Init to Winit
EduEvolve

Education for sustainable developmenet and personalized virtual classroom

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Problem Statement

The Indian education system faces a multitude of challenges, including overburdened teachers, high student-teacher ratios, and disparities in access to quality education across different regions and socioeconomic backgrounds.

This has resulted in lower-quality teaching, reduced interaction between teachers and students, and an overall lack of adequate support for students, particularly during after-school hours when they are typically studying.

 To address these systemic issues and promote a more sustainable and equitable education system nationwide, there is a critical need to implement personalized virtual classrooms that can cater to the diverse learning needs of students, ensure access to educational materials, and help alleviate the burden on teachers by automating tasks, offering continuous support, and enhancing communication channels.

Lack of Personlized Learning

No Student Profiling

Wasted Time Searching for answers

Complex UI

Teacher Burden

Teacher to Student Ratio

Students have to study from large Amount of Data

Large Materials

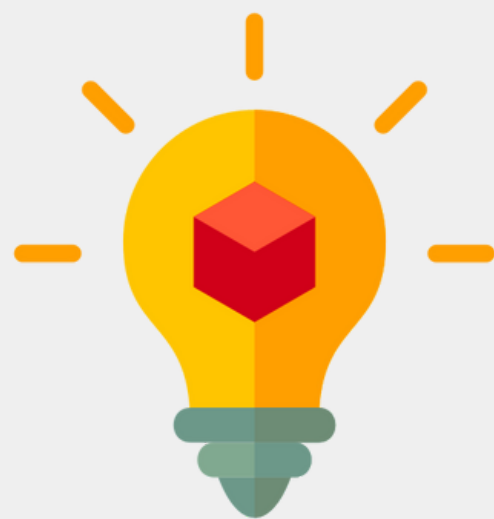**Limited Integration of AI and Technology**

Lack of Student Analytics

No Contextual Translation

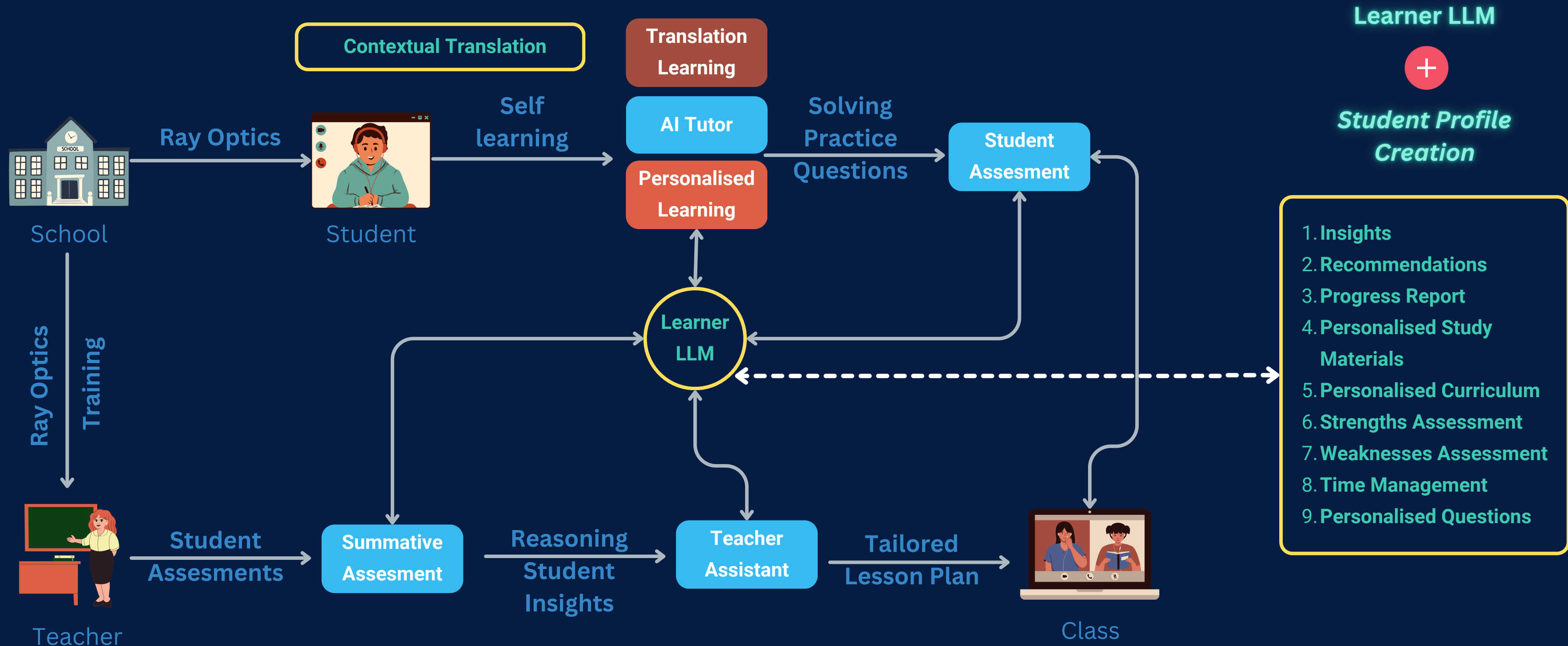| Existing Services	Limitations
cognii	Limited Focus: Has specific Focus on certain subjects or Age Groups, categories. No Personalised Learning
gradeslam	1) Has no context of student's previous performance. 2)does not have profile for students to record their progress.
smartsparrow	Limited Assessment: While Smart Sparrow shines in interactive lessons, it lacks built-in assessment tools. Teachers need separate platforms for quizzes and exams.
kaltura	no personalized learning, excels in video generation and delivery but lacks built in features for interactive learning
Perason AI	it is predefined data set and lacks student specific data

