

VIDEO INDEXING

STEPS: STORING AND
INDEXING



🔍 Purpose of Storing and Indexing 🔍

Store metadata persistently and create an index for efficient retrieval.

Index supports queries by keywords, sentiment, or themes.



Techniques Used



METADATA STORAGE



Tool

SQLite database.



How

Stores metadata in a table with segment IDs, video paths, timestamps, keywords, sentiment, and cluster IDs.



Why

Provides persistent, queryable storage for indexing and retrieval.





Techniques Used



INVERTED INDEX CREATION



Tool

Whoosh search library.



How

Maps keywords and sentiment to segment IDs and timestamps (Fichier inverse).



Why

Enables fast text-based search (e.g., “find ‘dog’ segments”).



Techniques Used



SEARCH WITH RANKING



Tool

Whoosh (TF-IDF).



How

Searches index with queries, filters sentiment/time, and ranks results.



Why

Delivers relevant results (e.g., highest-scoring “castle” scenes).



Techniques Used



MODALITY FUSION



How

Boosts keywords present in multiple modalities (e.g., text and visual) in the index (Fusion des modalités).



Why

Improves search accuracy by combining multimodal features.





Importance of Step 5



ENABLES FAST RETRIEVAL



SUPPORTS MULTIMODAL SEARCH



ORGANIZES CONTENT

Inverted index allows instant lookup of segments by keywords or sentiment.

Example: Query “dog” returns segment IDs [1, 3] in milliseconds.

Fusion of modalities ensures accurate results (e.g., “dog” in text and visual is prioritized).

Clustering groups similar segments, aiding browsing (e.g., “show all dog scenes”).

