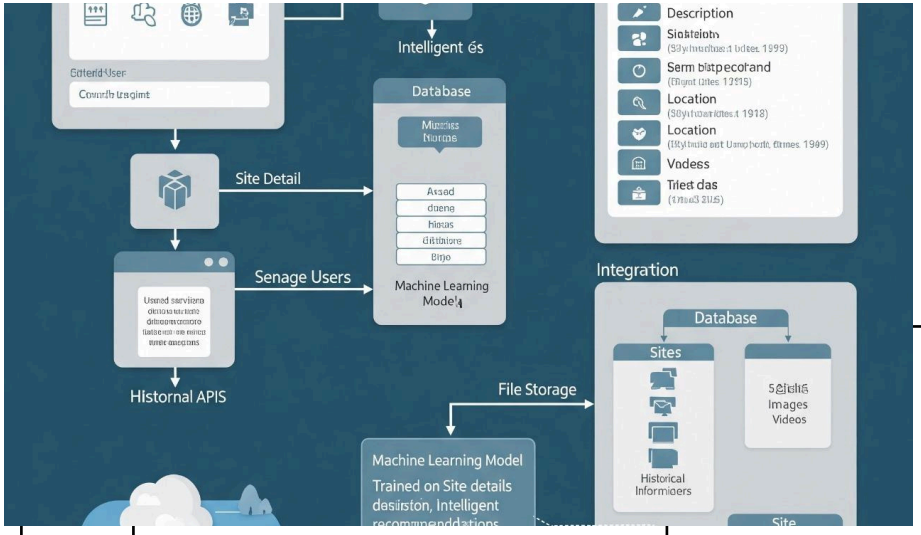
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	1 July 2025
Team ID	LTVIP2025TMID49753
Project Name	Heritage Treasures: An In-Depth Analysis of UNESCO World Heritage Sites
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Web Dashboard for exploring heritage data(online plays offline access).



Guidelines:

- Include all processes(user interface,Logic,APIs,DB,ML)
- Indicate Local vs.Cloud Components
- External Interfaces(e.g.,APIs like maps,Weather)
- Data Storage(DataBase,File Storage)
- Any Machine Learning Models

S.No	Component	Description	Technology
1.	User Interface	Web interface to visualize.UNESCO Data Maps. Charts.	HTML, CSS, JavaScript, Tableau Embedded.

2.	Application Logic-1	Data filtering and category logic.	JavaScript , Python.
3.	Application Logic-2	Time presentation using interactive dashboard.	Tableau story.
4.	Application Logic-3	Location based logic for map display.	Leaflet.js, or Google Maps API.
5.	Database	Data set storage.UNESCO site details.	MySQL/Google Sheets/CSV.
6.	Cloud Database	Optional cloud storage.	Firebase/Google Cloud SQL.
7.	File Storage	Dashboard image/ assets storage	Google Drive/ firebase storage.
8.	External API-1	Geolocation or map integration	Google Maps API.
9.	External API-2	Whether data or country metadata.	Open Weather API/REST countries API.
10.	Machine Learning Model	(Optional)Predict threat level or clustering heritage sites.	Scikit-learn/TensorFlow(if used)
11.	Infrastructure (Server / Cloud)	Hosted on local or cloud.	Google Cloud /localhost.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	HTML, JavaScript, Python, Tableau Public(free)	Open source.
2.	Security Implementations	Embedded production controlled access to dashboard.	SSL/HTTPS, O Auth(if used)
3.	Scalable Architecture	Tableau dashboards support up to large data sets.	Tableau Server/cloud hosting.
4.	Availability	Dashboard available online, hosted 24/7.	GitHub pages /tableau public.
5.	Performance	Optimized loading map interactivity catching if needed.	CDN,efficient queries.

References:

https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics

https://public.tableau.com/

https://leafletjs.com/

https://developers.google.com/maps

https://firebase.google.com/