

Text to Search Processing Language (SPL)



Experiment

Few-shot Learning

Few-shot Learning + RAG

Fine-tuning

What is Few-Shot Learning

Few Shot Learning vs. Zero Shot Learning

Few Shot

Few-shot learning (FSL) aims to generate a classifier using limited labeled examples.

Zero Shot

Zero-shot learning (ZSL) aims to recognize instances of unseen classes based solely on the semantic descriptions of the classes.

What is Few-Shot Learning



x 3



x 3

Few Shot Learning vs. Zero Shot Learning

Few Shot

Few-shot learning (FSL) aims to generate a classifier using limited labeled examples.

Zero Shot

Zero-shot learning (ZSL) aims to recognize instances of unseen classes based solely on the semantic descriptions of the classes.

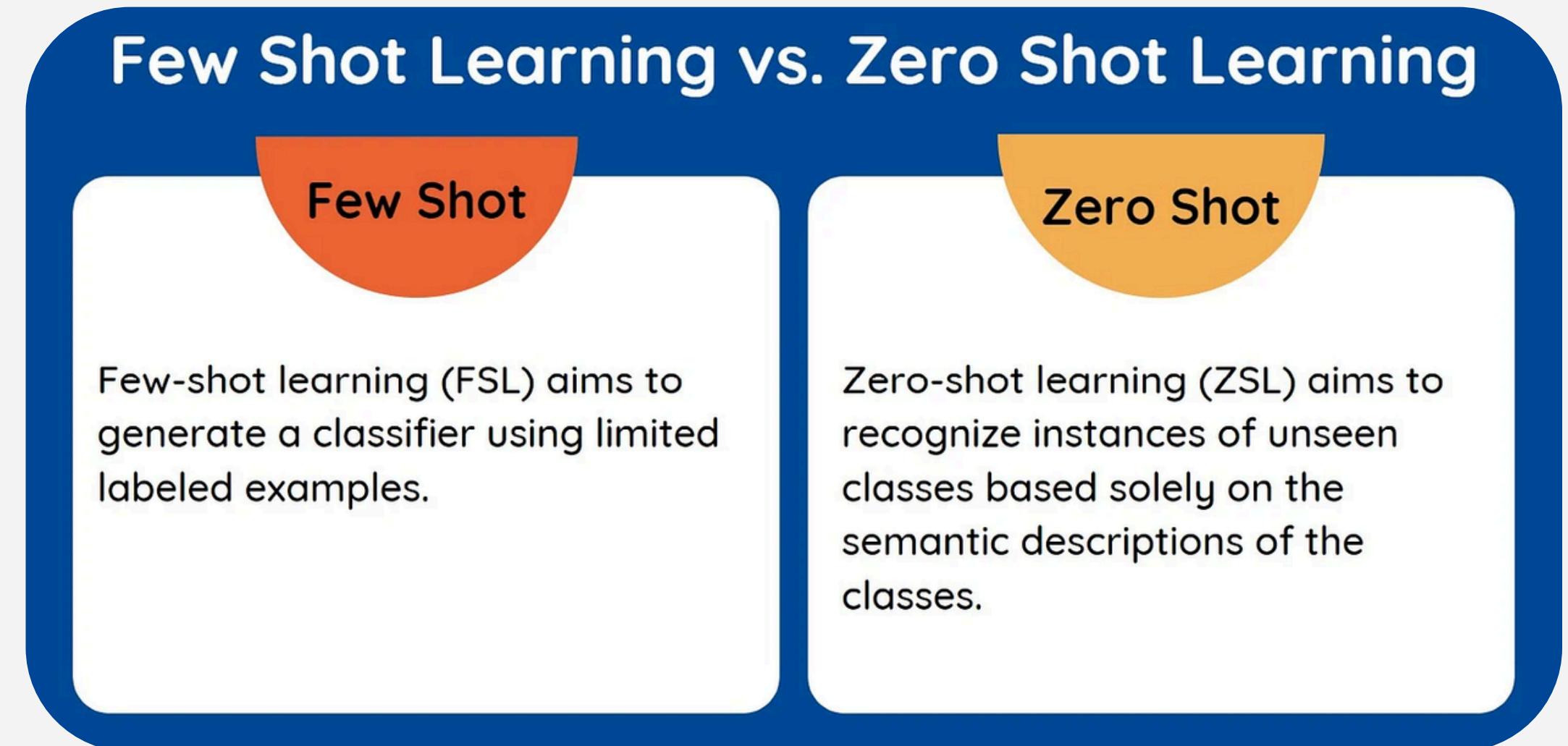
What is Few-Shot Learning



x 3

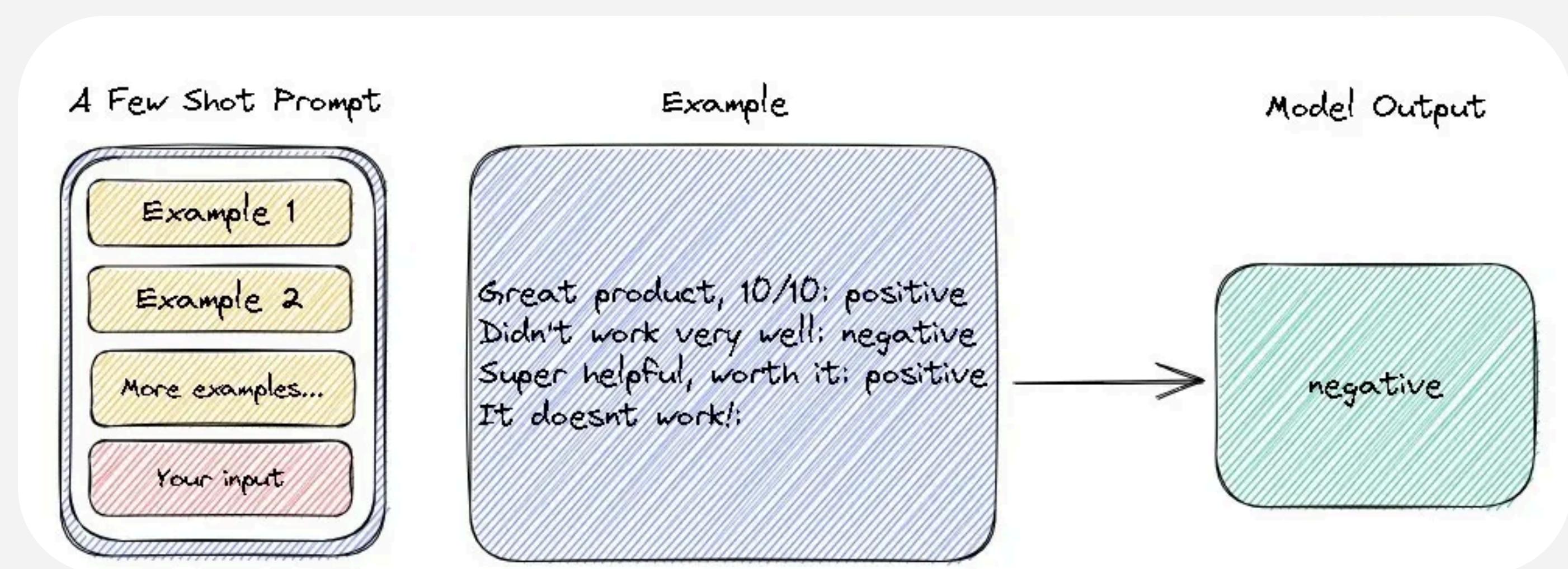


x 3



Result : Model can identify wolves and tigers

What is Few-Shot Learning



What is Few-Shot Learning

Few Shot Learning vs. Zero Shot Learning

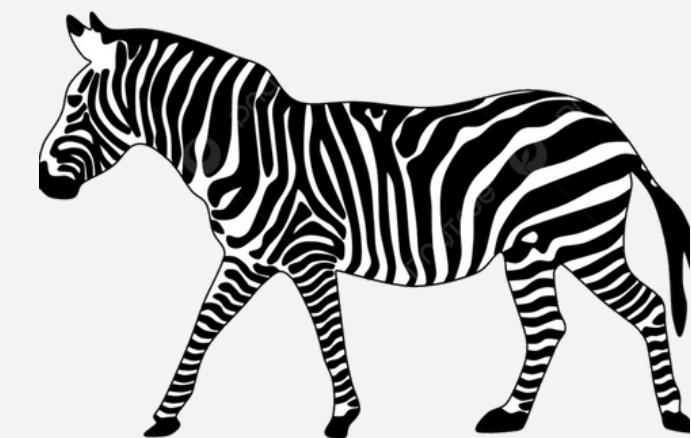
Few Shot

Few-shot learning (FSL) aims to generate a classifier using limited labeled examples.

Zero Shot

Zero-shot learning (ZSL) aims to recognize instances of unseen classes based solely on the **semantic** descriptions of the classes.

"A zebra is an animal with black and white stripes, long ears, and a face similar to a horse."



What is Few-Shot Learning

Few Shot Learning vs. Zero Shot Learning

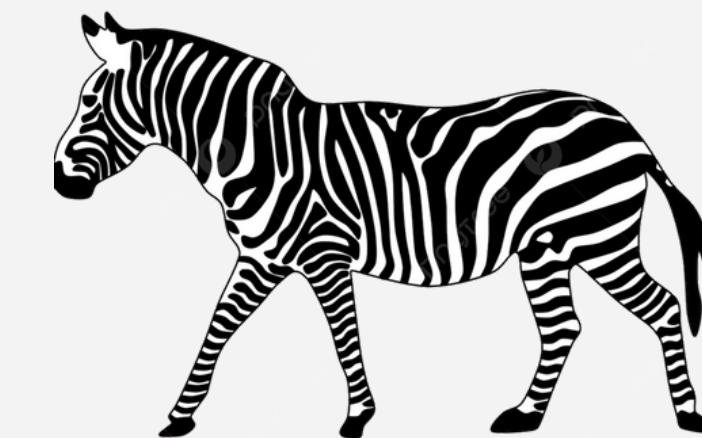
Few Shot

Few-shot learning (FSL) aims to generate a classifier using limited labeled examples.

Zero Shot

Zero-shot learning (ZSL) aims to recognize instances of unseen classes based solely on the **semantic** descriptions of the classes.

"A zebra is an animal with black and white stripes, long ears, and a face similar to a horse."



Result : Model can identify zebras even though it never saw any pictures of zebras during training.

What is RAG?

Retrieval

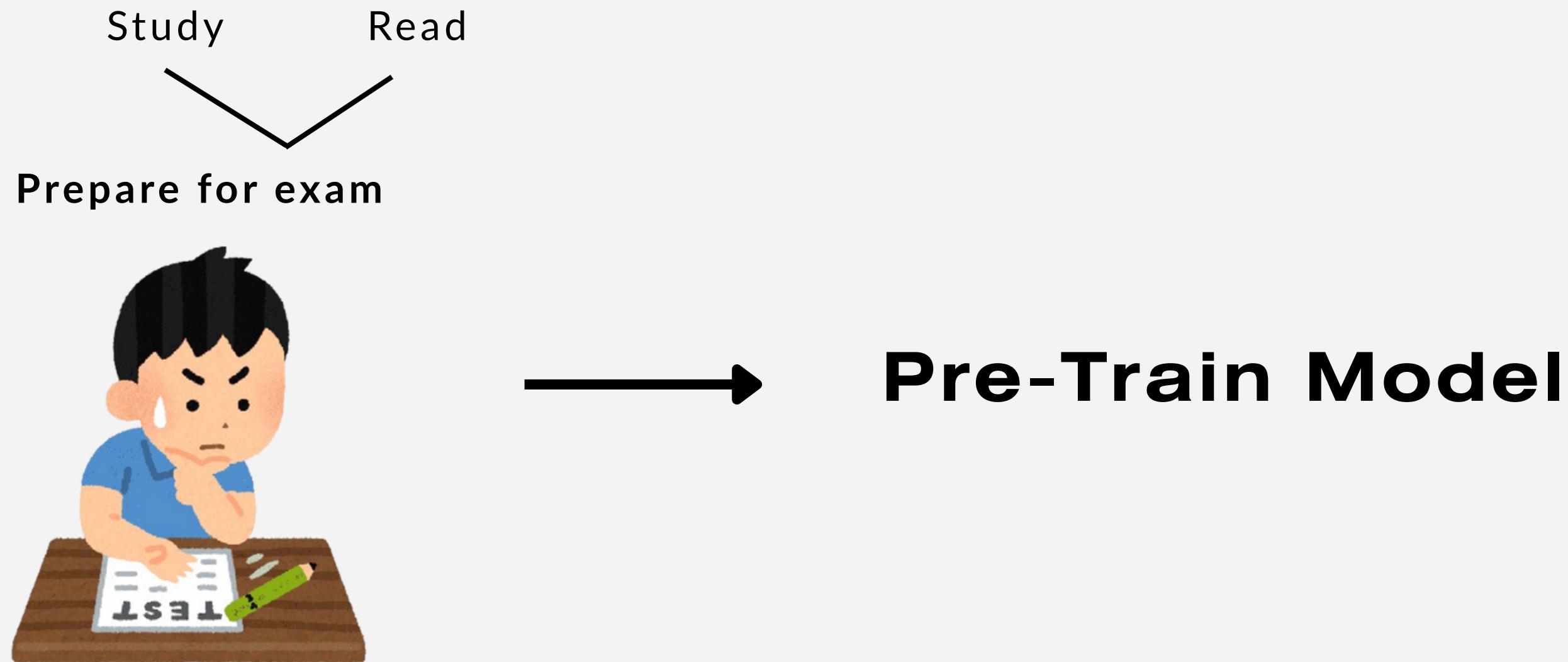
Augmented

Generation

Study Read
 ↙ ↙
 Prepare for exam



What is RAG?



