

Project Overview

EduTutor AI is an AI-powered personalized learning platform that caters to both students and educators by providing a smart and interactive educational experience. The project is designed to automate and enhance the process of quiz creation, performance analysis, and classroom management using Generative AI technologies.

The system includes two main user panels:

- **Student Panel:** Allows students to log in (manually or via Google), take quizzes based on selected topics, view their quiz history, and receive instant performance feedback. The quizzes are dynamically generated using IBM WatsonX Granite models and stored for analytics using Pinecone vector database.
- **Educator Panel:** Provides educators with insights into student performance through a dashboard displaying metrics such as quiz scores, completion rates, and topic-wise analysis. This helps teachers identify learning gaps and provide targeted interventions.

EduTutor AI integrates several technologies, including:

- **IBM WatsonX & Granite Models** for generating context-aware quiz questions.
- **Pinecone Vector Database** for storing quiz history and enabling semantic search.
- **Google Classroom API** for syncing classroom data and managing assignments.
- **Streamlit** for building a user-friendly, interactive front-end interface.
- **FastAPI** as the backend service to handle quiz requests and responses.

With a strong focus on automation, personalization, and ease of use, EduTutor AI aims to be a comprehensive digital assistant in modern education—supporting students in self-paced learning and helping educators with data-driven teaching strategies.