### **Project Title**

**VIDHYA: Virtual Intelligent Digital Helper for Youth and Adolescents**

### **Abstract**

VIDHYA is an AI-powered virtual assistant designed to support school students from grades 1 to 10 through voice and face-based interaction. The system listens to students' questions and provides immediate, easy-to-understand answers in both English and Hindi. With features like face recognition, speech recognition, and bilingual support, VIDHYA simulates the role of a personal tutor in the classroom. It has been successfully deployed in **Government High School, Baretha (Gwalior district, Madhya Pradesh)** where it is enhancing the classroom experience, especially for students in rural settings with limited digital infrastructure.

### **Project Keywords *(Up to 5)***

* AI Education Assistant
* Voice Recognition
* Face Recognition
* Interactive Learning
* Bilingual Digital Tutor

### **Utility of Project**

VIDHYA functions as an educational support system that enhances classroom learning by providing real-time responses to students’ queries. It is designed for schools that lack access to sufficient teaching staff or resources. VIDHYA boosts engagement, encourages students to ask questions without hesitation, and provides consistent support regardless of a teacher's availability. Its intuitive interface and offline-friendly design make it ideal for use in classrooms such as **Baretha School**, where it is actively used by students and teachers alike.

### **Societal Impact**

* Provides rural students with access to intelligent digital learning
* Increases participation and interest in education
* Promotes digital literacy and self-learning habits
* Supports inclusive education by enabling interaction in local languages
* Acts as a teaching aid, complementing the efforts of human educators

### **Future Scope**

* Expand subject coverage to higher grades and vocational topics
* Support for more regional dialects and local curricula
* Deploy across multiple schools and integrate with smart classroom systems
* Develop mobile and tablet-compatible versions
* Include emotional intelligence and AI feedback features for more adaptive interaction

### **Cost Aspect of Project**

* **Hardware Requirements:**
  + Raspberry Pi / microcomputer unit
  + USB camera, speaker, microphone
  + Power supply and optional display unit
* **Software Stack:**
  + Open-source AI libraries (for speech & face recognition)
  + Lightweight curriculum-based QA system
* **Estimated Cost:** ₹60,000–₹80,000 per classroom unit
* **Maintenance:** Minimal; primarily software updates and occasional hardware servicing