Team Name : ByteCode

Problem Statement : Open Innovation in Education

LearnMateAI

- **LearnMateAI is a personalized AI tutor that can help students learn a subject area in a more efficient and effective way.**
- The system will learn the subject area from teacher’s notes and understand the important topics based on previous year question papers.
- It will then teach the student step by step, focusing on the most important topics and adapting to the student's learning curve. Generate Imp topics and possible Qns papers.
- The system will interact with the student using voice-based technology to create a more engaging learning experience.
- **This personalized and adaptive learning experience can help students understand concepts better and achieve better grades.**

Opportunity

How will it be able to solve the problem?

LearnMateAI aims to solve the problem of traditional learning methods by adapting to the student's learning pace and style, focusing on important topics, and providing instant feedback through regular testing and to make more engaging AI voice technology is used. All these approach can help students learn more efficiently and effectively, ultimately leading to improved academic performance.

Opportunity

How different is it from any other existing ideas out there?

LearnMateAI is a unique approach to education system and it stands out from other existing ideas by providing a customized learning experience that adapts to individual learning styles and paces, focuses on important topics, and provides instant feedback. By analyzing past exam papers and adjusting content delivery in real-time, students can achieve better results and be better prepared for exams. This unique approach sets it apart from other learning tools and makes it more effective in improving academic performance.

