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Video Summarization using Python

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Abstract: *Video summarization, the process of condensing lengthy videos into shorter, more concise representations while preserving essential content, has garnered significant attention due to the exponential growth of video data across various domains. Video summarization technologies aim to create a concise and complete synopsis by selecting the most informative parts of the video content.[10] This paper presents a comprehensive review and implementation of video summarization techniques leveraging Python programming language. In addition to the theoretical exploration, this paper provides practical insights into implementing video summarization algorithms using Python libraries such as OpenCV, TensorFlow, and PyTorch. A step-by-step guide to preprocessing video data, extracting features, and generating summaries is presented, accompanied by code snippets for clarity and reproducibility. Through this review and implementation, this paper aims to provide researchers and practitioners with a comprehensive understanding of video summarization techniques and practical guidance for developing efficient and effective summarization systems using Python*

Keywords: Video summarization