A NOVEL APPROACH TO LIP SEGMENTATION FOR VISUAL SPEECH RECOGNITION

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ABSTRACT

Lip area detection and extraction is essential for many applications like facial expression, lip reading and visual speech recognition. In general, the lip segmentation in color image is a tedious task because the color difference between lip and skin region is not so apparent sometimes, which is a major issue in lip reading system. The objective of this work is to provide the solution to the problem of lip segmentation from the video using Image Processing techniques. In this work, Otsu based thresholding and mid-point based lip segmentation is carried out. The performance of the proposed technique is evaluated by testing it on 20 different videos which are taken under standard condition. From the results it is observed that, the proposed method has achieved 98% of success rate for lip segmentation.

KEYWORDS: Face Detection, Image Segmentation, Otsu Method, Thresholding, Inverted Image