

## 7. Knowledge-base Search Engine

### Objective:

Search across documents and provide synthesized answers using LLM-based retrieval-augmented generation (RAG).

### Scope of Work:

- Input: Multiple text/PDF documents
- Output: User query → synthesized answer
- Optional frontend for query submission & display

### Technical Expectations:

- Backend API to handle document ingestion & queries
- RAG implementation or embeddings for retrieval
- LLM for answer synthesis

### LLM Usage Guidance:

- Prompt example: *“Using these documents, answer the user’s question succinctly.”*

### Deliverables:

- GitHub repo + README
- Demo video

### Evaluation Focus:

- Retrieval accuracy, synthesis quality, code structure, LLM integration