目录

KICA与Relief算法相结合的人脸识别研究

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摘要：

　　为使提取到的独立成分有利于人脸的分类识别，在用核独立成分分析（KICA）进行特征提取后，选用改进后的k最近邻的Relief方法进行特征选择。改进后的Relief算法可以减少噪声污染，并能处理小样本问题，使选择后的人脸特征较好地用于分类。通过在 AR人脸库上的实验，并与类内类间距离的特征选择方法进行比较，证明了该方法的有效性。

关键词： 人脸识别　独立成分分析法（ICA）　核主成分分析（KPCA）　核独立成分分析（KICA）　特征选择

Research on KICA and Relief algorithms combined face recognition

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Abstract:

　　We employ improved k-nearest neighbor Relief algorithm to select features after extracting features with kernel independent component analysis (KICA) to make the extracted independent elements to be favorable to be recognized. This improved Relief algorithm can reduce noise pollution and address the issue of small samples, so the selected features can be employed to better classify faces. We prove the effectiveness of this method with the experiment to AR face database and comparisons with feature selection algorithms of intra- and inter-cluster distance.

Keywords: face recognition;independent component analysis　kernel principal component analysis kernel independent component analysis　feature extraction

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