The database for our project must -

1. Store comments and related details (like timestamps and video IDs).
2. Save the results from the AI/LLM model after processing the comments.
3. Check if a video’s comments have already been analyzed to avoid repeating the work.
4. Provide the stored data to the Chrome extension for immediate display.

Some key attributes include-

Video\_id

Title

Last\_analyzed

Analysis\_Id

Sentiment (values could be either - Positive, Negative, Neutral, Spam) and more.

Potential Options to store data(SQL and NoSQL):

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NoSQL(MongoDB and Firebase Firestore)

These are two good options since

1. The data is structured in a flexible way, like a free-form text i.e. comments and AI analysis results.
2. The Chrome extension needs to update stats in real-time.
3. It should be easy to work with JSON-like data from APIs and AI models.

Firebase’s real-time sync makes it ideal for displaying stats.

MongoDB’s JSON structure works well for storing comments and analysis.

SQL(MySQL and PostgreSQL)

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1. SQL helps organize data by linking videos, comments, and analysis results, making it easy to store and retrieve.
2. It avoids duplicate work by checking if a video’s comments have already been analyzed.
3. SQL allows complex searches and easy extension of schema if new features are added.