Project Design Phase

Solution Architecture

Date	28 June 2025
Team ID	LTVIP2025TMID49408
Project Name	Heritage Treasures: An In-depth Analysis of UNESCO World Heritage
Maximum Marks	4 Marks

Solution Architecture:-

Solution architecture in this project serves as a strategic framework that bridges the gap between the problem of scattered, unstructured heritage data and the need for a clean, visual, and interactive dashboard solution. It ensures the right use of technology and structure to meet both user and project goals.

Key Aspects:-

- ☑ **Identify the best technology setup** to organize and visualize UNESCO heritage data effectively.

- ☑ **Define the structural flow** from raw data to final insights presented through an interactive dashboard.

- ☑ **Establish features, stages, and functional requirements** of the solution.

- ☑ **Set clear specifications** for how the solution is developed, maintained, and scaled in the future.

Business Problem:-

Stakeholders such as cultural researchers, policy makers, and educators struggle to interpret UNESCO heritage data, which is scattered, non-visual, and difficult to compare. There is a need for a centralized, interactive solution that helps analyze site distributions, endangered status, regional patterns, and historical trends to support research, preservation, and public engagement.

Technology Solution:-

The solution uses **Tableau** to create an interactive dashboard built from a structured UNESCO World Heritage dataset. The cleaned dataset includes fields such as region, country, site type, year of inscription, area, and endangered status. Users can explore global heritage trends, identify endangered sites, and analyze cultural distributions through dynamic filters,

maps, bar charts, KPIs, and timelines—making complex data easy to understand and actionable for researchers, students, and policy makers.

Features:-

- • Visualization of heritage sites on a world map
- • Distribution analysis by site type, region, and country
- • Trend analysis by year of inscription and endangered status
- • Comparison of cultural vs natural sites
- • Identification of top 10 countries with endangered sites
- • Interactive filters for country, region, type, and year
- • Exportable insights and dashboards for research and presentations

Solution Delivery:

- • Tableau Public Dashboard for interactive exploration
- • Built using a cleaned, open-source UNESCO heritage CSV dataset
- • Dashboard published and shared via public URL
- • Visual outputs documented with screenshots for reports and presentations
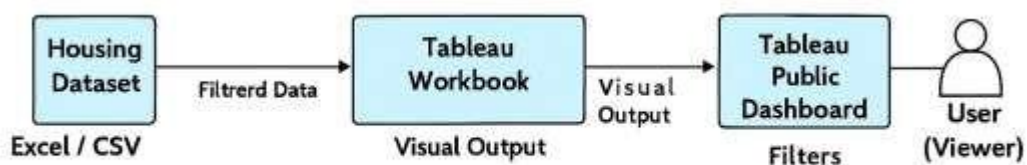
Example - Solution Architecture Diagram: -

Figure 1: Solution Architecture for Housing Market Visualization using Tableau