LEARNING LOCAL DESCRIPTORS FOR FACE DETECTION (WedAmPO1)

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Abstract :

In this paper, we propose a realtime face detection approach based on the local structure and texture of the objects in gray–level images. Our strategy is to map the local spatial structures and image textures of face class into binary patterns, and use these binary patterns as local descriptors. Boosting based face detector is constructed with the local descriptors, and cascade scheme is employed to further improve the efficiency of the face detector. Compared to the existing face detection approaches, the proposed method has two advantages: (1) it is robust to the illumination changes to some extend, for the features use the information of local relationship instead of the original gray values; (2) its computational cost is very low, both in the training procedure and in the evaluation step, so it can meet the demand of real time application. The detection performance is encouraging according to the experimental results.

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