Abstract

With the rapid adoption of Large Language Models (LLMs) in education, students increasingly rely on AI-generated answers without clear evidence of their correctness or source reliability. This raises concerns related to factual accuracy, explainability, and trust in AI-assisted learning. To address these issues, this project proposes **EviLearn**, an agentic knowledge reasoning framework that combines **Retrieval-Augmented Generation (RAG)** with **explainable, claim-level verification**.

EviLearn operates by decomposing a user's answer or study content into individual factual claims and validating each claim against trusted academic documents such as textbooks, lecture notes, and research papers. Using an agent-based architecture, the system performs targeted retrieval, evaluates evidence relevance, and generates confidence-backed explanations instead of producing opaque answers. This approach improves transparency, reduces hallucinations, and helps learners understand *why* an answer is correct or incorrect.

Inspired by recent research in **Agentic RAG**, **explainable AI**, and **educational AI systems**, EviLearn emphasizes source traceability, reasoning transparency, and user trust. The system is particularly suitable for academic environments where correctness verification and explanation quality are critical. This project demonstrates how agentic retrieval and explainable reasoning can be effectively applied to support reliable and evidence-driven learning systems.