What is RAG?

Retrieval

Augmented

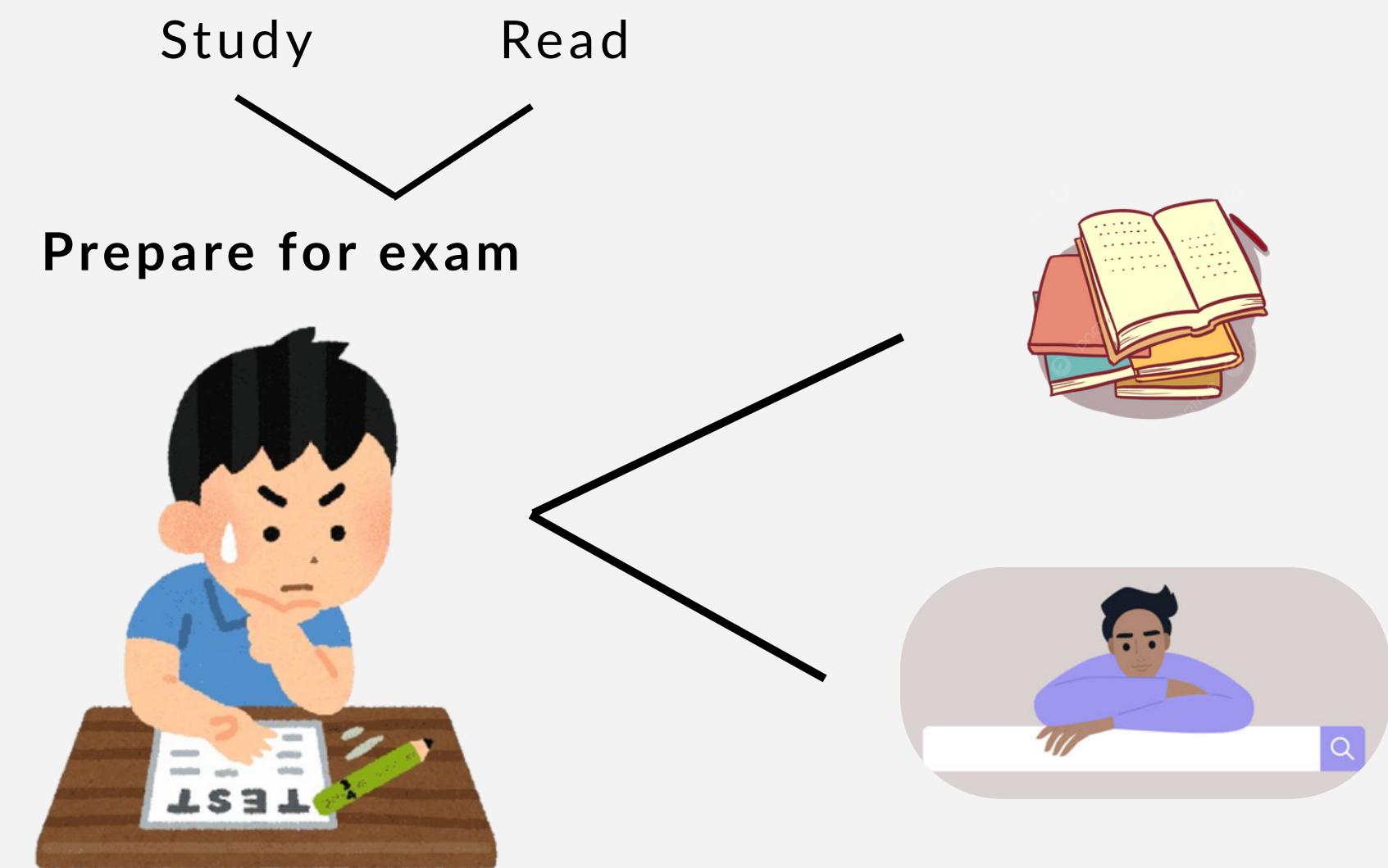
Generation

Study Read
 ↙ ↙
 Prepare for exam

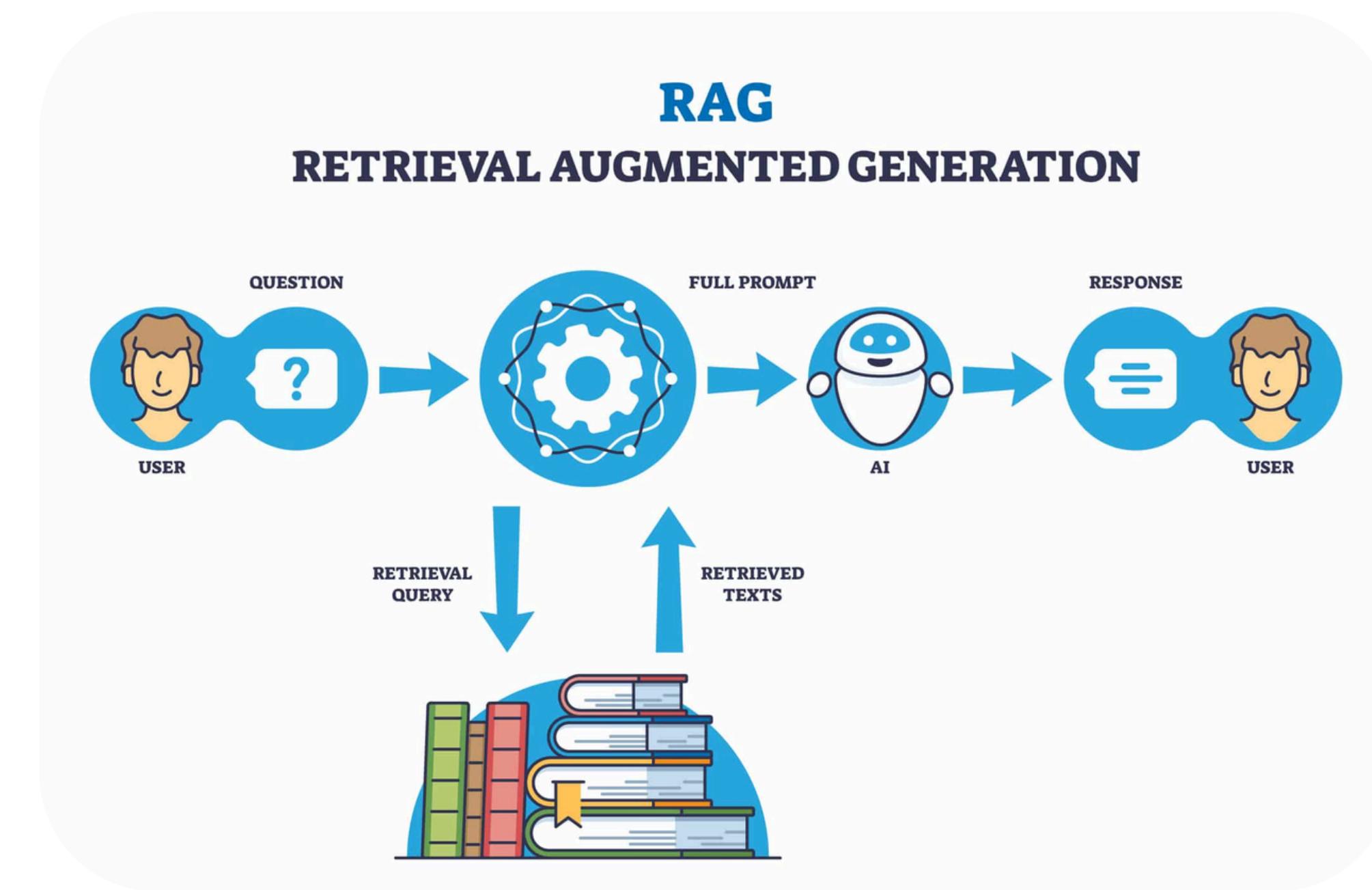


What is RAG?

Retrieval
Augmented
Generation



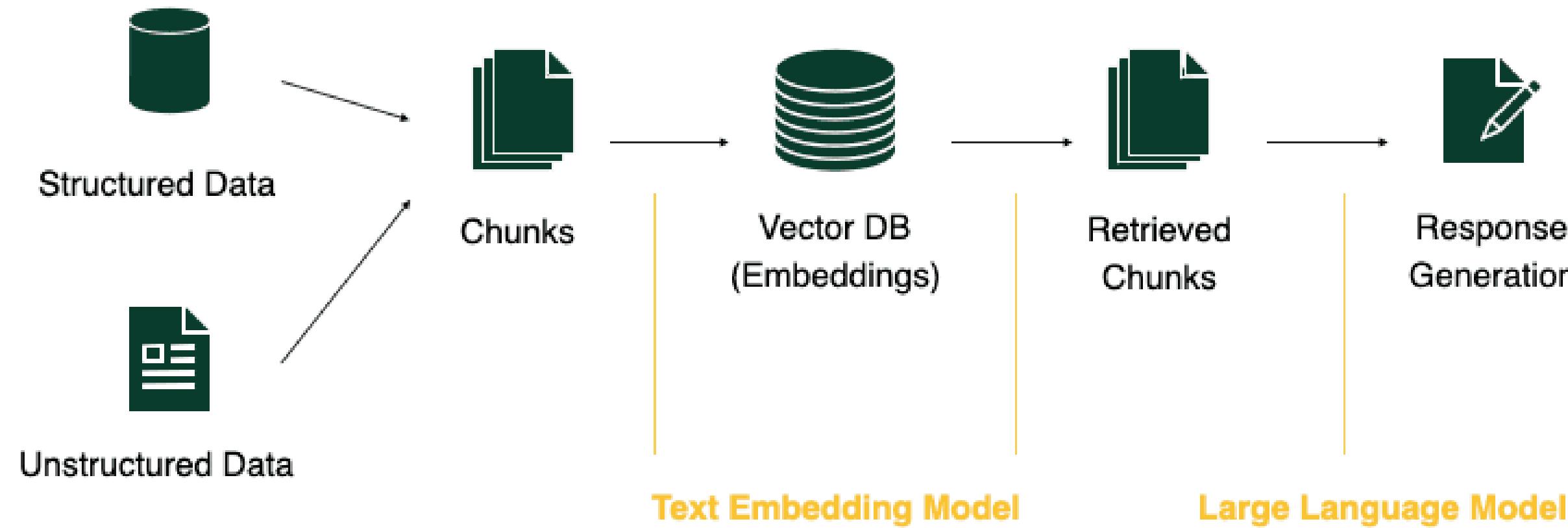
What is RAG?



