M R Media AI - Technical Architecture

1. System Overview

M R Media AI is a modular, REST API-based media generation system designed for public communication and citizen engagement. It supports:

- Text to Audio (via gTTS)

- Text to Image (via PIL)

- Text to Video (via MoviePy + gTTS + PIL)

Each endpoint requires authentication and provides downloadable media.

2. Models & Tools Used

- Audio: gTTS (Google Text-to-Speech)

- Image: PIL (Python Imaging Library)

- Video: MoviePy

- Backend: FastAPI

- Frontend: Streamlit

- Auth: Bearer Token-based security

3. Architecture Stack

Frontend: Streamlit app (localhost or cloud deployed)

API Server: FastAPI application

Media Services: Modular scripts per media type

Storage: File-system-based for generated assets

Deployment Ready: Docker-compatible, portable APIs