

Lecture #40 : RAG System Retrievers

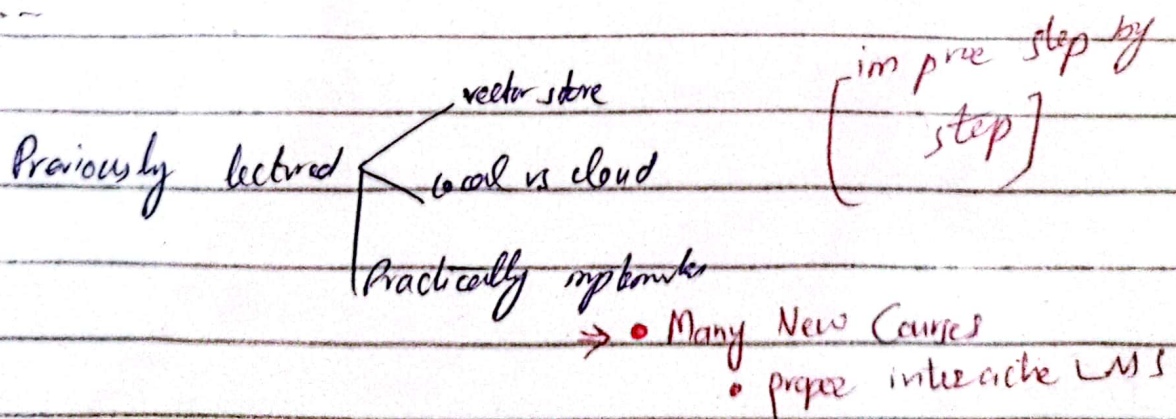
- ... new opportunities
- ... for serious students only [free of cost \rightarrow incubator center]
- ... Be grateful ^{to} Allah
- ... discussion about future projects
- ... Benefits of this field
- ... grab the opportunity & work for it.

[Proper communication & Trading]

\Rightarrow Good intentions — Dua — Mehnat

- ... just path —
- ... continuous effort

... different courses announcement + interactive sessions



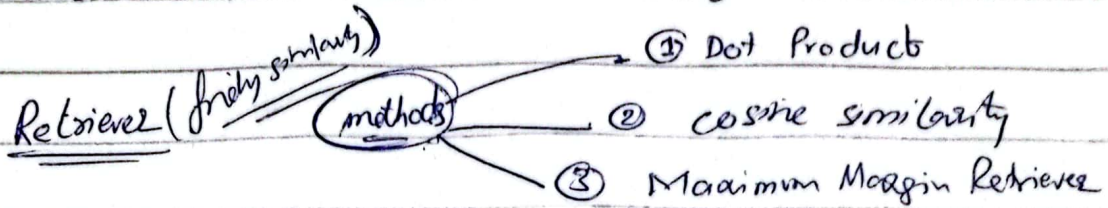
Retrieval

vector store $\xrightarrow{u_i}$ diesel engine
need to interact through

\Rightarrow To interact with data (vector store)

1/4 interface \Rightarrow retrieval.

enable us to interact with ingested data.



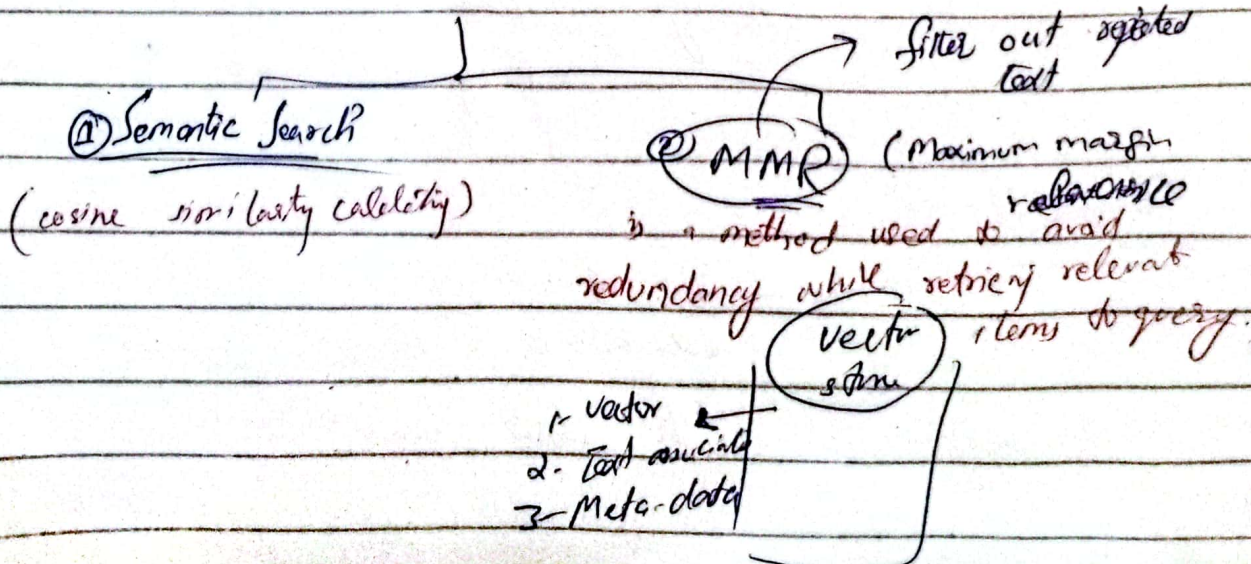
Question \rightarrow vector form \rightarrow go to vector store through retriever \rightarrow find n similar vectors

demo of project references

Vector Store as Retriever

vector store was a vector store to retrieve documents..

light-weight wrapper around the vector store class to make it conform retriever interface.



- will get associated text & chunk as output

Semantic Search

MMR \rightarrow (ensure relevancy and diversity)

All docs \rightarrow fetch most similar docs \rightarrow k most diverse

Other retrieval

- SVM

- TF/IDF (more focus on word)
(most repeated is important)

Practical demo

ingestor

- Retrieval

- query

- perform retrieval (Similarity Search)

addressing specificity, working with metadata

filtering

must,
should,

◦ other retrieval examples: SVM
TF/IDF

qdrant

need analyzing power
not knowledge in
RAS

LLM

(Selecting brain for the system)

why so many models?

→ Total model
→ Text-based models
→ Context window
analyzing power, cost
→ which model you use.

So mini model are more feasible

understand its
complete image

model
cost
accuracy