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TERSE: Video element extraction to make thumbnails

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Abstract

Thumbnail inspiration is a task that many content creators have to try iteratively to make the video get recommended to the masses. Without a custom thumbnail the video is most likely to get lower ranks in video hosting sites when there are millions of videos to watch. The existing thumbnail recommendation systems, while less have to be given at least a keyword to get some form of suggestion from, this can also be a tedious task for a content creator as this too includes watching the entire video to get an idea of what the video is about.

In this research project, the author focuses on getting thumbnails from the transcript of the video. The way this is done is by extracting words that get to the point of the video and then matching it with the available objects that could be matched with the image processing for object detection that will take place. Based on the evaluation conducted this project achieves good accuracy where the predicted thumbnails get similar thumbnails as the actual thumbnail. While having a good scope, the project has many feature additions that can be added.

Keywords: Keyword Extraction; Computer Vision; Image Processing; Video Summarization, Automatic Speech Recognition; YouTube Downloader; YOLO Algorithm; KeyBERT

CCS Concept:

• Computing methodologies ~ Artificial intelligence ~ Natural language processing ~ Speech recognition • Computing methodologies ~ Artificial intelligence ~ Natural language processing ~ Information extraction • Computing methodologies ~ Artificial intelligence ~ Computer vision ~ Computer vision problems ~ Object detection • Computing methodologies ~ Artificial intelligence ~ Computer vision ~ Computer vision tasks ~ Video summarization