Data Collection and Preprocessing Phase

Date	02 February 2026
Team ID	LTVIP2026TMIDS65532
Project Title	Explore With Ai: Custom Itineraries For Your Next Journey
Maximum Marks	6 Marks

Preprocessing

In the *Explore with AI* project, data preprocessing focuses on **user-provided textual and numerical input** rather than traditional datasets. Since the application uses a **pre-trained generative AI model**, no external dataset collection or complex preprocessing is required. Instead, preprocessing ensures that user inputs such as destination, number of days, and number of nights are **clean, valid, and meaningful**, enabling the generation of accurate and personalized travel itineraries.

Section	Description
Data Overview	The data used in this project consists of real-time user inputs such as travel destination, number of days, and number of nights. No external dataset is used.
Text Cleaning	User input text (destination) is cleaned by removing unnecessary spaces and checking for empty or invalid entries.
Input Validation	Ensures that the destination field is not empty, the number of days is greater than zero, and the number of nights is a valid non-negative value.
Token Handling	The validated input is passed to the Gemini generative AI model, which internally handles tokenization and text processing.
Prompt Formatting	The user inputs are formatted into a structured prompt before being sent to the AI model for travel itinerary generation.
Error Handling	The system handles invalid inputs and API-related issues gracefully. If incorrect or missing inputs are detected, appropriate error messages are displayed to guide the user. Any runtime or API errors are also caught and reported without crashing the application.

Data Preprocessing Templates	
Loading Data	User inputs are collected directly through Streamlit input fields, including text and numeric inputs.
Input Validation	Validation logic ensures that all required inputs are provided and fall within acceptable ranges before further processing.
Prompt Creation	The validated user inputs are combined into a structured prompt that clearly specifies the destination and trip duration.
Model Invocation	The formatted prompt is sent to the pre-trained generative AI model to generate a personalized travel itinerary.
Output Handling	The generated itinerary is received as text output and displayed on the Streamlit interface for user review.