



AlgoRhythm



Reimagining Learning: From “What is” to “Why it is”

Functionality

AlgoRhythm is a gesture + voice-powered AI tutor built for Bharat. It transforms classrooms into interactive, inclusive, and personalized learning spaces by offering:

- Gesture-based interaction for hands-free use.
- Vernacular voice input with bilingual output (Hindi + English).
- AI flashcards combining visuals, audio, and simplified explanations.
- Smart topic detection that adapts answers into visuals, stories, or quizzes.
- Device-light design, optimized for rural, low-tech environments.

Technology Stack

Vision & Interaction: OpenCV, CVZone

Core Libraries: NumPy, Pillow

User Interface: Streamlit

AI / NLP Engine: Google Generative AI

Speech & Audio: SpeechRecognition, gTTS, pyttsx3, Pygame

Social Impact

- Breaks language barriers by enabling learning in native languages.
- Boosts student confidence through relatable, visual, and bilingual explanations.
- Empowers teachers with AI-driven insights and feedback on learning gaps.
- Affordable & scalable solution designed to reach both remote villages and urban schools.