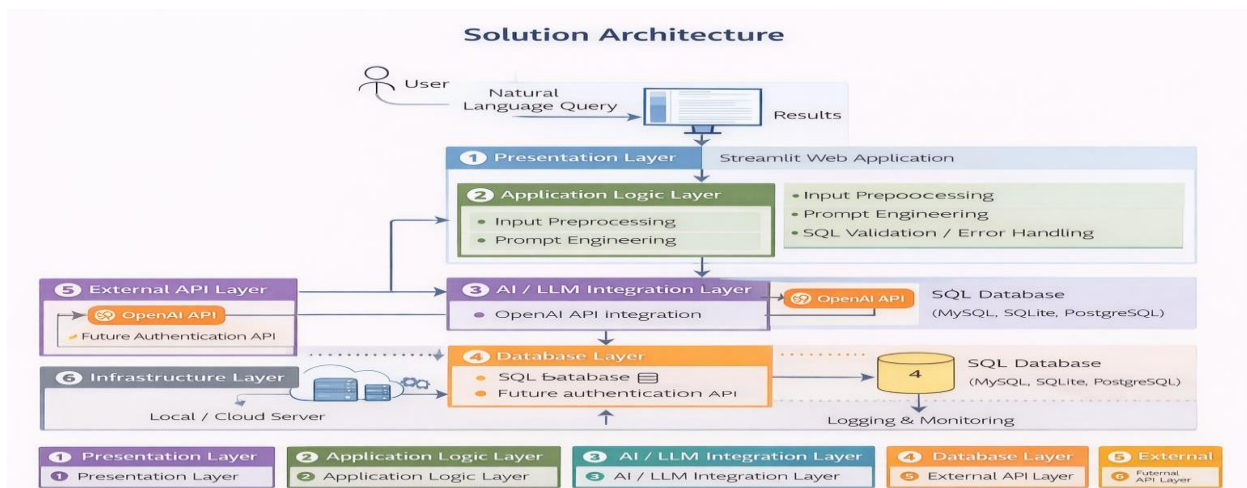


Figure 1: Architecture and data flow of the SQL-LLM sample application

Reference: <https://aws.amazon.com/blogs/industries/voice-applications-in-clinical-research-powered-by-ai-on-aws-part-1-architecture-and-design-considerations/>