Novelty

- Holistic assessments and evaluations
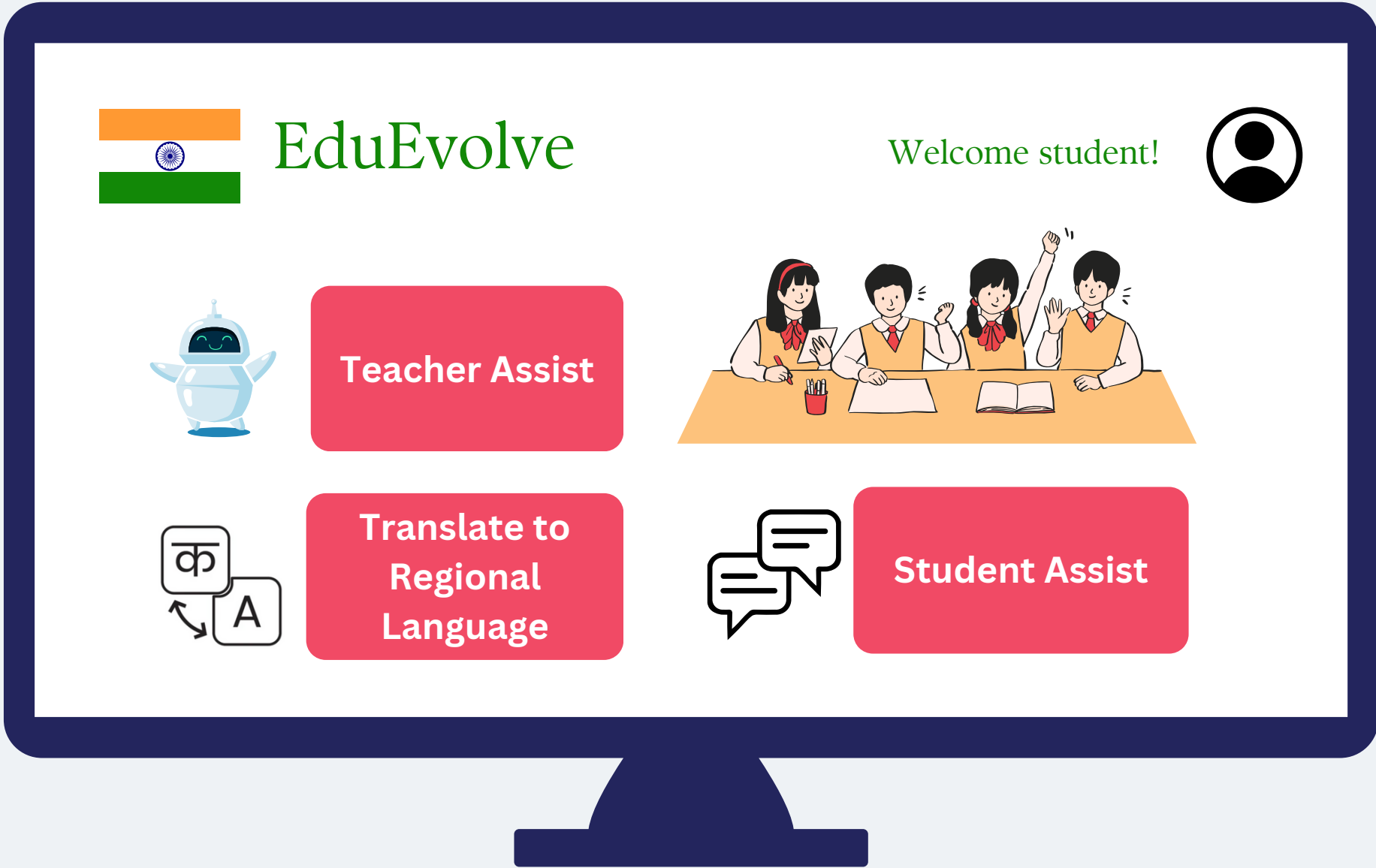- Maintaining student history and profiles

