عنوان مقاله:

Face Recognition using Orthogonal Weighted Locally Linear Discriminant Embedding

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خلاصه مقاله:

In this paper an efficient feature extraction method called Orthogonal Weighted Locally Linear Discriminant Embedding (OWLLDE) is proposed for face recognition. TheOWLLDE algorithm is motivated by locally linear embedding (LLE) algorithm, modified maximizing margin criterion (MMMC) and cam weighted distance. In OWLLDE, the LLEalgorithm is modified based on the weighted distance measurement to select more suitable neighbors for each data. Inthis way, the performance of OWLLDE in feature extraction will be improved for deformed distributed data. Moreover,OWLLDE preserves the local geometry structure of the databased on modified LLE and also makes full use of class information to improve the discriminant ability by a vectortranslation and rescaling model. Finally to improve the recognition accuracy, we use Gram–Schmidt orthogonalization to obtain the orthogonal basis vectors. The results of experiments on ORL and YALE databases show the superior performance of OWLLDE.

کلمات کلیدی:

cam weighted distanc; feature extraction; locally linear discriminant embedding; manifold learning

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