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

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AI nowadays is a new tool that seems to be everywhere including education. It brings convenience but also concerns - the two largest concerns with using AI by instructors are the safety of students' data and the AI lack of the specific knowledge needed in a specific class. The data safety can be addressed by using a locally run large language models model using Ollama framework, a free tool that gives user the ability to run LLM locally on your system so no data is transmitted. The approach of using the Retrieval Augmented Generation adds the user data to the as a context for the generation of the educational materials as well as homework and quiz assignments. Brief background, installation and configuration highlights with performance and use examples of different models will be presented.

Secondary track

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