- All rounded solution that covers all domains
- Contextual translation for reach and accesibility

- Continuous Learning and learner ML
- Reduces teacher burden

Solution Model Journey

SOLUTION MODELS

EduEvolve

Welcome student!

Teacher Assist

Translate to Regional Language

Student Assist

Personalized Learning

Translated Learning

Student Learning

Teacher Assistance

Learner LLM

+

Student Profile Creation

Personalised Continuous Assessment

Student Assessment and Analytics

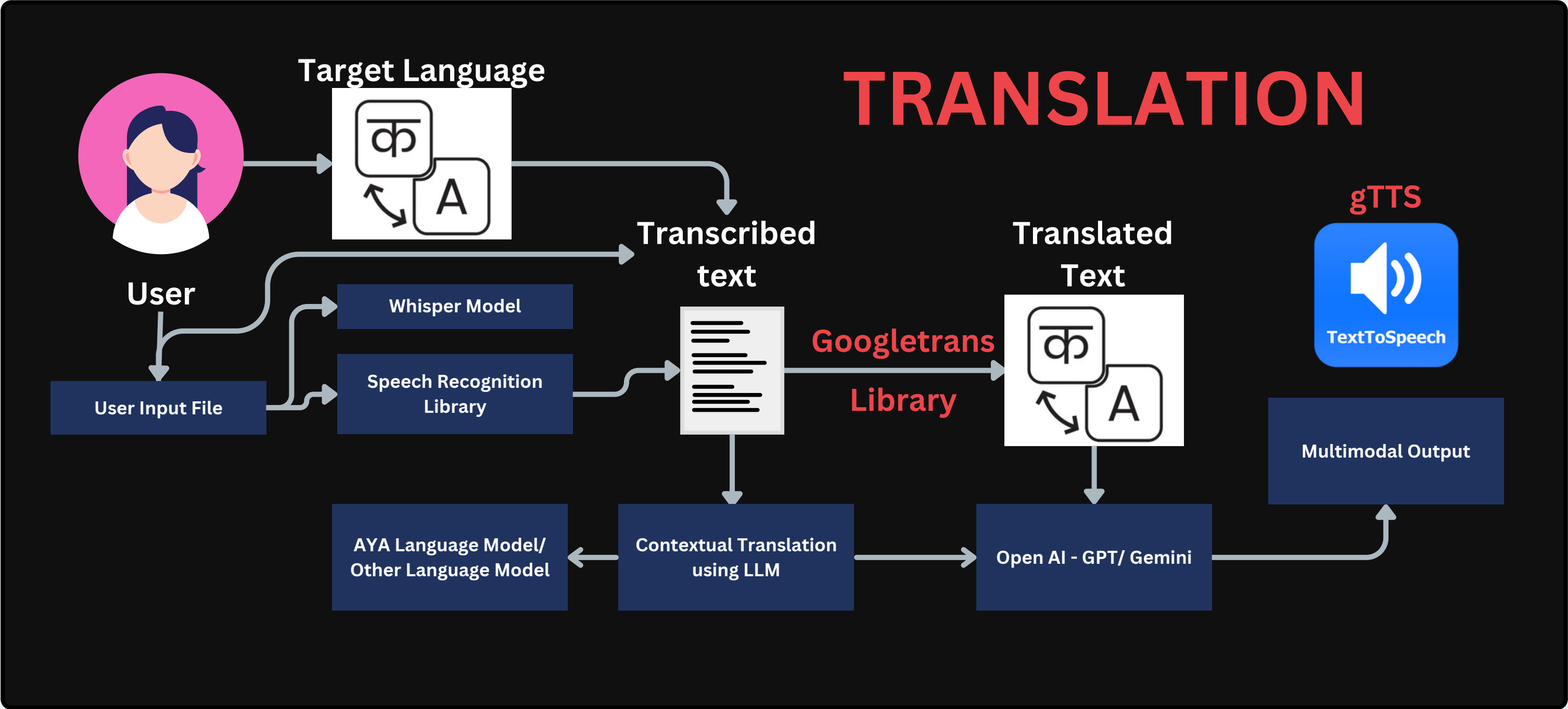Multimodal Summarisation and Notes Creation

