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**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.