

ABSTRACT

Recently, the research of Human Face Detection and gender classification focuses on the faces under different background. One aspect of this system is to cutting down false detection and speedup the processing delay. In the proposed approach, we try to apply the Benchmark test to gender discrimination using dominant facial region extraction and fractal model. In order to improve the performance of the gender recognition system, we propose an algorithm to extract the dominant facial region from the face images that includes the most discriminated part of the face, and for each dominant facial region and color moment, it was presented by fractal model and images are stored in database.

The fractal model of the dominant facial region is utilized as fractal facial features for gender recognition. Further improve the performance of the gender recognition system; we also propose the techniques of statistical based feature matching. Finally, some experimental results are presented and demonstrate the excellent performance of our gender recognition approach. Experiments show its feasibility for such applications are security systems and human-computer interactions, restricted areas (e.g. hostel, train coach) etc.

The thesis illustrates the development of "Real-Time Human Gender Recognition System". The principal system consists of three major subsystems. There are Image Acquisition System, human face characteristic extraction and finally feature vector matching. For experiment, we adopted colored face image with different complex background and simulate on the computer. We found the characteristic points and characteristic vectors from the face image, which is searched and matched. Then, finally, the system classifies the gender (Male & Female) and count separately no of males and females are present in the database and reduce the time of counting process.

Keywords: pre-processing, feature extraction, Gender recognition, Benchmark Test.