

# **Edu Tutor AI Personalized Learning Generative AI with IBM**

## **1.Introduction:**

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## **Project Overview:**

EduTutor AI is a personalized learning platform that leverages IBM's Generative AI technology, specifically the Granite model, to provide dynamic learning experiences. Here's a project overview .

## **Key Features:**

- ❖ Dynamic Subject → Topic Selection: Enables learners to navigate through various subjects and topics with ease.

- ❖ **AI-Powered Doubt Solving:** Provides instant answers and explanations to learners' questions.
- ❖ **Quiz Generation and Study Suggestions:** Offers customized quizzes and study materials based on individual learners' needs.
- ❖ **Progress Tracking:** Securely tracks learners' progress using Firebase and Gradio.

## **Technologies Used:**

- ❖ **IBM Watsonx AI's Granite-13B Instruct Model:** A foundation model that generates human-like responses based on given prompts.
- ❖ **Streamlit:** A web-based UI framework for building the platform's interface.
- ❖ **Firebase:** Used for secure progress tracking.

## **Benefits:**

- ❖ **Personalized Learning:** Tailored learning experiences that cater to individual learners' needs and styles.

- ❖ **Instant Feedback:** AI-powered doubt solving provides immediate answers and explanations.
- ❖ **Adaptive Assessments:** Quizzes and study suggestions adjust to learners' progress and understanding.

## **Learning Resources:**

If you're interested in learning more about Generative AI and its applications in education, IBM offers various courses and specializations, such as

- ❖ **Generative AI Engineering with LLMs Specialization:** A 3-month program that equips learners with job-ready skills in Generative AI and NLP.
- ❖ **Generative AI for Educators:** A specialization that teaches educators how to leverage GenAI to enhance teaching practices and student outcome.

## **Workflow of Edututor AI:**

### **Step 1: Data Input**

- Students log in and provide learning goals, past performance, or topics of interest.

- Existing datasets (syllabus, textbooks, question banks) are uploaded to IBM Cloud.

### Step 2: AI Processing

- IBM Watson & generative AI analyze learner data.
- AI generates personalized learning paths and practice materials.

### Step 3: Learning Delivery

- Students interact with the platform: lessons, quizzes, AI tutor chat.
- Adaptive recommendations adjust in real-time.

### **This Project Aims To:**

- ❖ Personalize education at scale using generative AI.
- ❖ Provide learners with an AI-powered tutor available 24/7.
- ❖ Empower educators with insights into student strengths and weaknesses.

❖ Enhance accessibility by supporting diverse subjects and languages.