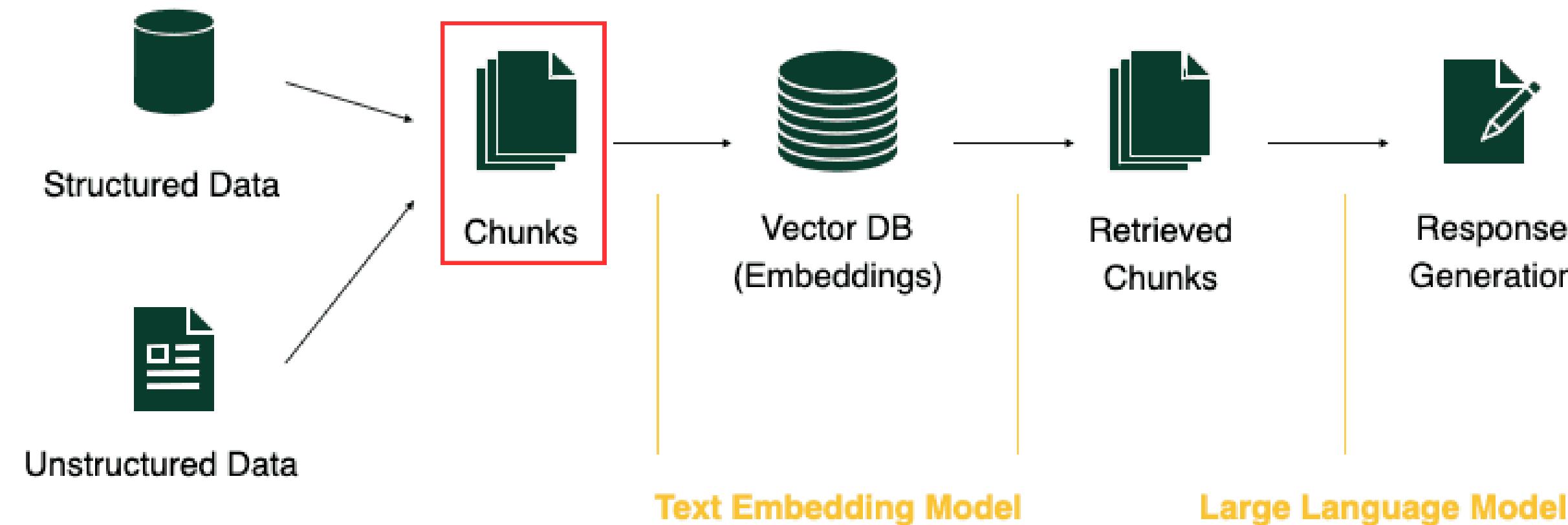
Open book -> Reduce guesswork

New update data

Simple RAG

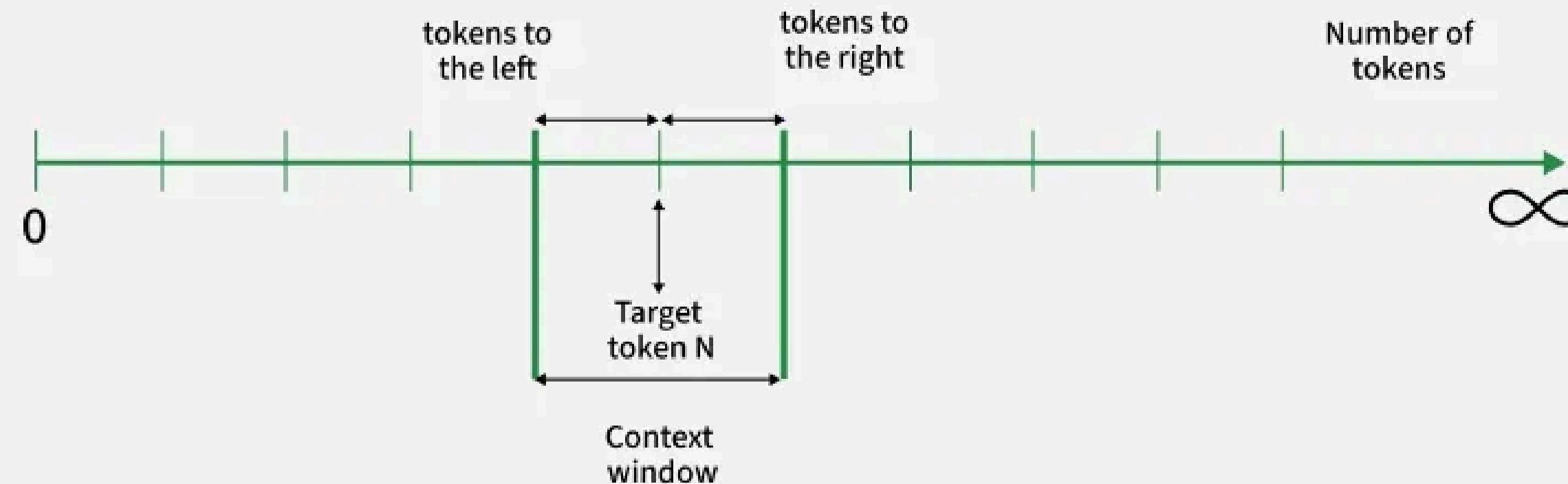


Simple RAG



What is Chunking ?

Example of a Context Window



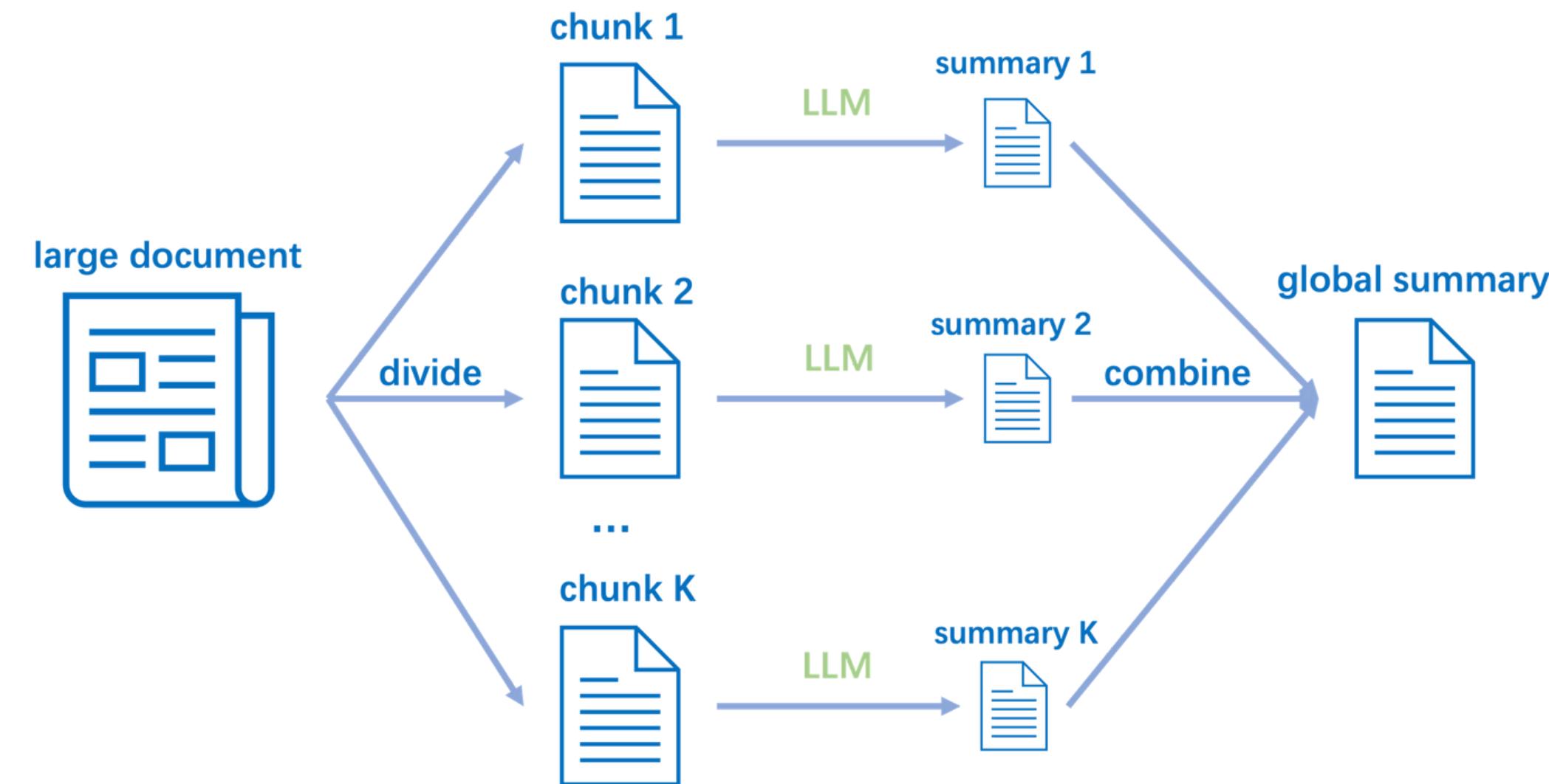
What is Chunking ?



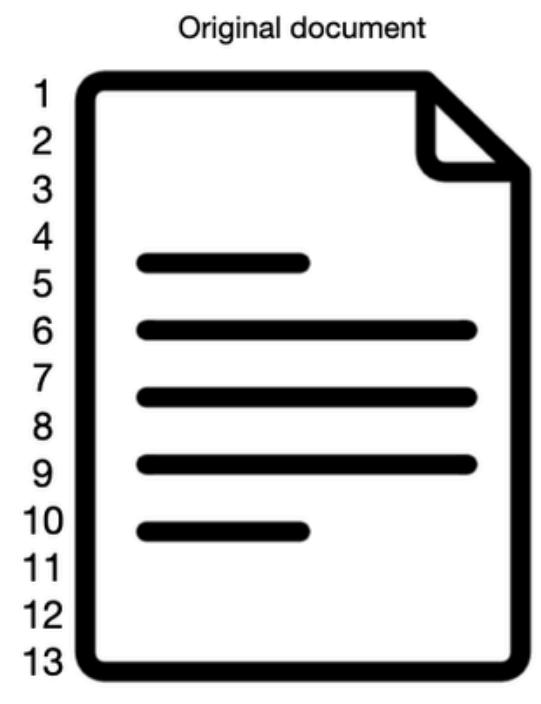
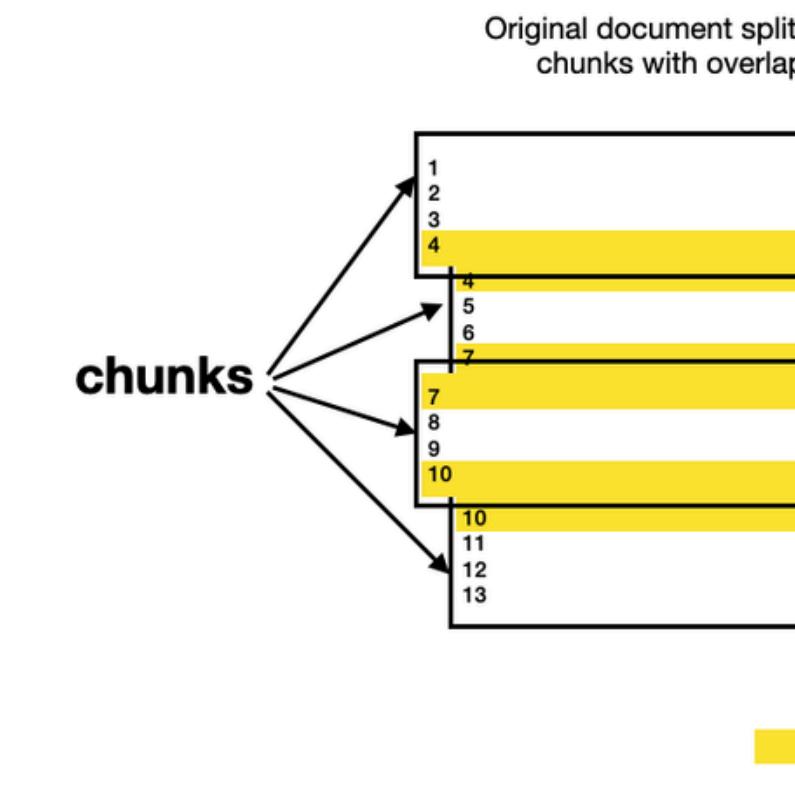
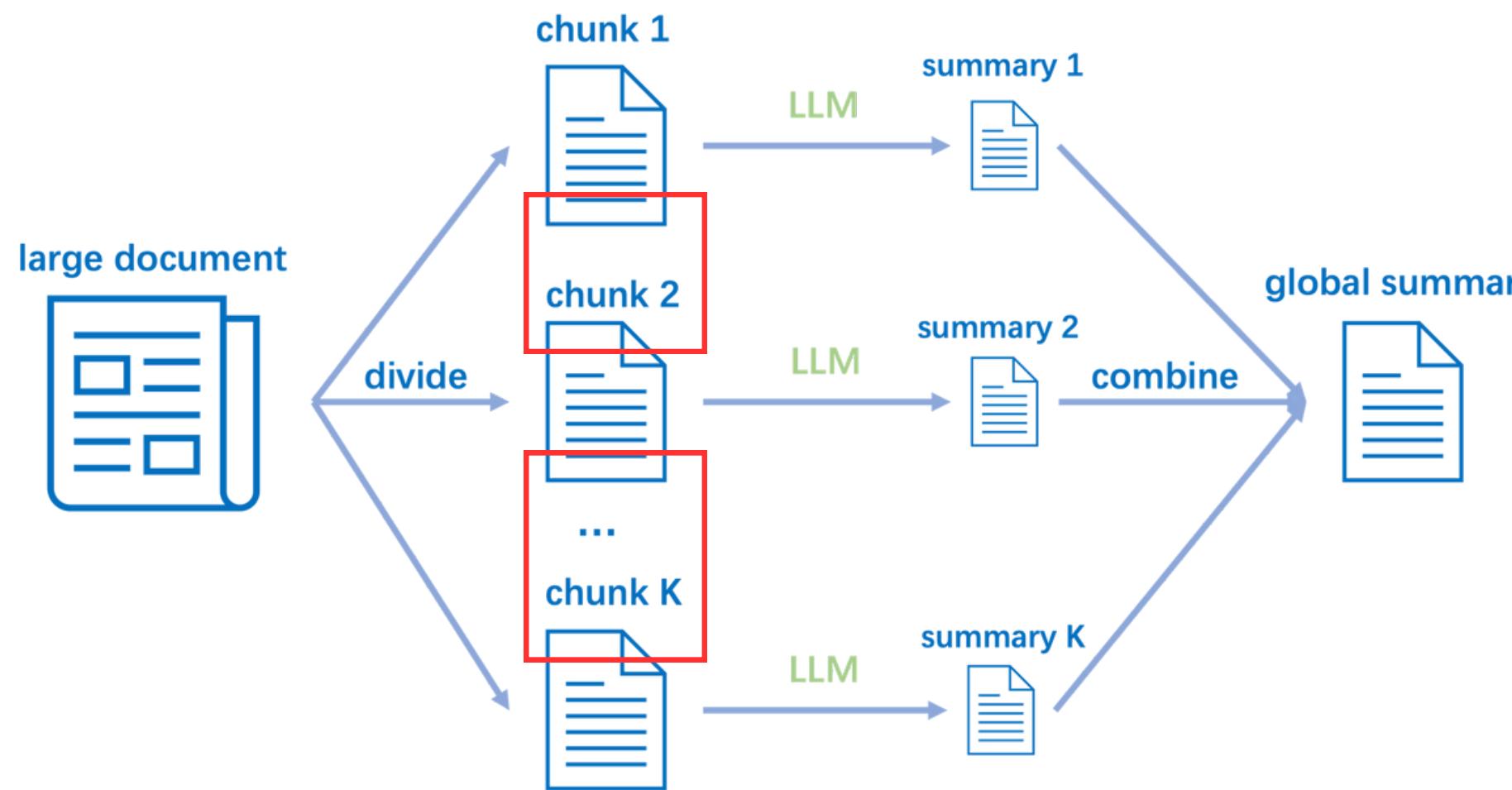
LLM

Overheat!
Hallucination!

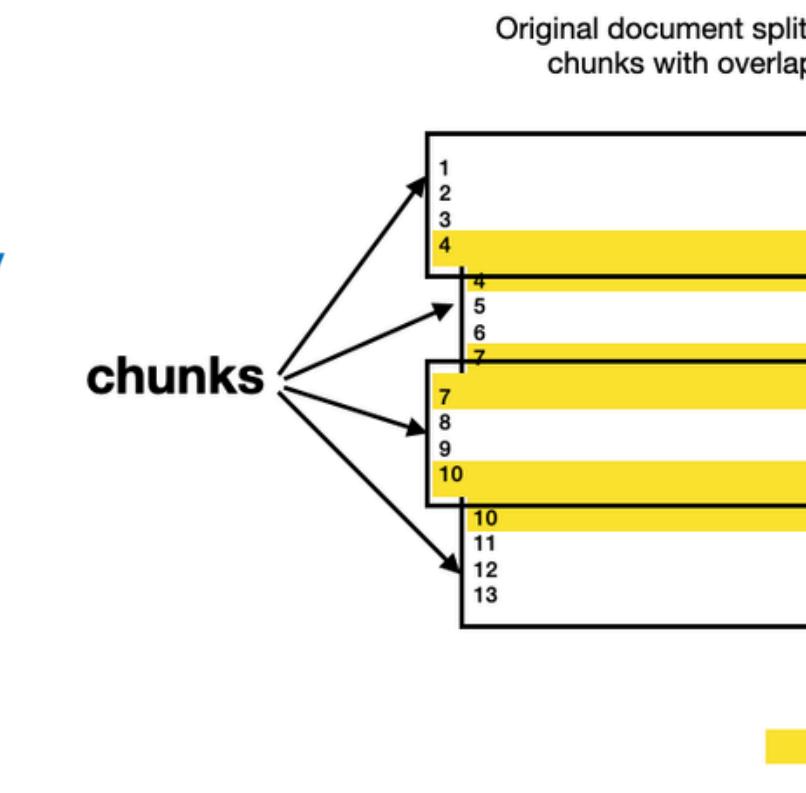
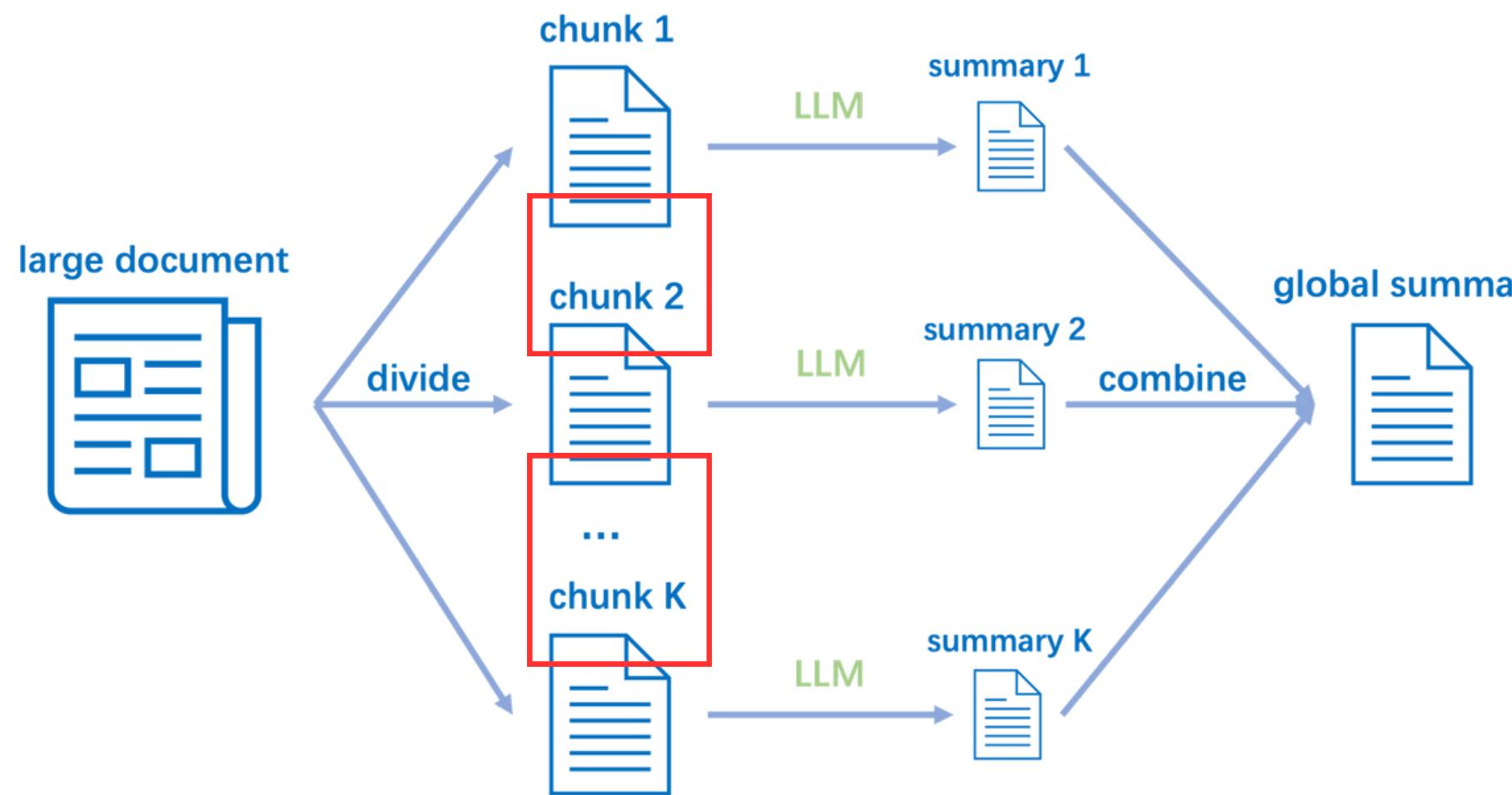
What is Chunking ?



What is Chunking ?

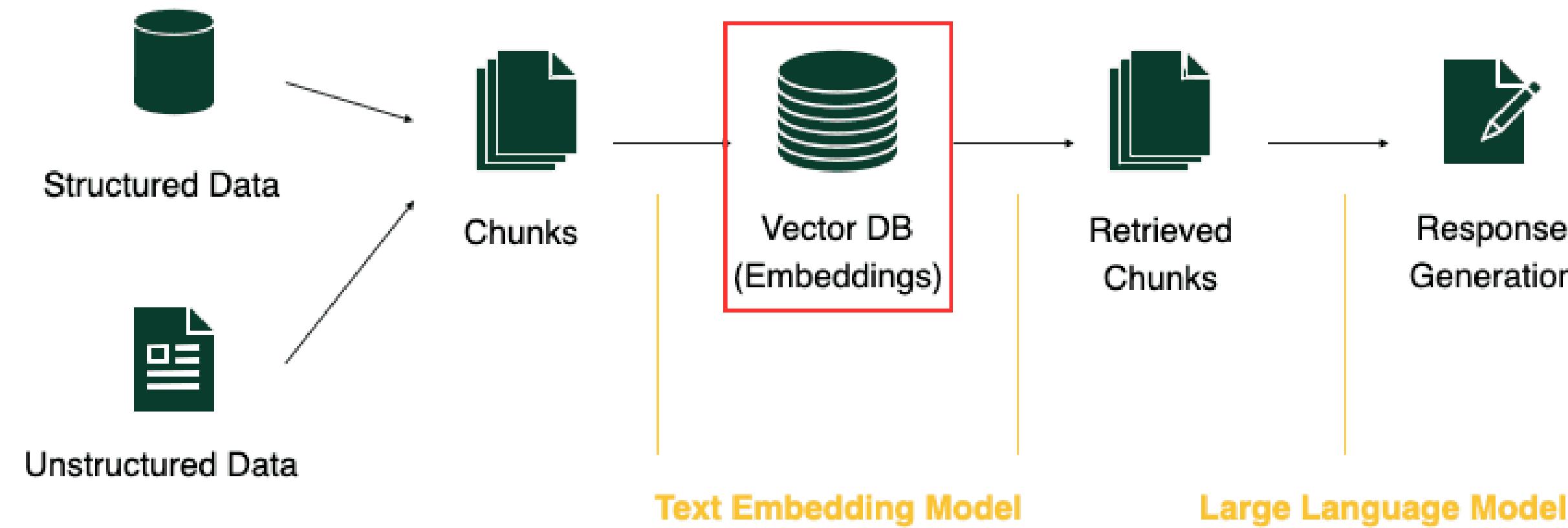


What is Chunking ?

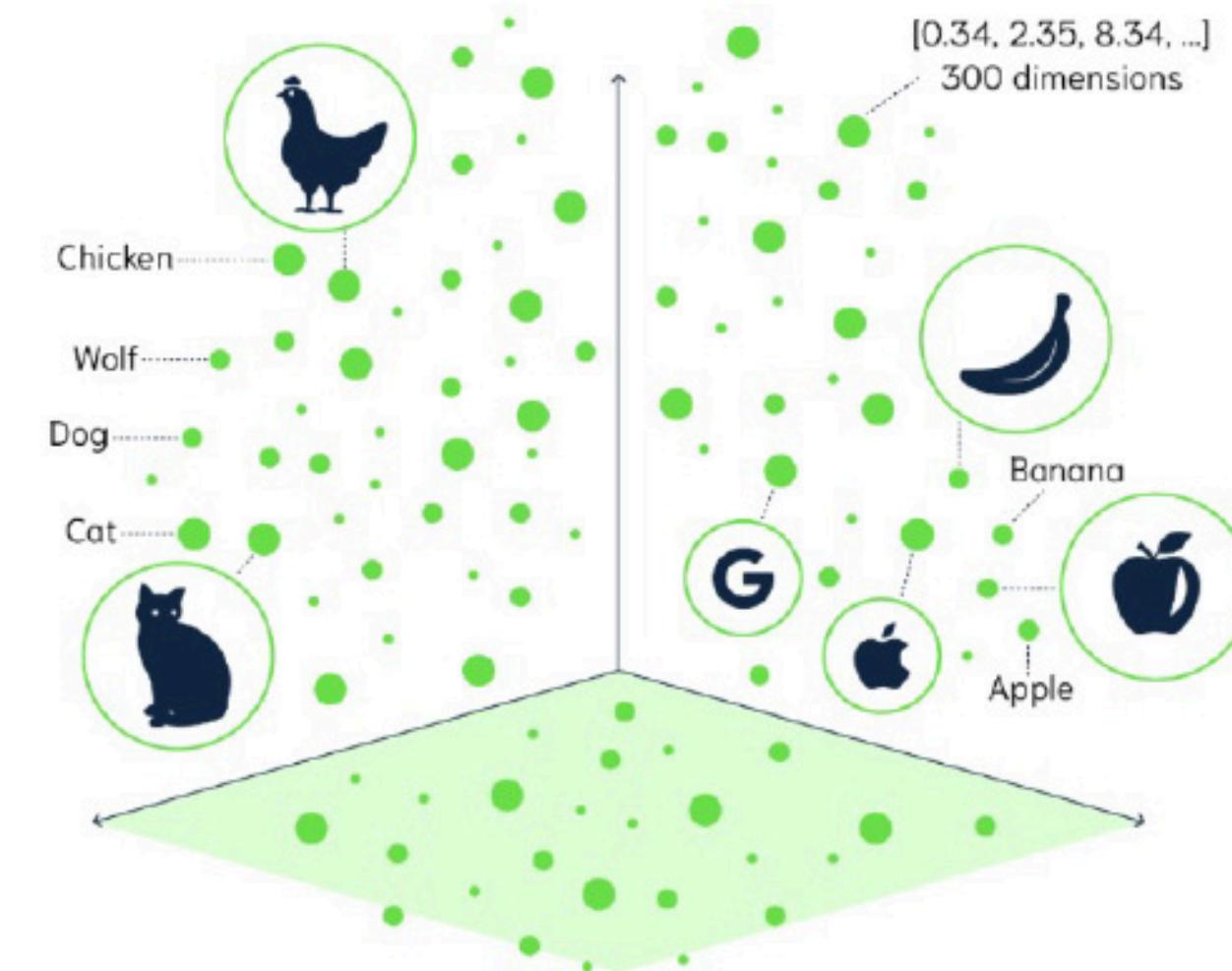
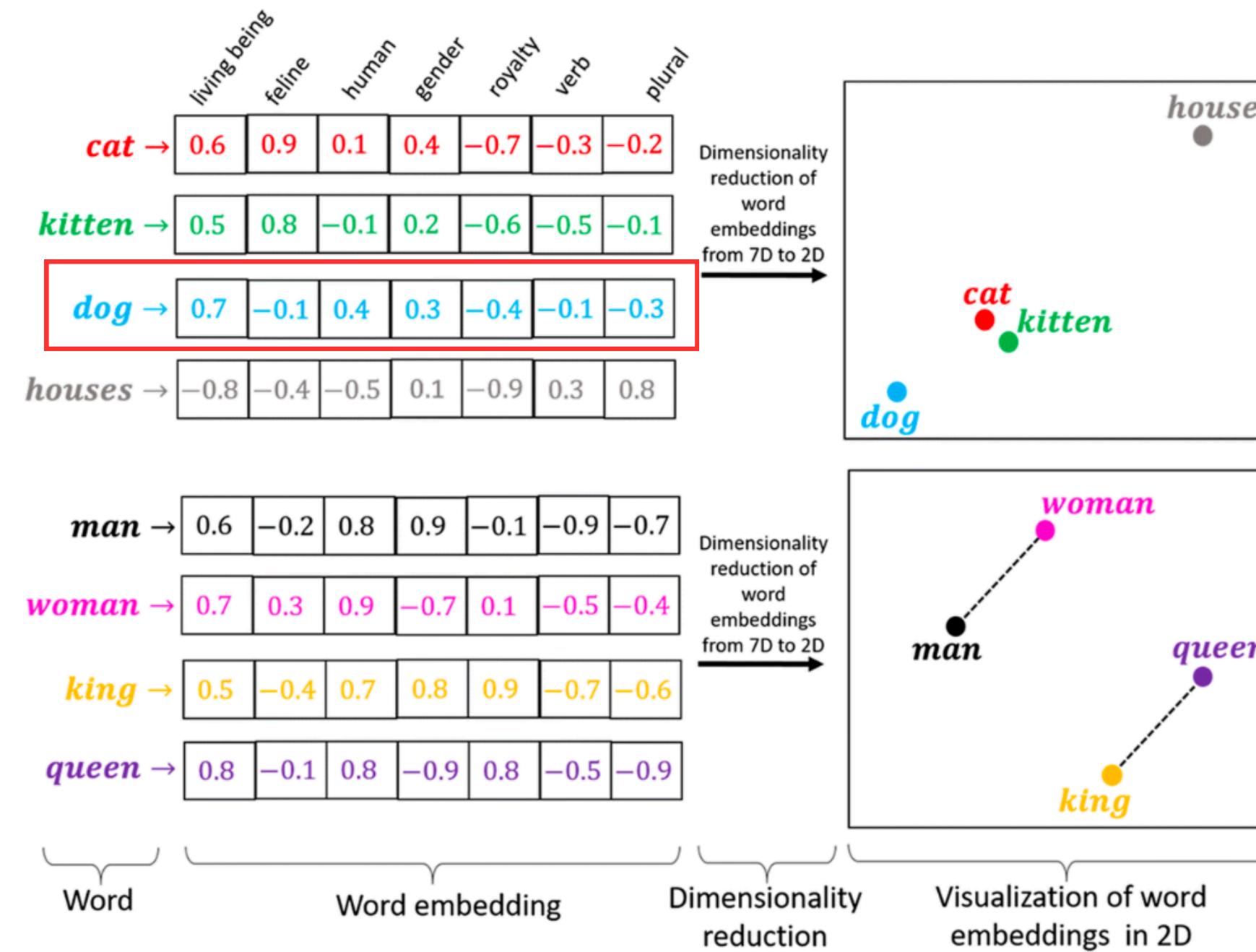


