

# Edu Tutor AI: Personalized Learning With Generative AI and LMS Integration.

## ***Introduction:***

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## ***Project Overview:***

This project is an Educational AI Assistant built using Gradio and the Hugging Face Transformers library.

## ***Key Features:***

### **1. Concept Explanation:**

Users can input a concept, and the AI will provide a detailed explanation with examples.

### **2. Quiz Generation:**

Users can input a topic, and the AI will generate 5 quiz questions with different types (multiple choice, true/false, short answer) and provide answer.

## ***Technical Details:***

### **1.Model:**

The project uses the IBM-granite/granite-3.2-2b-instruct model, a large language model fine-tuned for instructional tasks.

### **2.Gradio Interface:**

The project features a user-friendly Gradio interface with two tabs: Concept Explanation and Quiz Generator.

## ***How it Works:***

1. Users input a concept or topic.
2. The input is passed to the model, which generates a response.
3. The response is processed and displayed in the Gradio interface.

## ***Potential Applications:***

### **1. Education:**

This project can be used to support students in understanding complex concepts and preparing for exams.

### **2. Content Generation:**

The quiz generator feature can be used to create educational content for teachers or online courses.

## ***Future Enhancements:***

### **1. Model Fine-Tuning:**

Fine-tuning the model on specific educational datasets could improve its performance.

### **2. Additional Features:**

Adding features like user feedback, rating systems, or personalized learning paths could enhance the user experience.

## ***Benefits:***

### **1.Improved Learning Outcomes:**

Personalized learning experiences lead to better understanding and retention.

### **2.Increased Efficiency:**

AI handles administrative tasks, freeing educators to focus on high-touch activities.

### **3.Accessibility:**

Edu Tutor AI can reach students with disabilities, remote or underserved communities.

## ***Potential Applications:***

### **1.K-12 Education:**

Supports students in various subjects, such as math, science, or language arts.

### **2.Higher Education:**

Supplements university courses with AI-powered tutoring.

### **3.Corporate Training:**

Provides employees with personalized skill development <sup>1</sup> <sup>2</sup>.

**Conclusion:**

EduTutor AI is a cutting-edge, AI-enhanced personal learning tutor designed to facilitate a tailored learning experience that adapts to individual learning styles, preferences, and paces.