Quiz Gene (quizzes adapt to student weak areas)

Short Description:

AI tutor that personalizes quizzes for students based on past performance, adapting

difficulty and topic coverage dynamically.

Recommended Tech Stack:

Python, TensorFlow/Keras for adaptive models, Scikit-learn for knowledge tracing,

PostgreSQL for question bank, Django/Flask backend, Angular/React frontend.

Expected Output:

Student dashboard showing strengths/weaknesses, automatically generated quizzes

focusing on weaker areas, and performance graphs over time.

**Main Focus:** To increase the knowledge on the subject based on the past quiz results.  
  
**Features:**

1. Every student has its own database., where his details are standard of each subject and past quiz results are stored.
2. In first version only limited subjects should be there in application.
3. Depth of the test questions have been given randomly based on level. From the results weaker areas are identified and suggestion, knowledge materials will be given.
4. For every subject there are four levels.

**Workflow:**

A diagram of a process

AI-generated content may be incorrect.

**Data Base:**

User: Name, email, number, gender, standard, Number of subjects attempted.

Subject -Array : name , Topic, Questions-Array, results-array, suggestions, weaker Sections, level

First Prototype:

1. Use gemini, chatgpt Apis, generate question, answers, topics based on user selected subject.
2. User will attempt results
3. Results are again given to gemini/chatgpt to identify wearker topics and get suggestions and materials to prepare for this.
4. This data is stored in database.
5. For Next quiz along with subject, previous questions, results and level also given to gemini/chatgpt for results.