人臉辨識課程線上點名系統

The application of face recognition in online course attendance system

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摘要

隨著科學技術不斷地進步與發展，快速與準確儼然已成為生物特徵辨識的基本特點。生物特徵辨識中物件比對的方法有許多種，利用形狀偵測及邊緣偵測都是在物件比對中常見的方法。而人臉辨識是一個典型的圖像分析、圖像分解及分類的綜合運用。由於人臉是最為複雜、分析種類最為龐大的人類生物特徵，目前對這一問題的初步研究與解決，是在物件比對上找到穩定的參考點做為比對。本研究通過 B2DPCA 方法進行了人臉辨識實驗，實驗結果顯示本研究提出的方法有效加快人臉辨識率，並實踐在人臉辨識課程線上點名系統，有效提升教師對於上課學生出席率的掌控。

關鍵字：生物特徵、人臉辨識、線上點名系統

Abstract

With continuous progress and development of science and technology, rapidity and accuracy has become the essential features of biometric identification. Biometric identification of objects than there are many different kinds of methods to do objects comparison in biometric identification, such as shape detection and edge detection, etc. However, face recognition is a typical integrated application of image analysis, image decomposition and classification. Since the face is the most complex biological feature which requires the widest variety of analysis types, the current solution for this is to find stable reference point for objects comparison.
This paper did face recognition experiment through B2DPCA, and the result show that the proposed methods in our study effectively accelerate the rate of face recognition, and could help the teachers to do better control of the attendance rate when applied in online course attendance system.

Keywords：Biological feature, Face recognition, Online course attendance system