Abstract

In this paper, Fisherface is extended for face recognition from one example image per person. Fisherface is one of the most successful face recognition methods. However, Fisherface requires several training images for each face, so it cannot be applied to face recognition applications where only one example image per person is available for training. To tackle this problem, Fisherface method is extended by utilizing 3D morphable model to derive multiple images of a face from one single image. Experimental results on ORL face database and real time face database show that face recognition method proposed in this paper makes impressive performance improvement compared with conventional Eigenface methods.

Reference

Face Recognition using Extended Fisherface with 3D Morphable Model


[13] 3D Face Database, Multimedia Technology and Graphics Laboratory, college of computer science and technology, Beijing University of Technology.

Index Terms

Computer Science

Face Recognition

Key words

Face recognition

morphable model

Fisherface

Eigenface