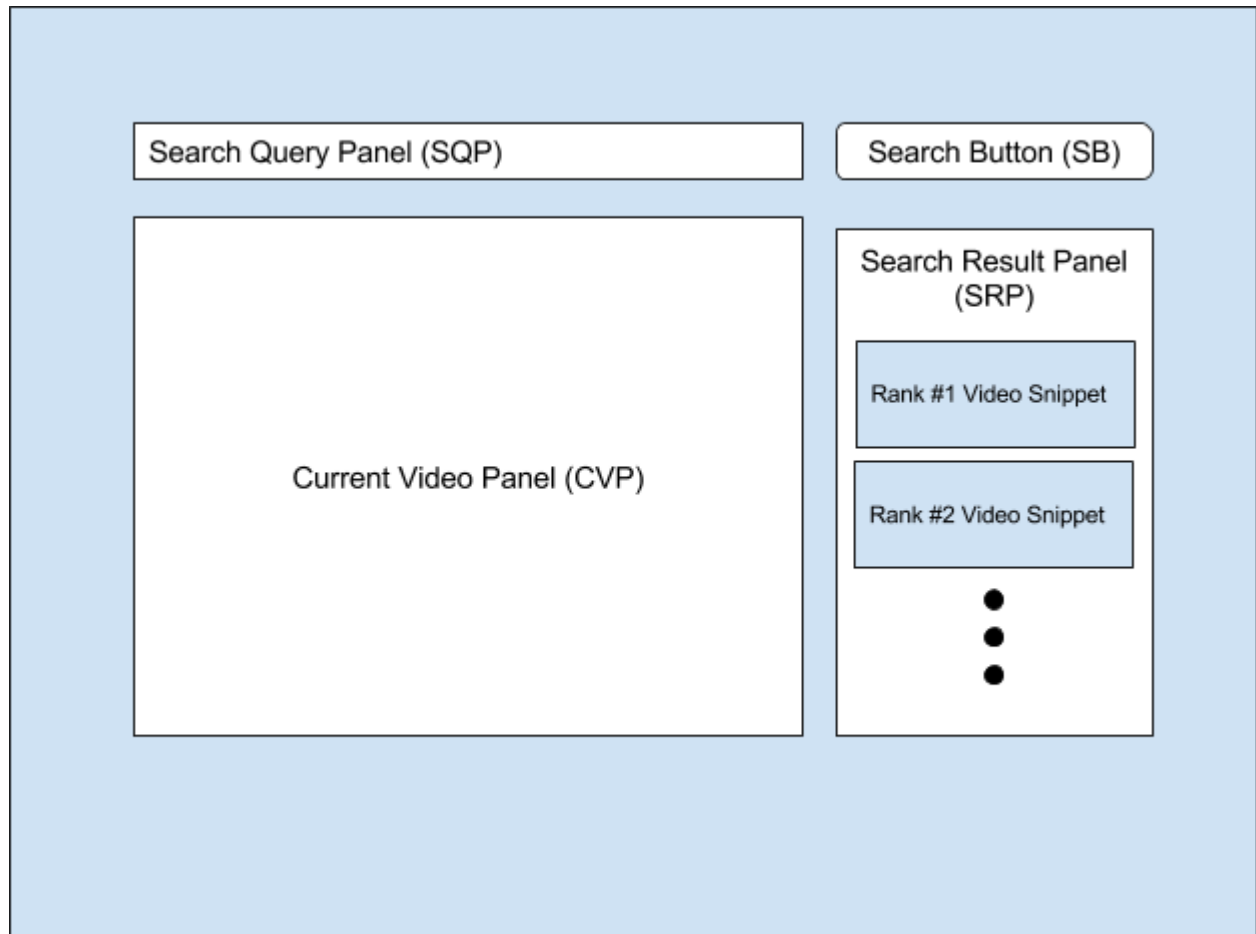# Polysearch-Video-Hub

Problem Statement

Your objective is to build a **video search engine** application with a **GUI**.

The following features are mandatory:

- The **application** must be combinedly managed by all 2 database programs.
  - MongoDB should be used for indexing the video files. Use the video dataset shared with this file ('dataset.tar'). Please feel free to add more video documents, e.g., you can create JSON files of your favorite videos and add them to the database.
  - MySQL will be used to store relational information, such as click-through information.
- The **GUI** should at least have the following components:
  - Search Query Panel (SQP) - for submitting video search queries ○ Search Button (SB) ○ Search Result Panel (SRP) ○ Current Video Panel (CVP)

- When the application is launched, all three panels should remain empty.
- When the user inputs a search query in SQP and clicks on SB, the GUI should display a list of **relevant videos** in SRP. The search query can be a single word query or a multi-word query, e.g., 'Kohli' or 'Virat Kohli'. You may choose the number of videos you would like to show in SRP (at least two are expected). Each result should be displayed in the result list with appropriate snippets, such as – the title of the video, thumbnail image, and short description.
- If a user clicks on a video snippet, the video details (description, like count, etc.) should be shown in CVP. At the same time, SRP should be updated to display the new list of **related videos** i.e. the videos related to the current video in the Neo4j database. You can choose the type(s) of relationship between the videos to improve the search results.
- The **click-through information** should be stored in the MySQL database. In a click-through log, traditionally relevant information about clicks against a search query is stored. In general, every transaction in the relation may capture information such as search query, video ID, rank of the video in the search result against the query, timestamp of the click, user ID <if available>, etc. You may additionally consider any other relevant information that you feel is important for improving the search results. Improvement includes, but not limited to, the following:
  - Inclusion or exclusion of a video in the search result ○ Change in the rank of a video in the search result