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From image vector to matrix: a straightforward image projection techniqueâ€”IMPCA vs. PCA

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Abstract

The conventional principal component analysis (PCA) and Fisher linear discriminant analysis (FLD) are both based on vectors. Rather, in this paper, a novel PCA technique directly based on original image matrices is developed for image feature extraction. Experimental results on ORL face database show that the proposed IMPCA are more powerful and efficient than conventional PCA and FLD.

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Keywords

Image principal component analysis (IMPCA); Principal component analysis (PCA); Linear discriminant analysis (FLD); Image feature extraction

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