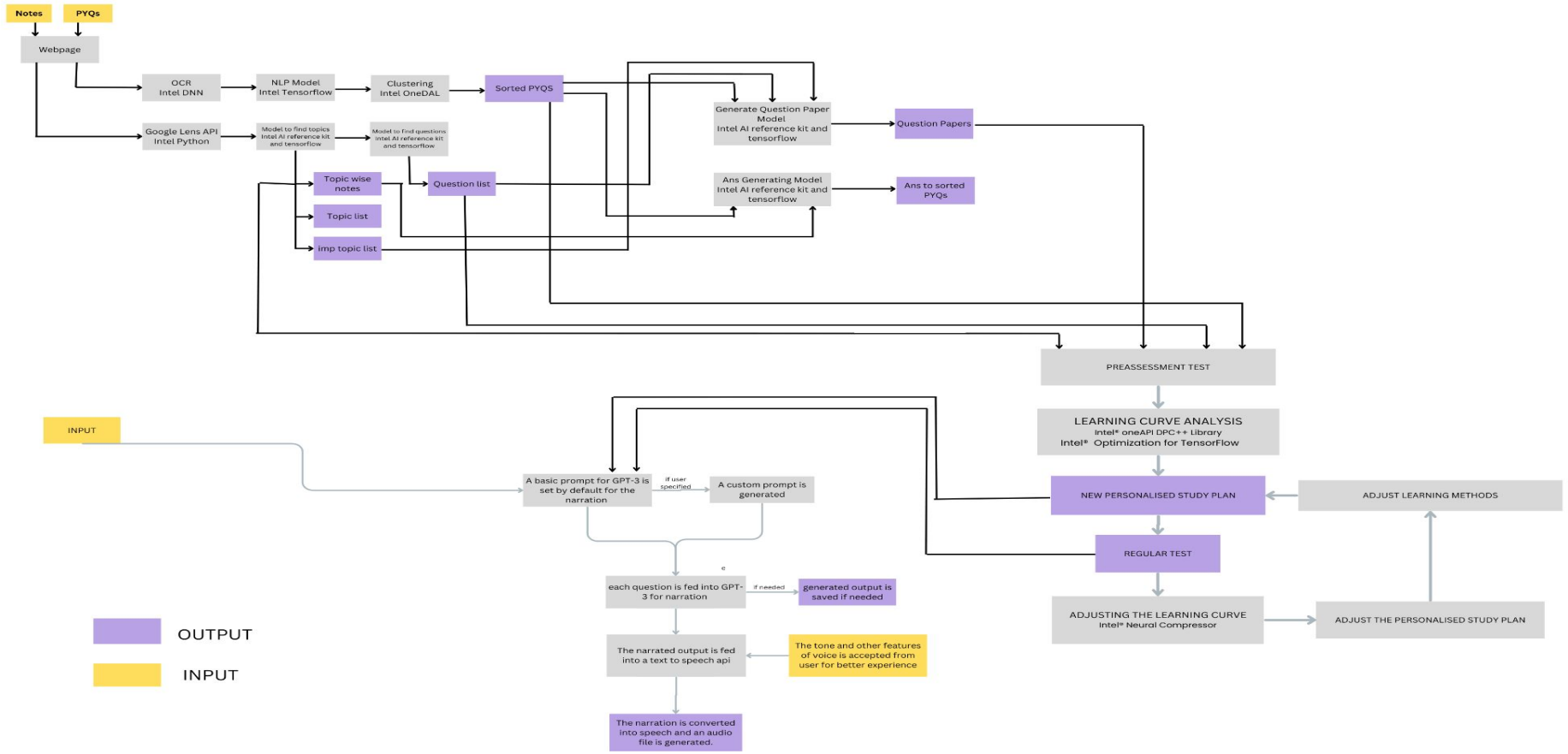
Features offered by the solution

- Generate Important topic : The system can analyze previous year question papers to identify the most important topics and concepts in the subject area.
- Generate possible question paper : Helps the student to prepare well for the exams and test their knowledge of the subject.
- Personalized learning : The system can Adapt to the student’s learning curve and adjust the teaching materials accordingly.
- Performance analysis : Analysis the performance and identify the areas where they need more help.
- Progress tracking : Track the student's progress and provide reports.
- Interactive voice-based technology : interact with the student using voice-based technology to create a more engaging and natural learning experience.

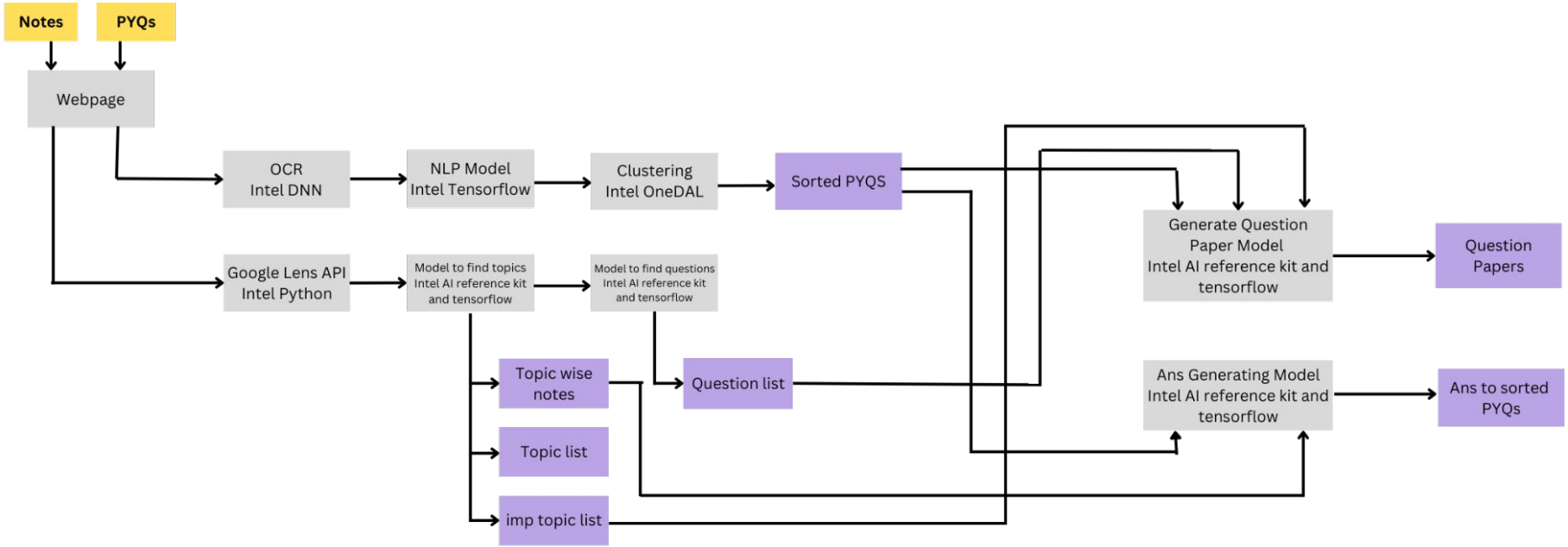
List of oneAPI Ai Analytics Toolkits, its libraries and the SYCL/DPC++ Libraries used

