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Approach to Physics Education Using Local AI with RAG for Open Educational Materials Generation

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The new tool that starts to enter all parts of our life is AI –and it enters education as well. There are two large concerns with using AI for education - the safety of students' data and the AI missing specific knowledge about the given class. The approach of using the Retrieval Augmented Generation provides the user data to the locally run LLM model (using Ollama framework, a free and open-source tool that allows you to run large language models locally on your system) as a context for the generation of the OER materials. As this AI model of user's choice is run fully locally, no data is transmitted and it can be used to do tasks with students' data, such as summarization of evaluations and simple grading and image recognition tasks. The background, installation highlights and use examples of different showing system performance will be presented.

Collaboration(s)

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