**EduTutor-AI Personalized-Learning-withGenerativeAI-and-LMS-Integratio**

# 1. Introduction

* **Project Title**: EduTutor AI
* **Team Members**: K.BHANU PRAKASH REDDY

## 2. Project Overview

* **Purpose:** This project aims to develop EduTutor AI, a personalized learning platform powered by AI that provides dynamic content, quizzes, and assessments for students.
* **Features:** AI-based Concept Clarification

Mood-to-Method Learning

Voice-based Concept Generator

Real-time Quiz Generation

Student Progress Tracker

Feedback and Recommendation System

# 3. Architecture

* **Frontend:** Built using React for a responsive, interactive UI.
* **Backend:** Developed using Node.js and Express.js to handle API requests.
* **Database:** Uses MongoDB to store user data, quiz records, and progress details.

## 4. Setup Instructions

* **Prerequisites:** Node.js, MongoDB.
* **Installation:** 1. Clone the repository.
  1. Run npm install in both client and server directories.
  2. Set environment variables as per .env.example file

## 5. Folder Structure

* **Client:** Contains React frontend code.
* **Server:** Contains Node.js backend code and API logic.

## 6. Running the Application

* **Frontend:** Run "npm start" inside the client directory.
* **Backend:** Run "npm start" inside the server directory.

## 7. API Documentation

• **Example Endpoints:** GET /api/concepts/:topic

POST /api/quiz

GET /api/progress/:userId

# 8. Authentication

* Uses JWT tokens for secure authentication.
* User sessions are maintained via tokens.

## 9. User Interface

• The UI is designed to be user-friendly with interactive quizzes, feedback popups, and progress tracking dashboards.

**10. Testing**

• Jest and Postman are used for unit and API testing.

**11. Screenshots or Demo**

• [Screenshots or demo link to be added]

**12. Known Issues**

• No critical bugs at present. Minor UI optimizations pending.

## 13. Future Enhancements

* Google Classroom integration.
* Mobile app version.
* Advanced analytics dashboard.
* AI-powered voice interaction.