- Intel® oneAPI DPC++ Library
- Intel® Python
- Intel® Tensorflow
- Intel® DNN
- Intel® OneDAL
- Intel® Neural Compressor
- Intel® AI reference kit

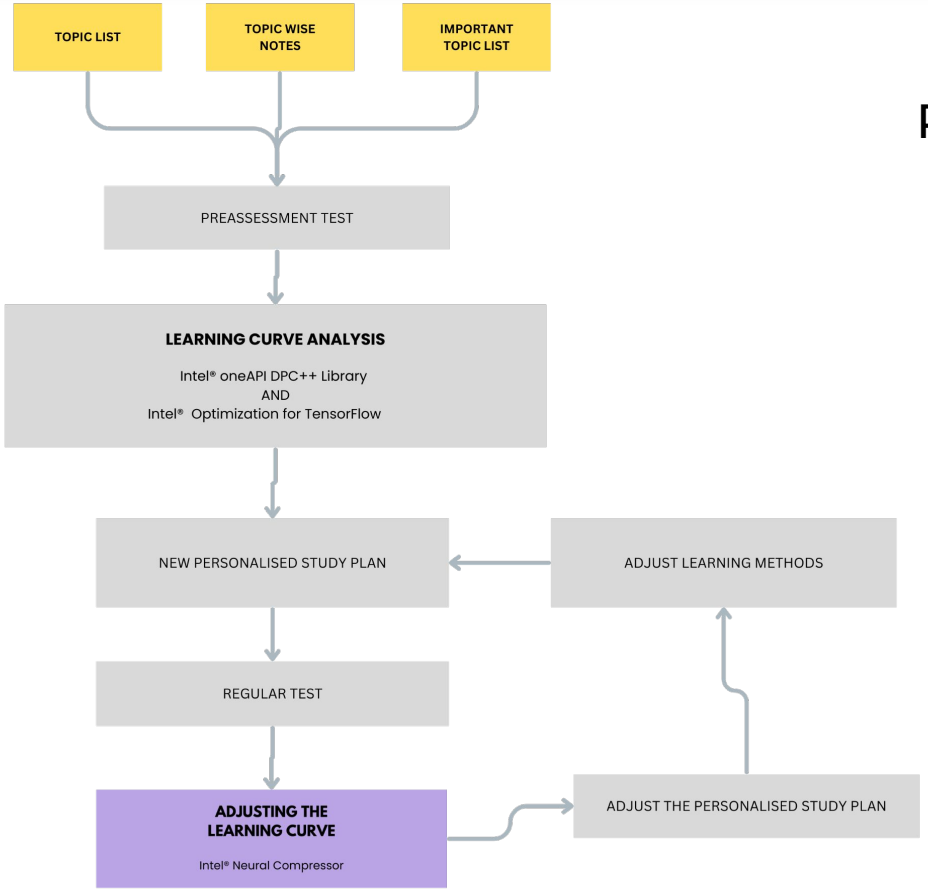
WHOLE PROCESS FLOW DIAGRAM



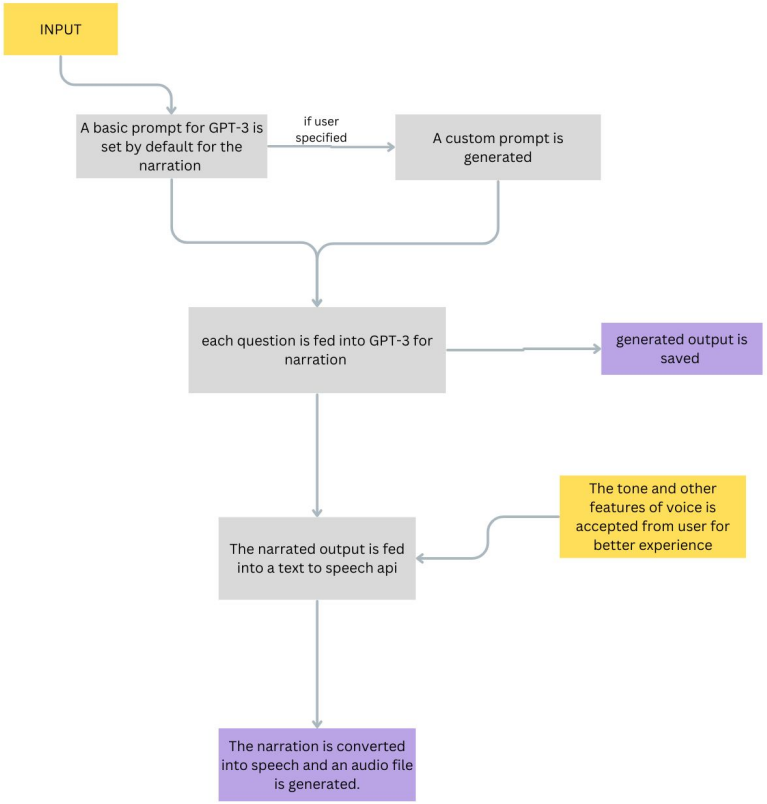
Data Analysis process flow diagram



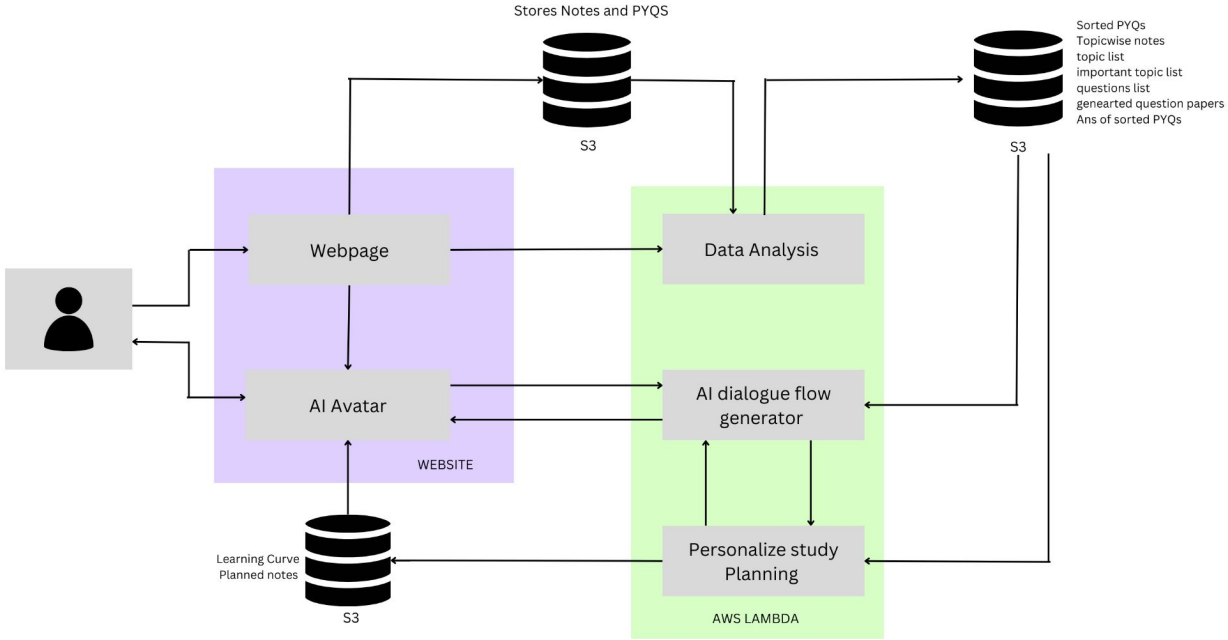
Personalize study Planning



AI Dialogue flow diagram



Architectural Diagram



Technologies used

- Intel® oneAPI DPC++ Library
- Intel® optimization tools
- Python
- TensorFlow
- Google Lens API
- OpenAI API
- Matplotlib
- TensorFlowTTS

Estimated cost of/after implementing the solution

Since the project is in the initial stage, it's difficult to provide an exact estimate for each of the cost categories. However, we can provide a general idea of the potential costs:

Infrastructure costs: AWS cloud servers will be used for storing and deploying data. The cost will depend on the amount of data to be stored and the number of users accessing the data.

Development costs: Further research will be needed to change the learning curve according to the students' knowledge. The cost will depend on the complexity of the project, the number of developers involved, and the amount of time spent on development.

Cloud computing costs: AWS cloud servers will be used for training the model. The cost will depend on the amount of computing resources needed for training the model, the duration of training, and the number of times the model needs to be retrained.

Operational costs: The cost will depend on the amount of data being stored, the frequency of server and software updates, and the level of support needed for the project.

THANK YOU