

Keyframe Extraction Using Face Quality Assessment and Convolution Neural Network

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Abstract : Due to the huge amount of data in videos, extracting the relevant frames became a necessity and an essential step prior to performing face recognition. In this context, we propose a method for extracting keyframes from videos based on face quality and deep learning for a face recognition task. This method has two steps. We start by generating face quality scores for each face image based on the use of three face feature extractors, including Gabor, LBP, and HOG. The second step consists in training a Deep Convolutional Neural Network in a supervised manner in order to select the frames that have the best face quality. The obtained results show the effectiveness of the proposed method compared to the methods of the state of the art.

Keywords : keyframe extraction, face quality assessment, face in video recognition, convolution neural network

Conference Title : ICIAP 2020 : International Conference on Image Analysis and Processing

Conference Location : Rome, Italy

Conference Dates : December 10-11, 2020