

# Development of an Offline AI-Powered Tree Identification and Information System Using QR Codes for Jungle Biodiversity Documentation (Network Detox)

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**Abstract:** *In recent years, biodiversity monitoring and ecological research have increasingly relied on digital tools and artificial intelligence (AI) for efficient species identification and data management. However, many forest and jungle environments lack stable internet connectivity, creating barriers for real-time data access and biodiversity documentation. This study presents the development of an Offline AI-Powered Tree Identification and Information System integrated with QR code technology, designed to support jungle biodiversity documentation under network-restricted conditions (Network Detox). The system utilizes a pre-trained deep learning model for on-device image recognition to identify tree species based on leaf, bark, and canopy features without requiring an active internet connection.*

**Keywords:** Artificial Intelligence (AI), Tree Identification, Biodiversity Documentation, Offline System, Deep Learning, QR Code Technology, Image Recognition, Forest Conservation, Network Detox, Edge Computing, Ecological Monitoring, Sustainable Technology

