

Gender recognition on real world faces based on shape representation and neural network

ABSTRACT

Gender as a soft biometric attribute has been extensively investigated in the domain of computer vision because of its numerous potential application areas. However, studies have shown that gender recognition performance can be hindered by improper alignment of facial images. As a result, previous experiments have adopted face alignment as an important stage in the recognition process, before performing feature extraction. In this paper, the problem of recognizing human gender from unaligned real world faces using single image per individual is investigated. The use of feature descriptor to form shape representation of face images with any arbitrary orientation from the cropped version of Labeled Faces in the Wild (LFW) dataset is proposed. By combining the feature extraction technique with artificial neural network for classification, a recognition rate of 89.3% is attained.

Keyword: Gender recognition; Shape representation; Neural network