

Project Design Phase

Solution Architecture

Date	13 February 2026
Team ID	LTVIP2026TMIDS66291
Project Name	Civil Engineering Insight Studio
Maximum Marks	4 Marks

Solution Architecture:

The Civil Engineering Insight Studio follows a layered, modular architecture that integrates a web-based user interface with an AI-powered image analysis engine through secure cloud APIs. The architecture ensures scalability, security, and efficient data processing. At the presentation layer, the system uses a Streamlit-based web interface where construction supervisors upload images and optionally provide descriptive inputs. This layer handles user interaction, input validation, and result visualization.

Example - Solution Architecture Diagram:

