

# VIDEO INDEXING

## STEP 6: SEARCH & RETRIEVAL





Allow users to query video segments by keywords, sentiment, or themes and retrieve relevant results.

Present results with segment details (e.g., timestamps, video path).



Techniques Used



# QUERY PROCESSING



## Tool

Whoosh search library.



## How

Parses queries to search the inverted index for keywords and sentiment (Fichier inverse).



## Why

Enables fast lookup of segments (e.g., "dog" returns segment IDs).



Techniques Used



# MODALITY FUSION



**How**

Boosts result scores for keywords in multiple modalities (e.g., text and visual) (Fusion des modalités).



**Why**

Improves relevance by combining multimodal evidence.





Techniques Used



# CLUSTER-BASED RETRIEVAL



## Tool

SQLite database.



## How

Retrieves segments by cluster ID for thematic browsing (Clustering).



## Why

Allows exploration of related segments (e.g., “dog-related” cluster).

# RESULT PRESENTATION



## Tool

Flask web framework.



## How

Displays results in a web interface with segment details and timestamps.



## Why

Makes results accessible to users.



Techniques Used



# SEGMENT EXTRACTION (OPTIONAL)



**Tool**  
FFmpeg.



**How**  
Extracts video clips based on segment timestamps.



**Why**  
Enables direct viewing of relevant segments.

## Importance of Step 6



**DELIVERS  
USABILITY**

Users can search and retrieve segments easily via a web interface. Example: Query “Howl” shows segments with timestamps and keywords.



**LEVERAGES  
MULTIMODAL  
DATA**

Combines text, visual, and sentiment for accurate results



**ENHANCES  
APPLICATIONS**

Supports use cases like content recommendation or video analysis.



**COMPLETES THE  
PIPELINE**

Ties together feature extraction, indexing, and search for a functional system.