

Title: ZimGuide AI: An Intelligent Ecosystem for National Heritage Preservation and Tourism Data Intelligence

Abstract: Zimbabwe's cultural heritage and tourism sectors currently face a significant challenge in data fragmentation and digital visibility. This submission introduces ZimGuide AI, a multi-product technological ecosystem designed to transform the tourism landscape through a centralized National Tourism Data Warehouse. Built using a modern technical stack of Next.js 15 and PostgreSQL, the platform serves as a high-performance repository for the digital preservation of Zimbabwe's intangible heritage, including totems, historical narratives, and indigenous knowledge.

The system utilizes Generative AI and agentic software structures to provide culturally-aware digital guides that offer real-time insights and offline navigation capabilities. By digitizing heritage through interactive media and intelligent data architectures, ZimGuide AI ensures that traditional knowledge is preserved in a format accessible to modern generations. Furthermore, the platform integrates location intelligence and fintech tools to support local artisans and tourism-based SMEs, facilitating inclusive socioeconomic growth.

This project aligns with the symposium's focus on the 4IR era by demonstrating how a data-driven approach can modernize industrial sectors while simultaneously serving as a cornerstone for cultural education and preservation. The proposed prototype demonstration will showcase the unified intelligence hub's ability to drive both national identity and economic advancement.