

Senior AI Engineer - Technical RAG

Task - Exam Practice Assistant

Requirements:

Your task is to build a chat assistant to help medical students prepare for exams by generating practice questions, explanations, and simulating a tutor that adapts based on the student's answers.

You will use the [MedMCQA dataset](#) (multiple-choice medical questions, answers, and explanations).

Features to Implement:

1. Quiz Me:

On receiving the command "Quiz Me", the system generates a random multiple-choice question from MedMCQA, presents options, and accepts an answer from the user. It should respond with whether the answer is correct or incorrect.

2. Explain Why?:

If the user answers incorrectly (or requests "Explain Why?"), the assistant retrieves the best explanation(s) for the correct answer from the dataset, as well as a concise explanation for the incorrect option if possible.

Tools to use:

- You may use Python and any retrieval/LLM orchestration library of your choice.
- Use Pinecone/Chroma/Qdrant for similarity search (or another vector DB).
- The Web framework for you should be FastAPI.
- You may use any open-source libraries you like (LangChain, LlamaIndex, Haystack, etc.)

Deliverables:

- Working code repository.
- README.md file for quick setup and how to run/test.
- (Bonus) Dockerfile and docker-compose for local deployment.
- (Bonus) Good code quality and structure.