**ABSTRACT:**

Video summarization technologies aim to create a concise and complete synopsis by selecting the most informative parts of the video content. Several approaches have been developed over the last couple of decades and the current state of the art is represented by methods that rely on modern deep neural network architectures. This work focuses on the recent advances in the area and provides a comprehensive survey of the existing deep-learning-based methods for generic video summarization. After presenting the motivation behind the development of technologies for video summarization, we formulate the video summarization task and discuss the main characteristics of a typical deep-learning-based analysis pipeline. Then, we suggest a taxonomy of the existing algorithms and provide a systematic review of the relevant literature that shows the evolution o f the deep-learning-based video summarization technologies and leads to suggestions for future developments. We then report on protocols for the objective evaluation of video summarization algorithms and we compare the performance of several deep learning-based approaches. Based on the outcomes of these comparisons, as well as some documented considerations about the amount of annotated data and the suitability of evaluation protocols, we indicate potential future research directions.