



## The platform isn't exclusively for Indian students, it will serve a global audience but first it will be launching in India

The age group is anywhere from 10 years old to full grown adults.

Primary use case is AI assisted tutoring and also a group collaboration for paid subscription.

It will be a freemium model , but pre and post launch there will be partnerships with schools and content creators.

Keep the benchmarks as high as possibly under 200ms and accuracy above 95% with open source resources , real time processing is very critical along with equal focus on performance.

The UI/UX should look a mixture of Netflix and Notebook LM , colour scheme should be professional and elegant.

Design should prioritise mobile first experience but this is an MVP so it will be a web first experience.

Users should be able to upload files like videos upto 50mb in free tier and paid can upload upto 500mb and 1gb and henceforth with the different tiers or 100mb pdf or 3 Images inat once in any formats . We can integrate Youtube resources.

The user data should be secure and in complaince to both indian and International laws, use any open source resources if available thats acceptable world wide, we can have parental control for users under 13 years of age.

We can have community collaboration for paid tiers. No gamification planned

**No existing collaboartion or in near future .**

### Conceptualization of the AI-Powered Learning Platform

Based on the clarified details, the platform will serve as a **global AI-powered learning platform**, launching first in India, with a focus on **AI-assisted tutoring** and **group collaboration**. It will adopt a **freemium model** with paid tiers offering enhanced features. The platform prioritizes **real-time performance**, **data security compliance**, and a **mobile-first design approach** for future scalability.

Below is a detailed breakdown of the project:

## Platform Features

### Core Functionalities

#### 1. AI-Assisted Tutoring:

- Natural language interaction with Mistral-7B-Instruct for answering questions, explanations, and providing study assistance.
- Indic language support via IndicTrans2 and IndicBERT for multilingual accessibility.

#### 2. Group Collaboration (Paid Tiers):

- Virtual study groups with shared resources.
- Real-time chat and file-sharing capabilities.

#### 3. Multimodal Content Support:

- Document parsing using Layout Parser + LayoutLM.
- Video transcription powered by Whisper.
- Image analysis using LLaVA-NeXT or OpenFlamingo.
- Voice interface via Bhashini for hands-free interaction.

#### 4. File Uploads:

- Free Tier: Upload files up to 50MB (videos), 100MB (PDFs), or 3 images at once.
- Paid Tiers: Increased limits (500MB, 1GB, etc.) based on subscription level.

#### 5. YouTube Integration:

- Ability to pull educational videos from YouTube for transcription or analysis.

#### 6. Parental Controls:

- Restricted access and content monitoring for users under 13 years of age.

#### 7. Community Collaboration (Paid Tiers):

- Forums or group discussions for collaborative learning among paid subscribers.

## Technical Requirements

### Performance Benchmarks

- Response Time: Under 200ms for most queries.
- Accuracy: ≥95% for English; ≥90% for Indic languages.
- Real-Time Processing: Critical for user satisfaction.

## Infrastructure

- Open-source stack to reduce costs while maintaining high performance:
  - Vector Database: Milvus.
  - Inference Optimization: ONNX Runtime.
  - Deployment: BentoML.
  - Orchestration: LangChain or LlamaIndex.

## Data Security

- Compliance with Indian IT laws, GDPR, and other international standards.
- Use open-source tools with global acceptance for encryption and data management.

## UI/UX Design

### Design Principles

- Inspired by Netflix (intuitive navigation) and Notebook LM (clean, professional interface).
- Professional and elegant color scheme (e.g., shades of blue, white, and grey).
- Mobile-first design philosophy but MVP will be web-first.

### Key Screens

#### 1. Dashboard:

- Personalized recommendations based on user activity.
- Quick access to uploaded files, recent collaborations, and AI tutor interactions.

#### 2. File Upload Interface:

- Drag-and-drop functionality with clear file size limits displayed per tier.

#### 3. AI Tutor Chat Interface:

- Conversational UI with text/voice input options.
- Real-time response display with multimedia outputs (e.g., graphs, images).

#### 4. Collaboration Hub (Paid Tiers):

- Group chat interface with file-sharing capabilities.
- Discussion threads for collaborative projects.

## Development Roadmap

Phase	Duration	Focus Areas	Cost Estimate
MVP	7 months	Core functionalities, web-first experience	\$65K
Scaling	5 months	Mobile app development (Android/iOS), performance optimization	\$25K

## Implementation Workflow

```
User Input (Voice/Text) -> FastAPI Gateway -> Auth (Keycloak) ->
File Upload -> Document Parser / Video Transcription / Image Analysis ->
Milvus Vector DB -> LangChain Orchestrator ->
Mistral-7B/IndicTrans2 -> Response Generator ->
Bhashini TTS -> User Output -> Firebase/GDrive Sync
```

## Business Model

- 1. **Freemium Model:**
  - Free Tier: Basic AI tutoring and limited file uploads.
  - Paid Tiers: Enhanced features like larger file uploads, group collaboration, and priority support.
- 2. **Partnerships:**
  - Collaborations with schools and content creators pre- and post-launch to drive adoption.
- 3. **Revenue Streams:**
  - Subscription fees from paid tiers.
  - Potential integration of premium educational content in later phases.

## Security Measures

- 1. Use globally accepted open-source tools for encryption and data handling (e.g., OpenSSL).
- 2. Implement parental controls for users under 13 years old to restrict inappropriate content.
- 3. Ensure compliance with GDPR, Indian IT laws, and other relevant regulations through regular audits.

This conceptualization aligns with your vision while ensuring scalability, cost-efficiency, and global readiness. Let me know if you'd like further refinements!