AI Assistant + Doubt Assistance (Contextual)
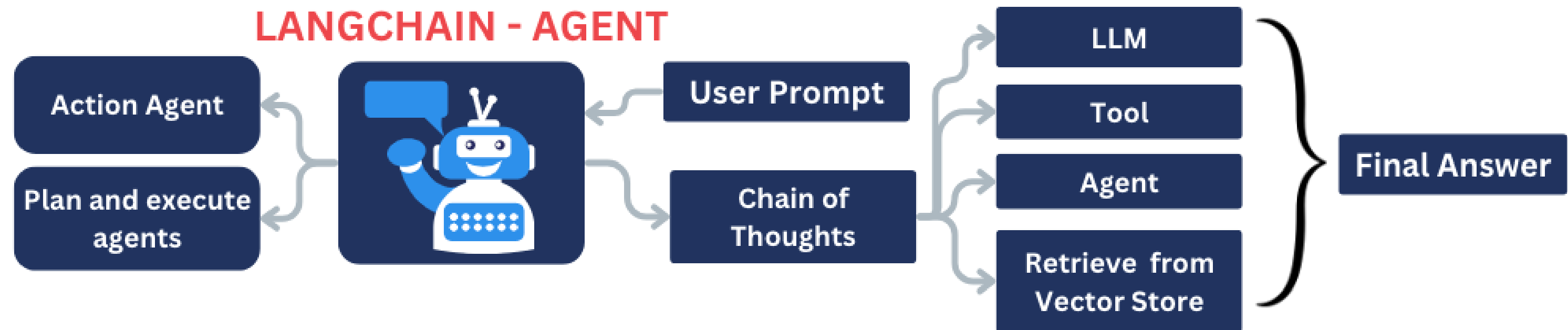
Glossary and Flash Cards Creator

Tailored Lesson Plan personalised Curriculum

QnA, MCQ and Question Creator

SOLUTION MODEL – TRANSLATION

TRANSLATION

Target Language

User

User Input File

Whisper Model

Speech Recognition Library

Transcribed text

Googletrans Library

Translated Text

gTTS
TextToSpeech

Multimodal Output

AYA Language Model/ Other Language Model

Contextual Translation using LLM

Open AI - GPT/ Gemini
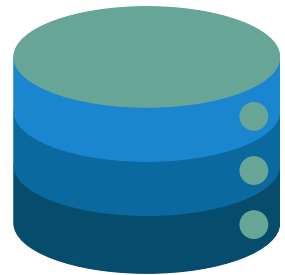
Our Foundation
Our Competitive Edge: Up-to-date quality resources

Data Resources

1. **Extensive Educational Data:** Vast collection of
   a. National Digital Library
   b. Textbooks
   c. NCERT/State Textbook
   d. Guides
   e. Youtube resources
2. **Local Resources:**
   a. Teacher notes
   b. Lecture notes
3. **Structure:**
   a. Q&A
   b. Paragraph
   c. Video Transcript

Stakeholders

1. **Teachers:** Can now help students more effectively by staying update and also we have teacher training resources so that they and prepared for everything
2. **Students:** With the personalized learning application, they can access resources at anytime with the comfort of their language
3. **Parents**

End Point Devices

1. Computers
2. Smartphones

Tech Stack

Website	HTML, CSS, JS, Flask
Summarisation	YouTube Data API (googleapiclient.discovery), Gemini AI API
OpenAI & Gemini	Natural Language processing and Natural Language Understanding
PyPDF and spacy	Extracting text from pdfs and documents and counducting similarity search.
Gradio	Used to create GUI on Colab interface
Langchain Framework	Framework to Integrate LLMS, Tools and User Data

Evaluation Metrics

Metric	Model Score	Inference
Coherence Score	0.99999999999	the sentences in both texts are highly coherent and logically connected.
Perplexity Score	40.1616325378418	the model text has relatively low predictability and higher complexity compared to the reference text.
LSA Based topic cohesion	0.8386490044059971	The topics in the model text are well-connected and semantically related.
Cohesion	0.7974868	high level of grammatical and syntactical cohesion within the model text.
ESIM	0.7974866628646851	there is strong degree of semantic similarity and inference between the model text and the reference text.

Metric	Gemini
Coherence Score	0.1995959206859706
Perplexity Score	6.354762554168701
LSA Based topic cohesion	0.8189365285411937
Cohesion	0.800603032112116
ESIM	0.7974868