

## Project Design Phase

### Solution Architecture

Date	13 February 2026
Team ID	LTVIP2026TMIDS49957
Project Name	Translingua: Ai-Powered Multi-Language Translator
Maximum Marks	4 Marks

#### Solution Architecture:

The solution architecture of TransLingua consists of a Streamlit-based web application that allows users to enter text and select source and target languages. The application validates the input, automatically detects the source language if needed, and sends a structured translation request to a large language model (LLM) through an API call. The AI model processes the request and returns the translated text, which is then formatted and clearly displayed to the user. The system can be deployed locally in a Python environment or hosted on a cloud platform such as Streamlit Cloud.

#### Example - Solution Architecture Diagram:

