

Lecture Video Indexing and Retrieval Using Topic Keywords

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Abstract : In this paper, we propose a framework to help users to search and retrieve the portions in the lecture video of their interest. This is achieved by temporally segmenting and indexing the lecture video using the topic keywords. We use transcribed text from the video and documents relevant to the video topic extracted from the web for this purpose. The keywords for indexing are found by applying the non-negative matrix factorization (NMF) topic modeling techniques on the web documents. Our proposed technique first creates indices on the transcribed documents using the topic keywords, and these are mapped to the video to find the start and end time of the portions of the video for a particular topic. This time information is stored in the index table along with the topic keyword which is used to retrieve the specific portions of the video for the query provided by the users.

Keywords : video indexing and retrieval, lecture videos, content based video search, multimodal indexing

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