Important information is not lost
AI understands the connections between data

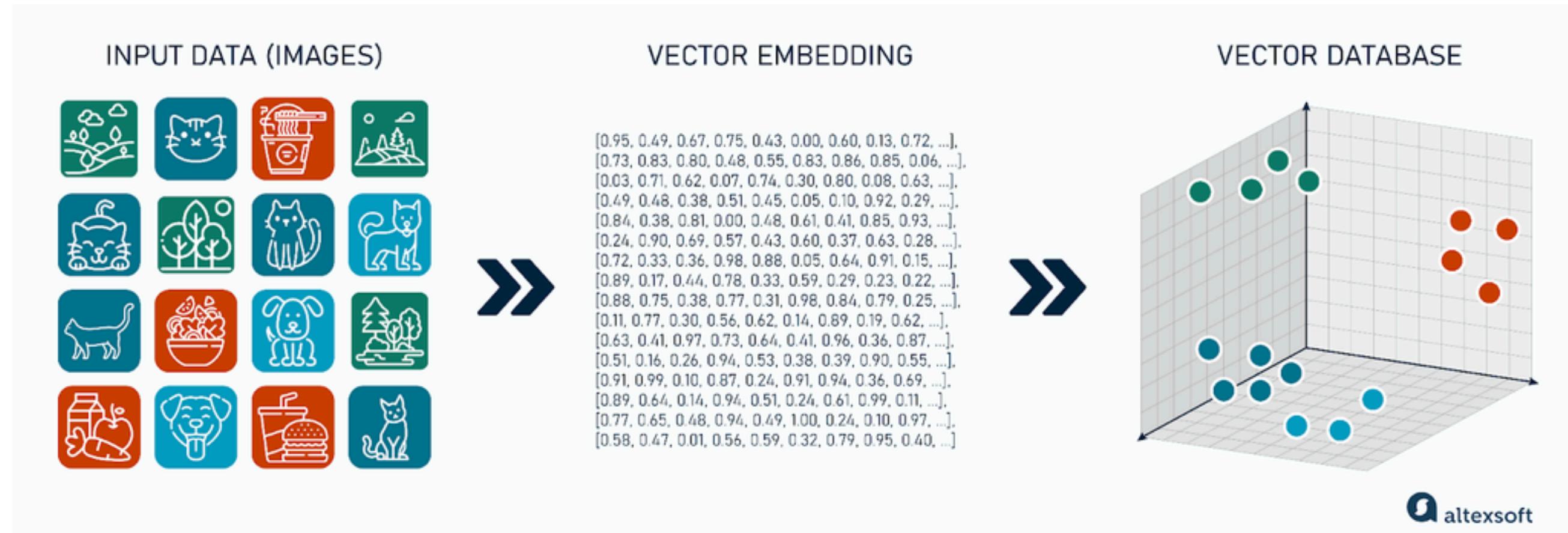
Simple RAG



Vector Space



Vector Database



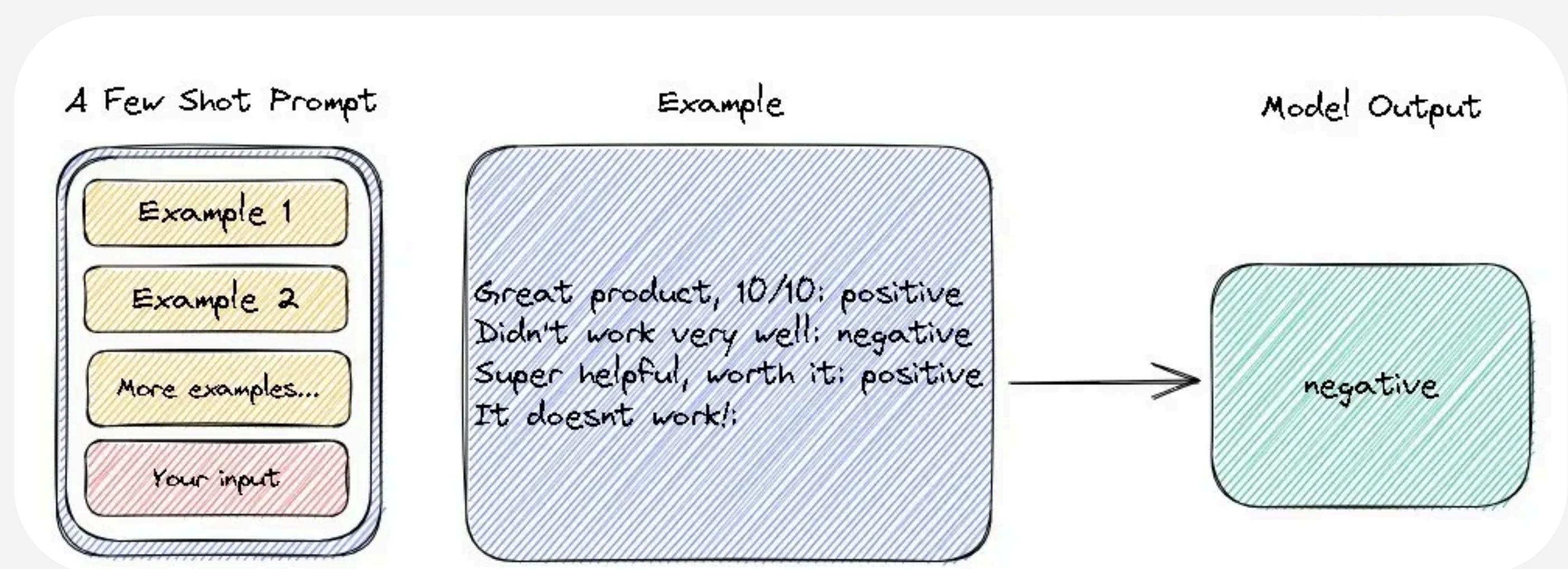
Experiment

Few-shot Learning

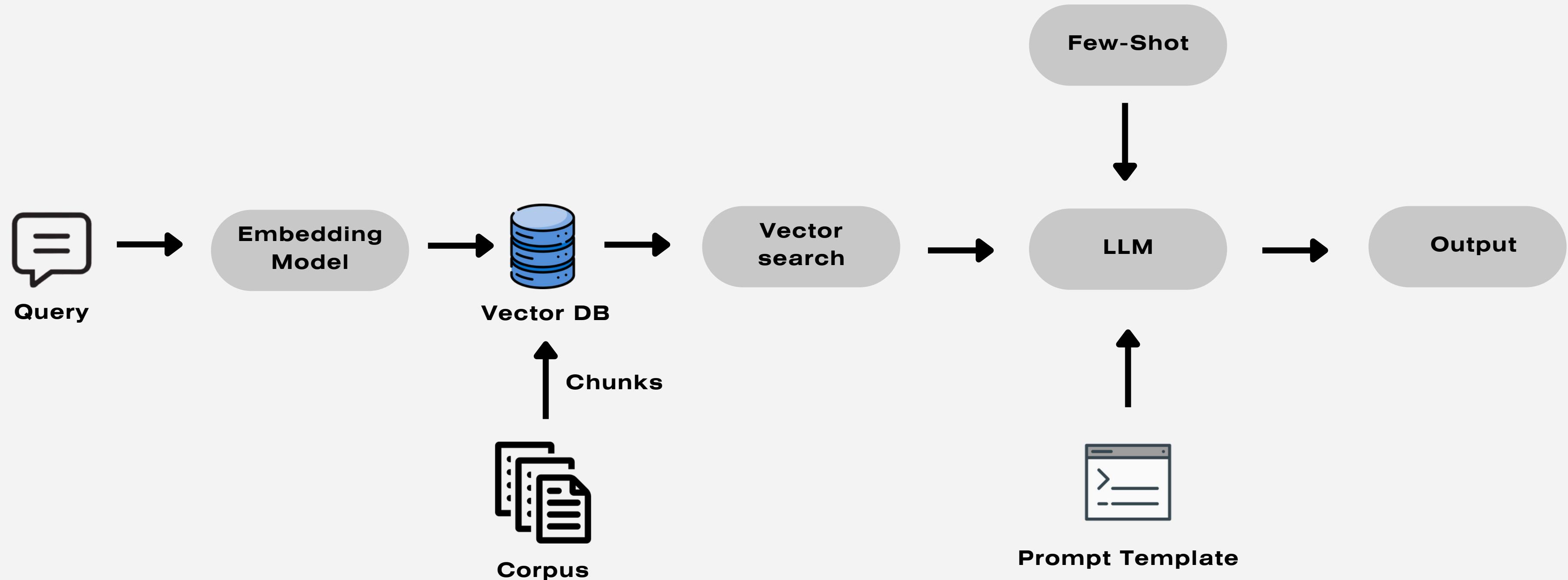
Few-shot Learning + RAG

Fine-tuning

What is Few-shot Learning



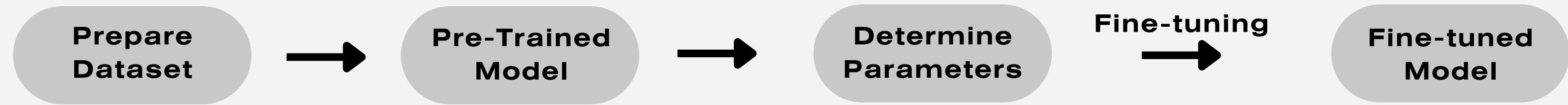
Few-Shot Learning + RAG



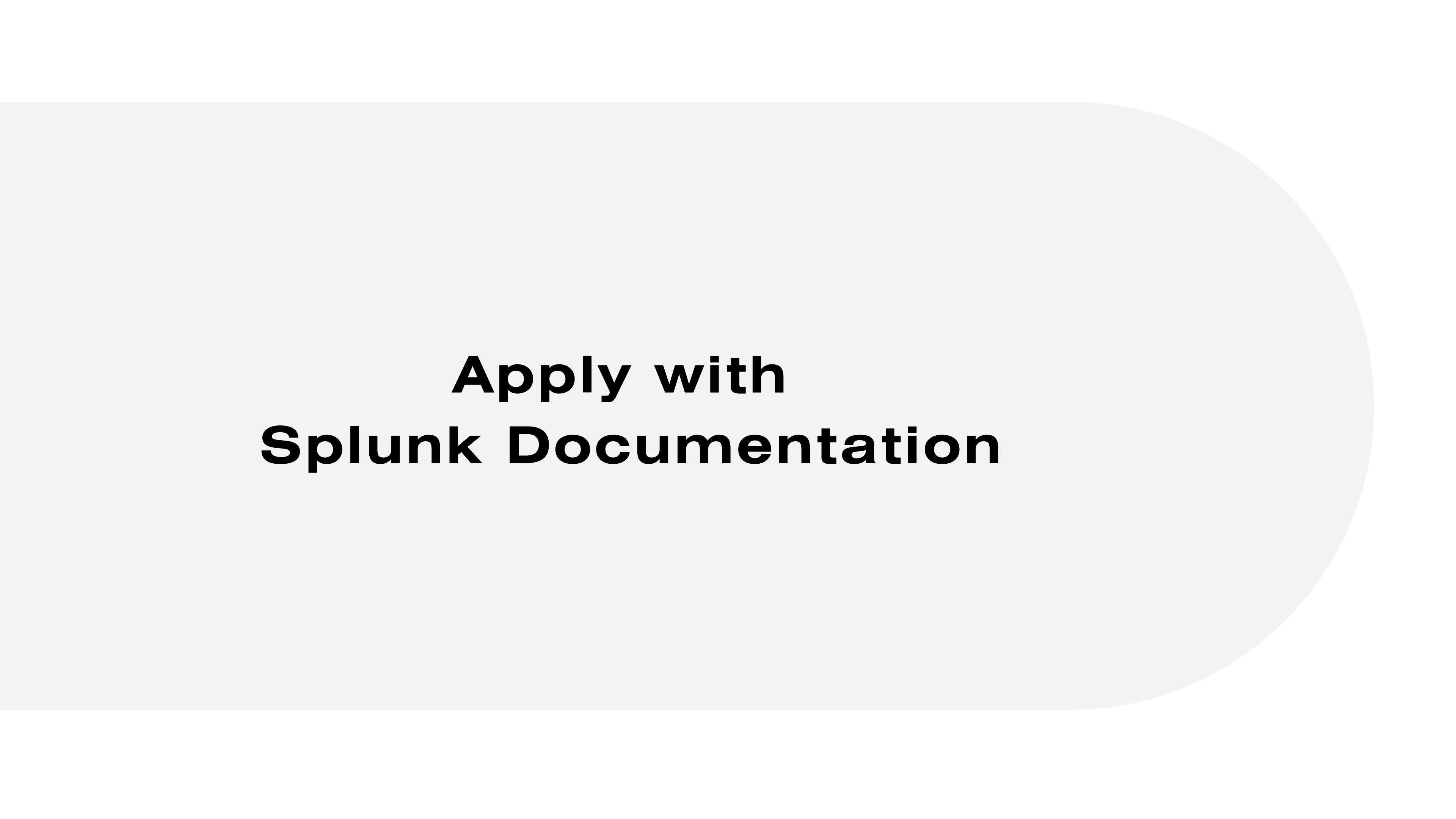
Fine-tune



Fine-tune



Few-Shot + Fine-tune + RAG!!



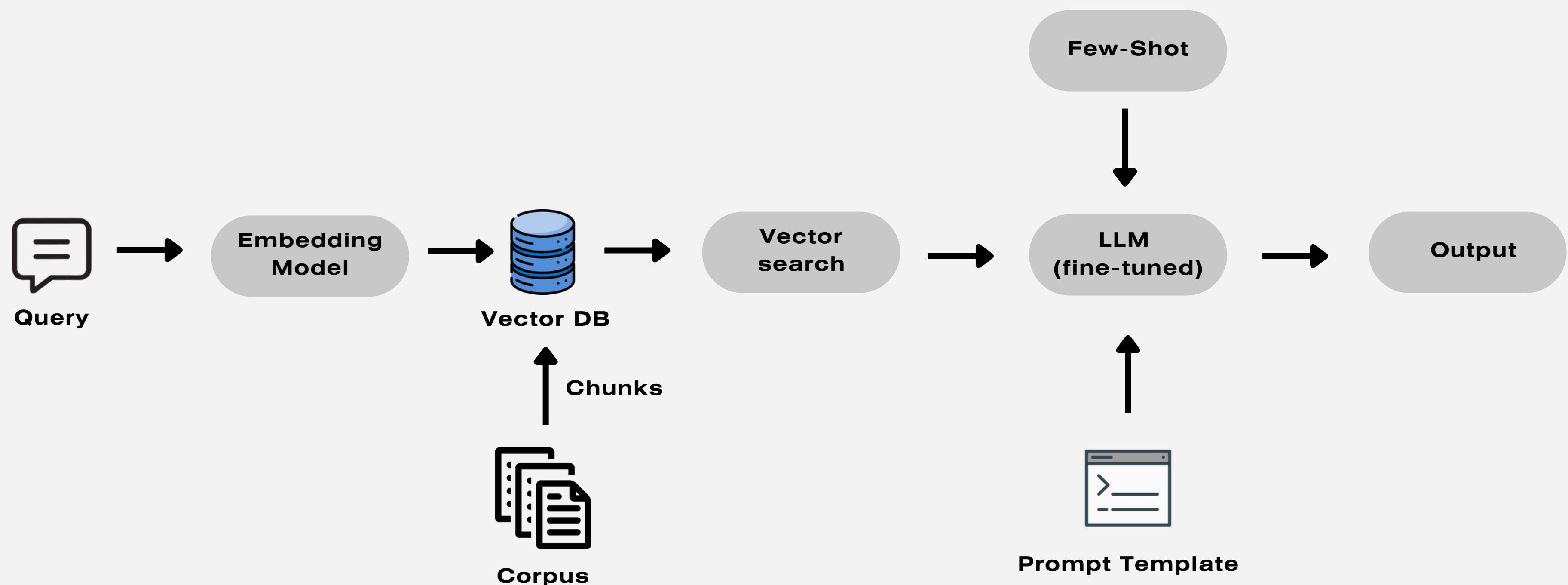
**Apply with
Splunk Documentation**

POC

Fine-tuned

No Fine-tuned

Fine-tuned



PDF Extraction

(PDF to Text)

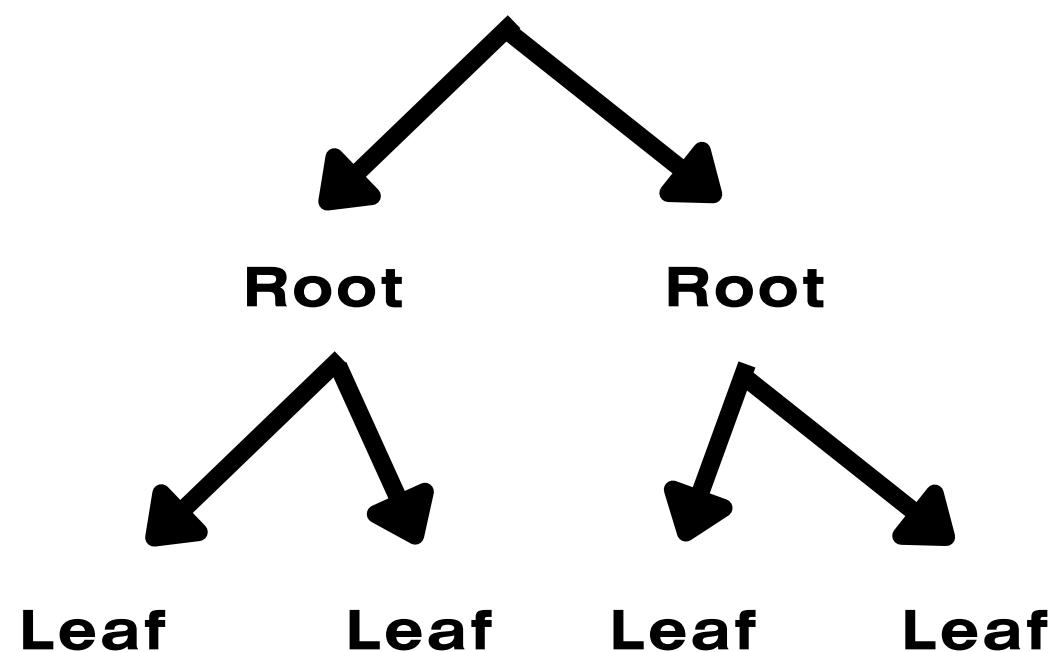


PyMuPDF

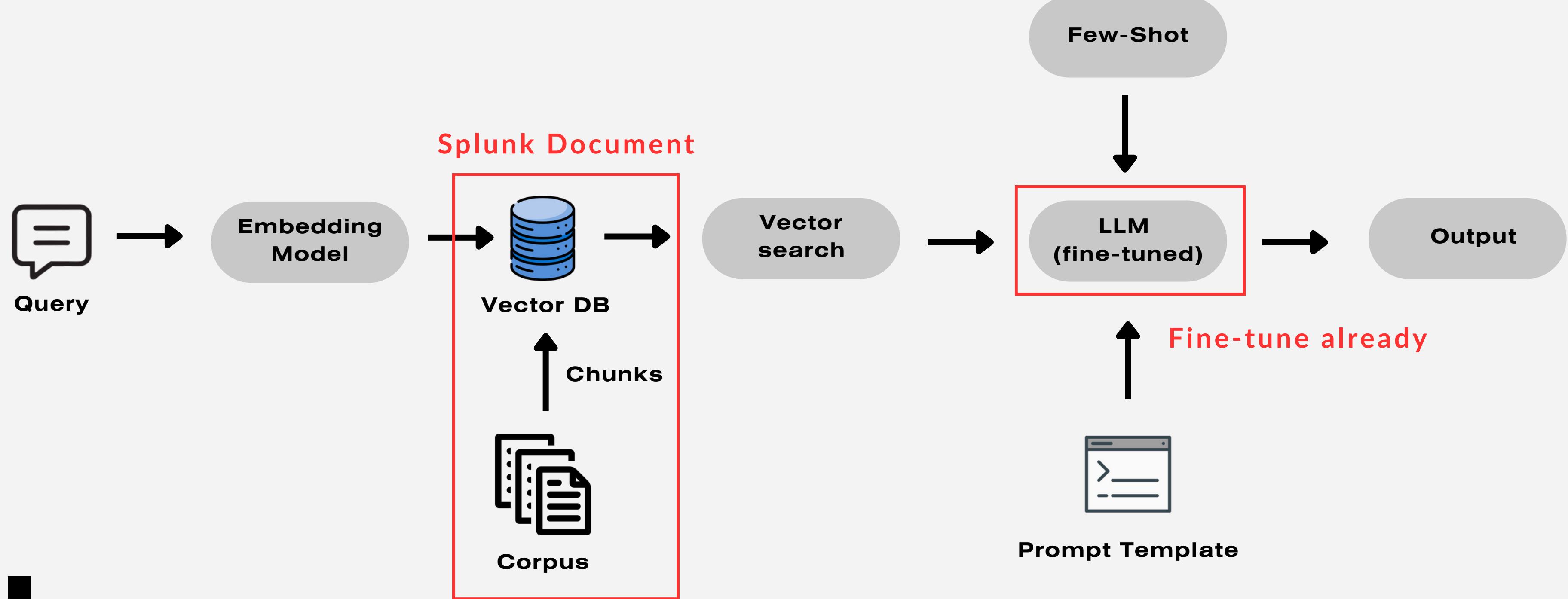
MuPDF with Python



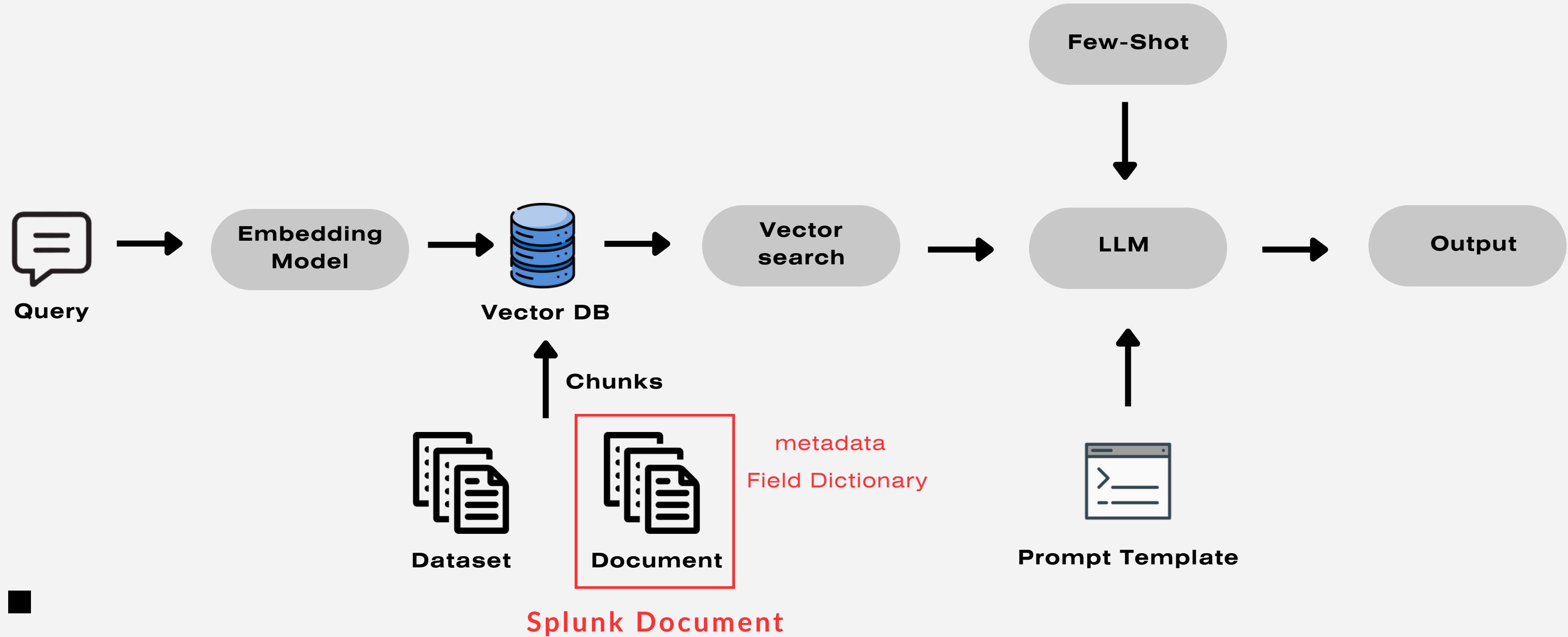
Document



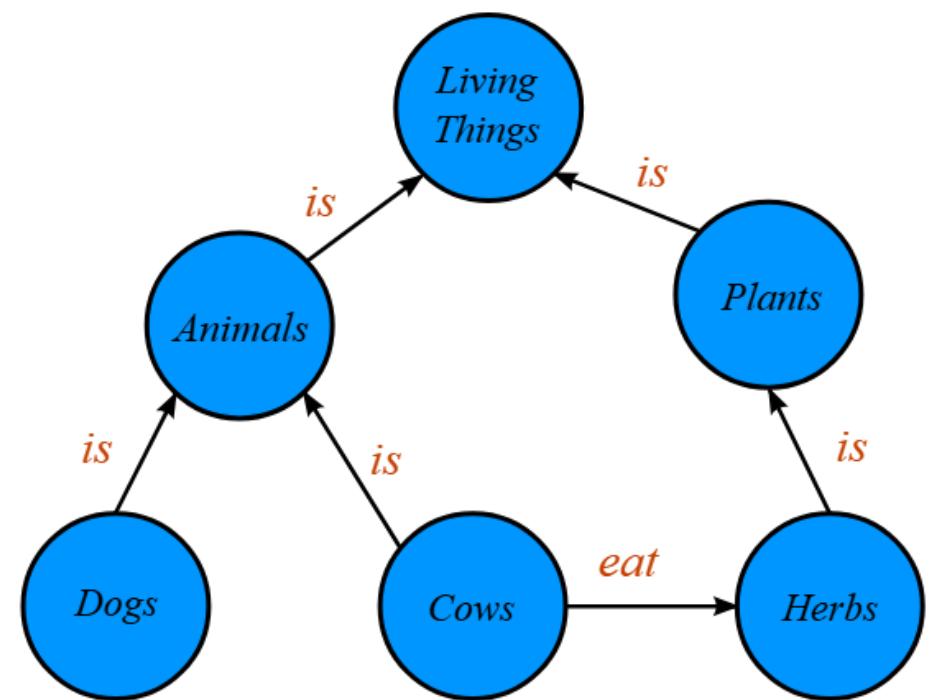
Fine-tuned



No Fine-tuned



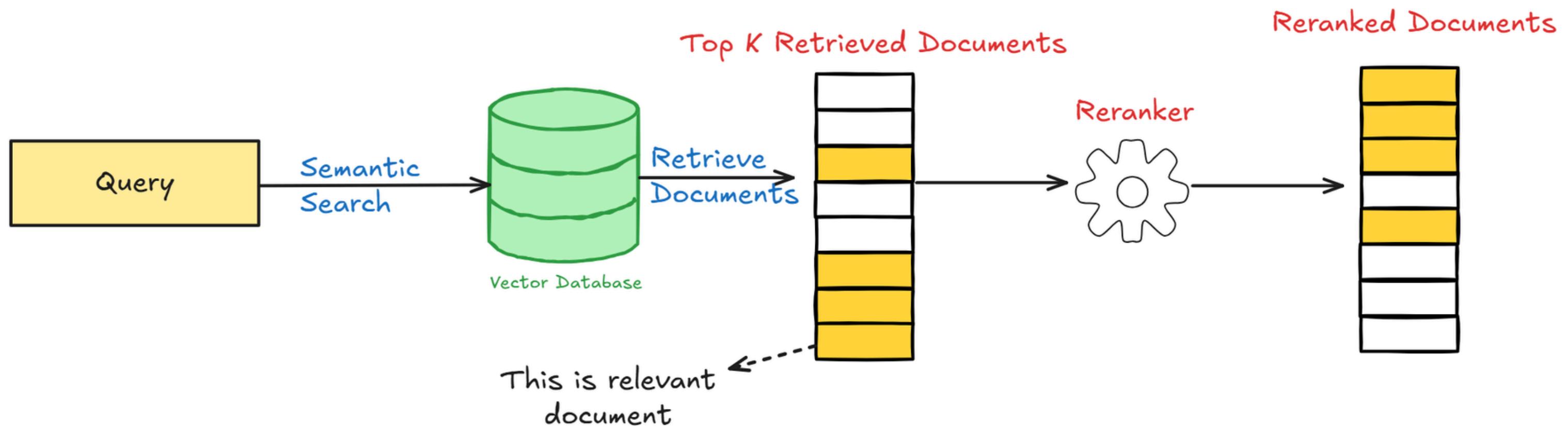
Other methods



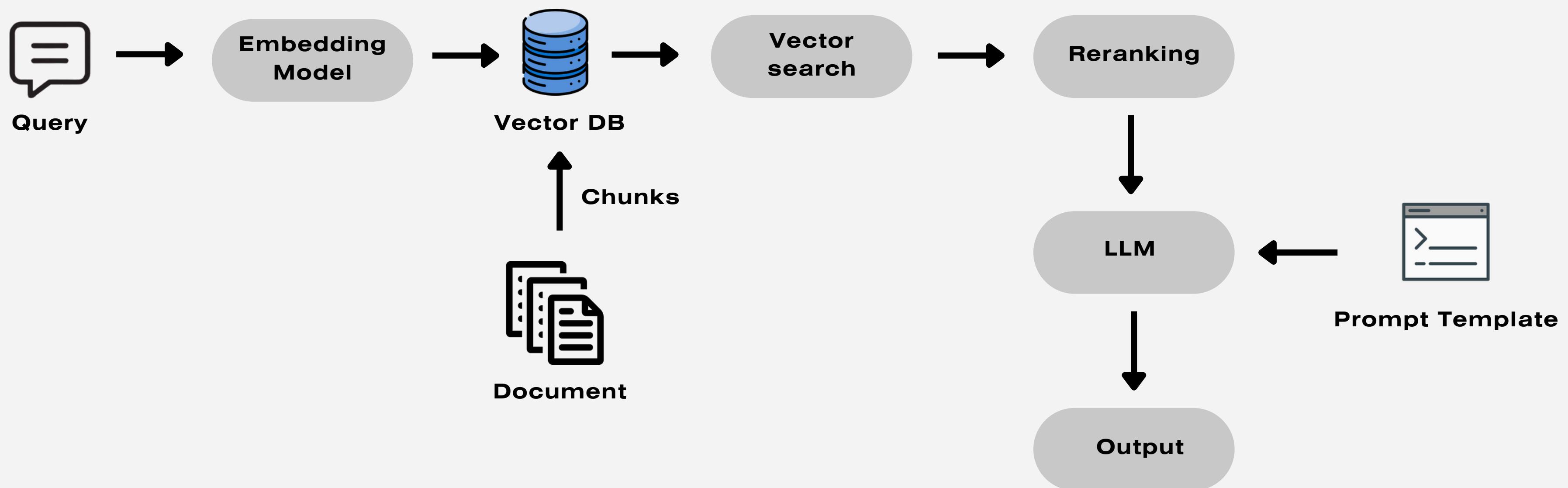
TEXT SUMMARIZATION



Reranking

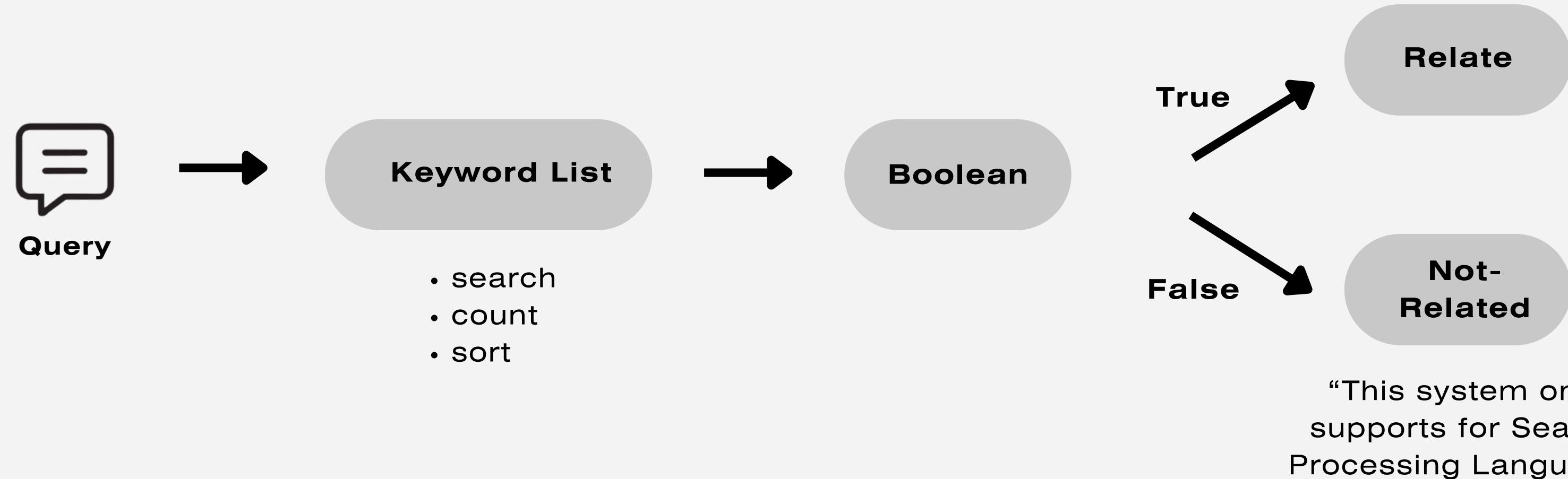


Workflow

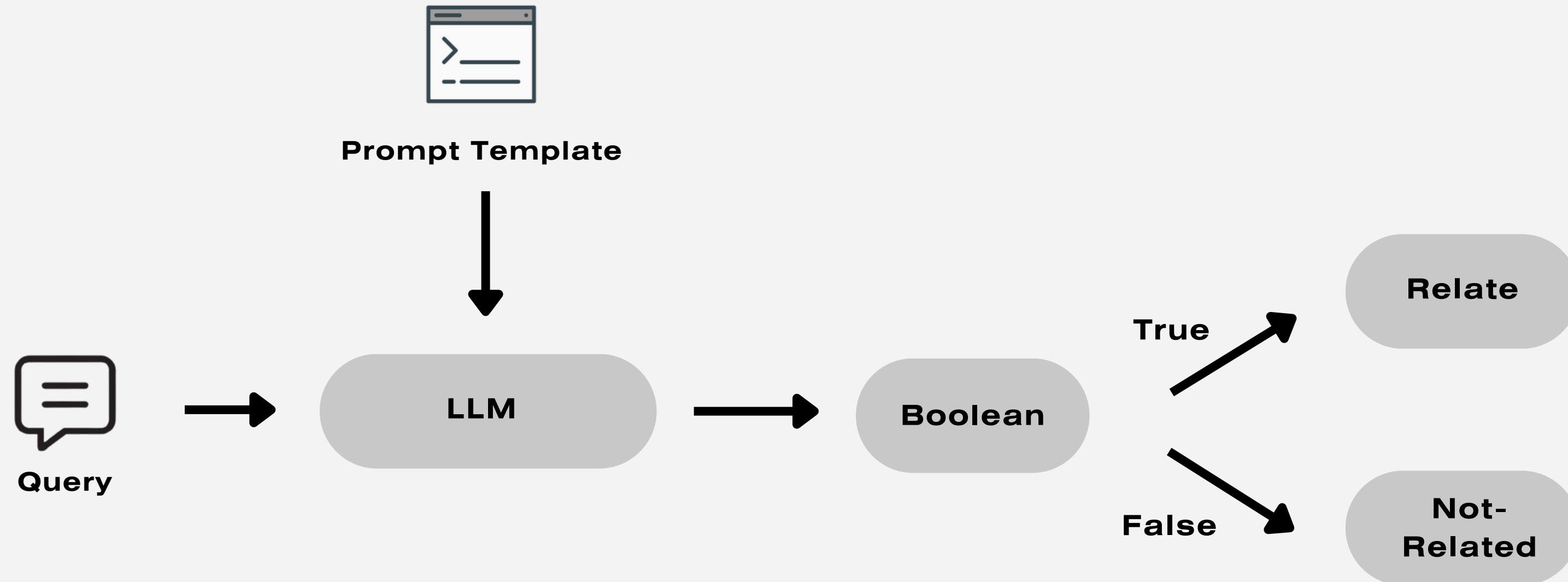


Prompt Restriction

Keyword Filtering

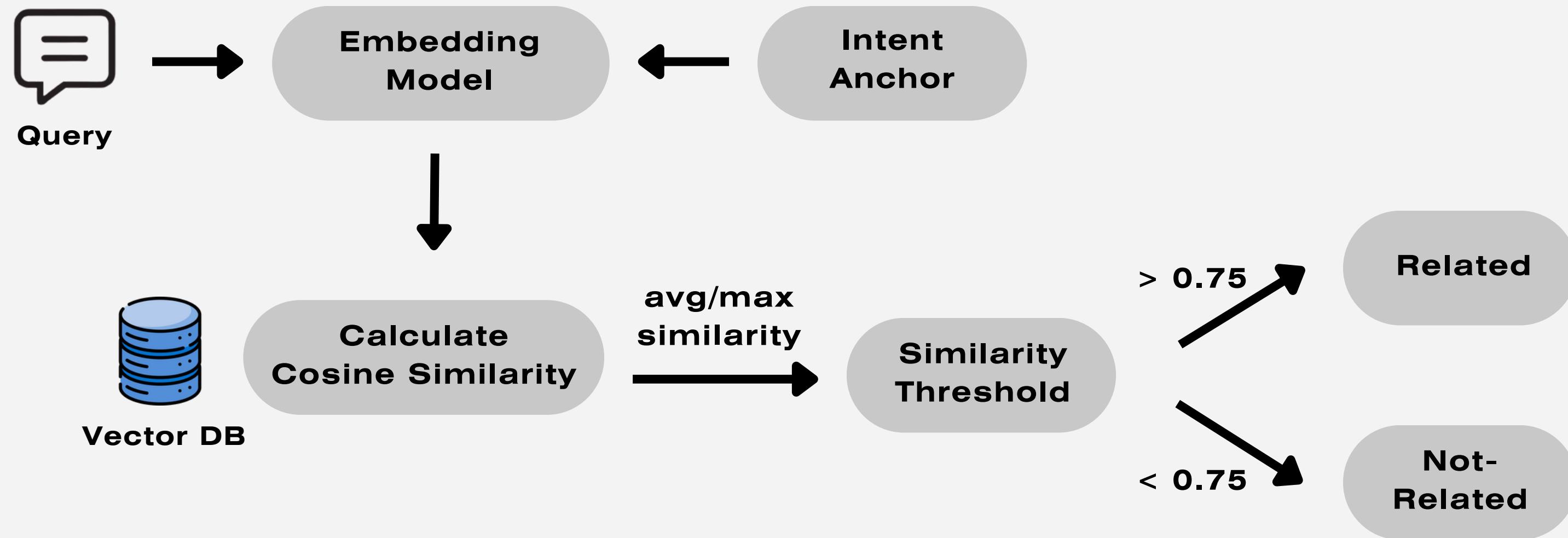


Zero-Shot Classification



“This system only
supports for Search
Processing Language”

Embedding Similarity & Multi-anchor



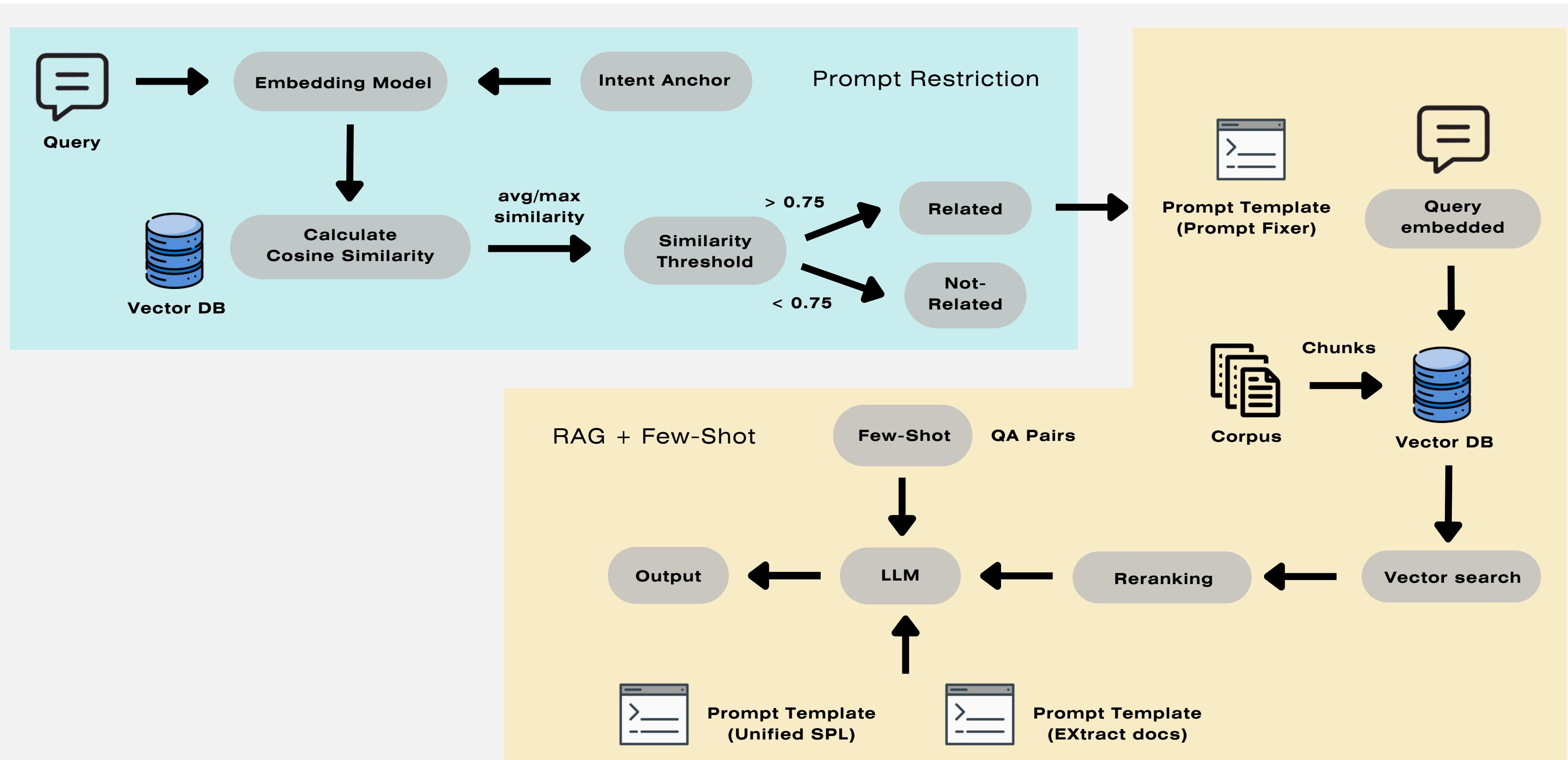
“This system only
