EduTutor AI with IBM

Abstract—EduTutor AI leverages IBM Granite models to provide personalized learning experiences through generative AI. The system generates concept explainers, quizzes, and interactive tools deployed on Google Colab with minimal setup effort.

Index Terms—EduTutor AI, IBM Granite, Personalized Learning, Generative AI, Google Colab.

I. INTRODUCTION EduTutor AI is designed to create adaptive learning experiences. By integrating IBM Granite models from Hugging Face, the project demonstrates concept generation, quiz creation, and customization to fit learner needs.

II. PROJECT DESCRIPTION The project uses Hugging Face Granite-3.2-2b-instruct model. It is lightweight, fast, and optimized for educational tasks.

III. PREREQUISITES To replicate this project, learners need knowledge of: 1) Gradio framework, 2) Python programming, 3) Git version control, 4) IBM Granite Models, 5) Google Colab with T4 GPU.

IV. PROJECT WORKFLOW A. Exploring Naan Mudhalvan Smart Interz Portal Students begin by enrolling through the Smart Internz portal. B. Choosing IBM Granite Model IBM Granite models are accessed from Hugging Face; granite-3.2-2b-instruct was selected. C. Running Application in Google Colab Required libraries are installed, and the model is executed using T4 GPU for optimized inference. D. Uploading Project in GitHub The final project is uploaded and maintained in a public GitHub repository.

V. RESULTS The application successfully runs in Google Colab, producing personalized learning outputs via a Gradio interface.

VI. CONCLUSION EduTutor AI demonstrates how generative AI models like IBM Granite can enhance personalized education, making learning adaptive and efficient.

REFERENCES [1] Hugging Face IBM Granite Models, https://huggingface.co/ibm-granite [2] Gradio Documentation, https://www.gradio.app/guides/ [3] Python Documentation, https://docs.python.org/3/ [4] Git Documentation, https://git-scm.com/docs/git [5] Google Colab GPU Guide, https://www.geeksforgeeks.org/python/how-to-use-gpu-in-google-colab/