

论文与报告

基于图像力场转换的耳廓图像识别

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摘要

首先讨论了耳廓识别技术的可行性、可靠性及其特点, 针对耳廓识别特点提出一种基于图像力场转换的耳廓识别方法(Force-field fisher classifier). 该方法通过力场图像转换提取耳廓图像特征后, 采用Fisher线性判别分类识别, 减小了光照变化对耳廓识别的影响. 在我们选取的耳廓图像库上识别率达到了98.5%.

关键词 [耳廓识别](#) [力场](#) [力场转换](#) [Fisher线性判别](#)

分类号

Ear Recognition Based on Image Force Field Transformation

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Abstract

Research of ear recognition technology, as well as its application, is a new subject in the field of biometrics. Earlier research has shown that human ear is one of the representative human biometrics with uniqueness and stability. According to these characteristics, this paper introduces a force-field Fisher classifier (FFC) for ear recognition. The FFC method, which is robust to changes in illumination, applies the Fisher linear discriminant analysis to an augmented force-field feature vector derived from the force-field transformation of ear images. The feasibility of the new FFC method has been successfully tested for ear recognition. The novel FFC method even achieves 98.5% recognition accuracy for ear images from selected database.

Key words [Ear recognition](#) [force field](#) [force field transform](#) [Fisher linear discriminant analysis](#)

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