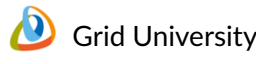


Retrieval-Augmented Generation (RAG)

100% COMPLETE

- ≡ RAG basics ✓
- ≡ Practice 1: Foundational Text-Based RAG System ✓
- ≡ RAG evaluation ✓
- ≡ Practice 2: RAG Pipeline Evaluation ✓
- ≡ RAG Advanced approaches ✓
- ≡ Practice 3: Practice: Hybrid Search + Reranking ✓
- ≡ Practice 4: Advanced RAG approaches ✓
- ≡ Multimodal RAG ✓
- ≡ Practice 5: Multimodal RAG (Phase 5.1 and 5.2) ✓
- ≡ Practice 6: Multimodal RAG with ColPali-like approach ✓

Practice 5: Multimodal RAG (Phase 5.1 and 5.2)



Phase 5.1: Multimodal RAG – Incorporating Tables

Objective: Extend the RAG system to understand and query data contained within the tables of the PDF.

Tasks:

- 1
- Table Indexing & Retrieval:**
 - Develop strategies for making tables "retrievable." This should involve all processes from Data Parsing Requirements section.
- 2
- Querying Tabular Data:**
 - Develop prompts for the LLM to interpret queries related to tables and synthesise answers from the retrieved table data (potentially including simple calculations or direct data extraction).
- 3
- Integrated Retrieval:** Modify the retrieval pipeline to search across both text chunks and table representations.
 - (Optional) Add Plotting functionality, similar to what you did in Capstone 1.

Phase 5.2: Multimodal RAG – Incorporating Images (Charts & Graphs)

Objective: Enable the RAG system to interpret and answer questions based on the visual data (charts, graphs) in the PDF.

- 1
- Image Extraction & Understanding:**
 - Extract images (charts, graphs) from the PDF and process them based on Data Parsing requirements for images.
- 2
- Querying Visual Data:**
 - Adapt the retrieval system to include these image descriptions in the search space.
 - Develop prompts that allow the LLM to use the image-derived textual information to answer user queries.

Next: Final Assessment ▶

In Progress 50%

Retrieval-Augmented Generation

- ✓ Retrieval-Augmented Generation (RAG)
- Final Assessment

Course Tasks 0/1

🔒 Course Evaluation

