Abstract

Automatic identification of male and female from facial image allows many useful applications in biometrics, surveillance, and human-computer interaction. This paper presents a robust face feature descriptor for gender classification from facial image. The proposed method is based on the compound local binary pattern (CLBP), an extension of the LBP texture operator. The CLBP operator exploits 2P bits to encode the information of a local neighborhood of P neighbors, where P bits are used to express the sign information and the other P bits are used to express the magnitude information of the differences between the center and the neighbor gray values. The performance of the proposed method has been evaluated using a large dataset comprising 1800 facial images collected from the FERET database. Extensive experiments with support vector machine classifier show the superiority of the CLBP feature descriptor against some well-known texture operators.
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Index Terms

Computer Science
Image Processing

Keywords

Compound LBP (CLBP)  Local texture  Gender classification  Support vector machine (SVM).