CHAPTER 7

CONCLUSION AND FUTURE WORK

7.1 CONCLUSION

In this research work, a prototype for Face Identification System using the Soft Computing Techniques Genetic and Ant colony optimization algorithm is developed for feature extraction and selection, image preprocessing techniques have been discussed. Here the static face detection system has been developed. The effectiveness of the face identification algorithm has been tested both in simple and complex backgrounds for different types of face images of 320×240 resolution. This algorithm is capable of detecting the faces in the images with different backgrounds and lighting conditions. The vital target is to instruct operations to robots and make them understand the human’s intentions and interests over facial expressions so that they would be capable of grasping with more intelligence while working cooperatively with human beings.

The competency can be superior than before, by using better face scanner/ high end cameras best technique of scaling and well-organized technique for edge detection and feature extraction of the face image. Therefore the efficiency of the Face Identification System is exemplary by clustering the Genetic, and Ant Colony Optimization Algorithm. In this research, accurate face identification has been developed using genetic and ant colony optimization algorithm with cost effective, scalable architecture and also with less system management overhead to search for the face of a particular individual in the test image.
7.2 FUTURE WORK AND LIMITATIONS

The Research work may be extended to build a system, which can deal with larger rotations it seems necessary to train a set of classifiers on a database of rotated faces, with each classifier being tuned to a specific range of rotations. A system for face detection can be developed, which can give more accurate results in term of right hit rate, repeat rate, false hit rate, average accuracy and average run time. The performance statistics shows an improvement in the detection rate, but an accompanying increase in the number of false positives. The goal of any future work is to improve the detection rate, minimize the number of false positives, and improve the speed of the detection process. The subsequent objective of the research is to extend the algorithm for multi-face detection and overlapping faces in images and to detect facial poses applying this for mobile authentication an application in mobile phone, to use infra red based technology to achieve excellent accuracy, utilizing face and iris for ultimate authentication and three dimension face recognition. Sincerely believe that present research work will open a new avenue for the research in this field and yield fruitful results. This thesis is an attempt to find the ways and means for the enhancement of Face Identification in a multifaceted condition using genetic and Ant colony optimization algorithms.