supports for Search
Processing Language”

Compare table

	Keyword Filtering	Embedding Similarity	Zero-Shot Classification	Hybrid
Accuracy	Low	Medium - High	High	Highest
Speed	Fast	Medium	Low	Medium - Fast
Suitable for	Text with keywords	Understand the broad meaning of the sentence	Understand the meaning and intent in depth	Reduce the burden of LLM
Limitations	If the input does not match the wordlist, it will be missed	Must be properly calibrated and anchor	Must have a well Prompt-Template, High resource	More complex to design and maintain

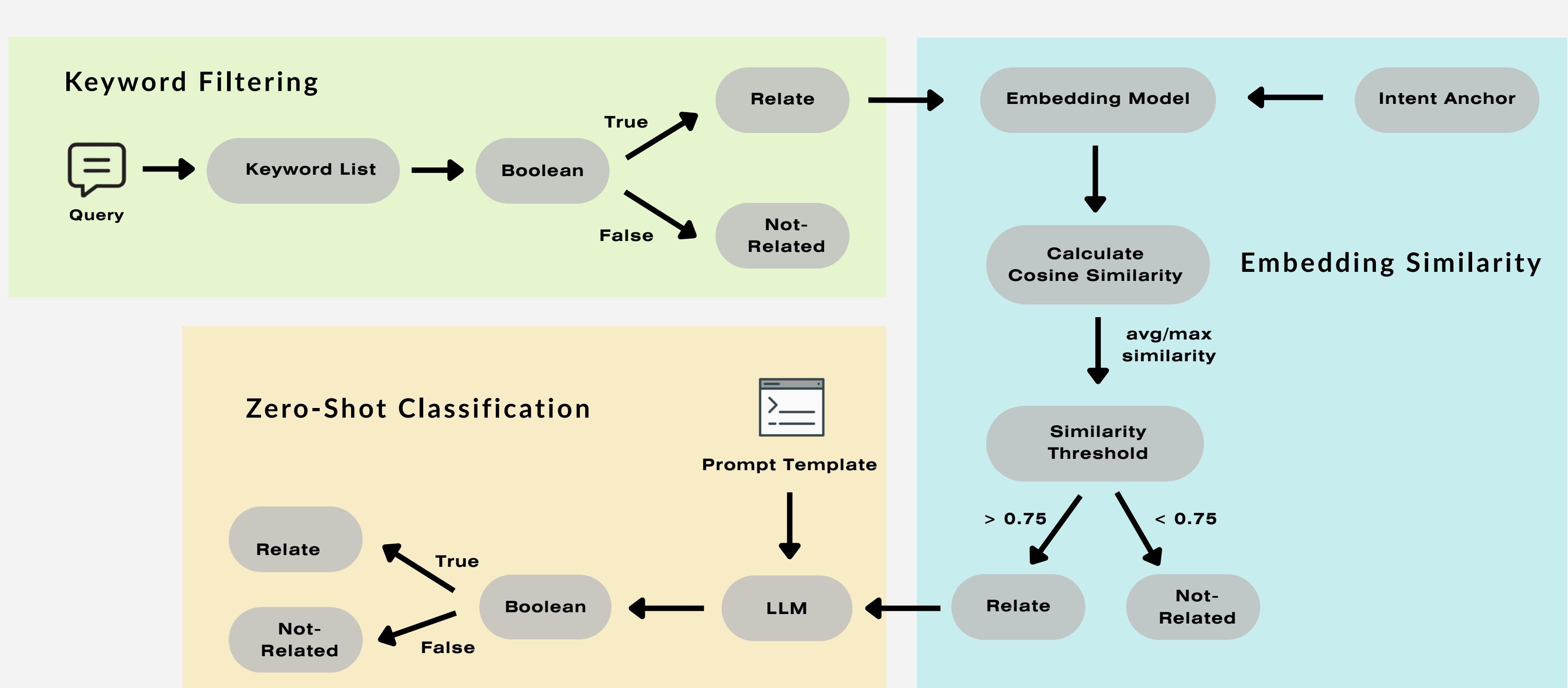
Full Workflow

Embedding Similarity + RAG + Few-Shot



Hybrid

Keyword Filtering → Embedding Similarity → Zero-Shot Classification



THANK YOU