Abstract

This paper introduces a face recognition system that contributes the feature and decision fusion in challenging environment. In this work, we investigate the proposed facial recognition system in typical office environments conditions. Though the traditional HMM based facial recognition system is very sensitive to the facial parameters variation, the proposed feature and decision fusion based face recognition is found to be stance and performs well for improving the robustness and naturalness of human-computer-interaction. At first appearance and shape based features are extracted using Active Appearance Model and Active Shape Model. The other task combines appearance and shape based features that have been used by the multiple Discrete Hidden Markov Model classifiers with likelihood ratio based score fusion and majority voting method. The performances of all these uni-modal and multi-modal system performance have been evaluated and compared with each other according to the VALID
database.

Reference

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Feature and Decision Fusion based Facial Recognition in Challenging Environment


Index Terms

Computer Science	Artificial Intelligence

Key words

Face Recognition

Feature and Decision Fusion

Facial Feature Extraction

Human Computer Interaction

Discrete Hidden Markov Model