**Smart Bridge Data Analytics Program on Tableau  
Technology Stack Report  
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**1. Introduction**

This report details the technology components, tools, and platforms required to develop, deploy, and maintain the UNESCO World Heritage Sites Tableau dashboard.

**2. Technology Overview**

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| **Layer** | **Technology** | **Purpose** |
| **Data Source** | UNESCO World Heritage Dataset (CSV) | Primary dataset containing heritage site details |
| **Data Cleaning** | Microsoft Excel / Python (Pandas) | Preprocessing, handling missing values, standardizing formats |
| **Visualization** | Tableau Desktop / Tableau Public | Building interactive dashboards |
| **Hosting** | Tableau Public | Making the dashboard publicly accessible |
| **Optional Storage** | MySQL / Google Sheets | Alternative or additional data storage for live connections |

**3. Architecture Diagram**

*(Visual Placeholder)*  
Flow:  
Data Source → Data Cleaning Tool → Tableau Desktop (Dashboard Creation) → Tableau Public (Hosting) → End Users (Web Access).

**4. Justification of Tools**

* **Tableau**: Industry-leading BI tool with strong geospatial and storytelling capabilities.
* **Excel/Python**: Flexible for cleaning and transforming datasets.
* **CSV Format**: Lightweight, universally compatible, and easy to update.

**5. System Environment**

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| **Component** | **Specification** |
| Operating System | Windows 10 or higher / macOS |
| Processor | Dual-core 2 GHz or higher |
| Memory | 8 GB RAM minimum |
| Storage | 500 MB free space for Tableau installation |
| Internet | Stable broadband connection |