RAGyverse

Computer Science and Engineering
AI-based programming
Mohamed Sabry,Begol Osama,Ahmed Mahdi,
Shahenda Adel,Mohamed Ibrahim
Supervised by: Dr/Laila Shoukry

Problem

- Online learning lacks interactivity and real-time support.
- Current tools rely on static videos and text, with no personalization or live discussion.
- Students struggle with understanding complex topics, finding info, and getting quick feedback.

Technologies used

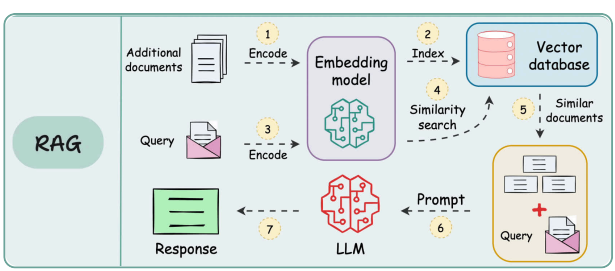
Unity
React
Hugging Face
groq
LangChain
Meta

Goal

- Online learning lacks interactivity and real-time support.
- Traditional methods limit personalization and engagement.
- Existing tools are static and non-adaptive.
- RAGyverse offers an AI tutor for real-time, interactive learning.
- Improves comprehension, feedback, and engagement with adaptive AI and immersive tech.

Approach

- RAGyverse uses a Conversational KGRAG engine for real-time, context-aware responses.
- Students upload PDFs and interact via text,voice,or avatars.
- KGRAG retrieves relevant info and gives personalized answers.
- Supports voice input (speech recognition) and audio output (text-to-speech).
- VR + 3D AI Tutor Avatar enables immersive, interactive learning.



Results and Conclusion

- Delivers relevant, engaging explanations.
- Outperforms traditional learning in adaptability.
- Enables real-time, personalized instruction.
- Future focus: enhanced AI and interactivity.