Abstract

The face is the identity of a person. The methods to exploit this physical feature have seen a great change since the advent of image processing techniques. The accurate recognition of a person is the sole aim of a face recognition system and this identification maybe used for further processing. Traditional face recognition systems employ methods to identify a face from the given input but the results are not usually accurate and precise as desired. The system described in this paper aims to deviate from such traditional systems and introduce a new approach to identify a person using a face recognition system i.e. the generation of a 3D Facial Model. This paper describes the working of the face recognition system that will be deployed as an Automated Attendance System in a classroom environment. The techniques and algorithms used along with the constraints and practical difficulties will be highlighted in this paper. The use
of Fuzzy Logic and the concepts of Content Based Image Retrieval (CBIR) will be the main aspect of the proposed automated system.

References

- Xue Yuan, Jianming Lu, Takashi Yahagi, “A method of 3D face recognition based on principal component analysis algorithm.”
- Shalini Gupta1, Mia. K. Markey2, Alan C. Bovik, “Advances and Challenges in 3D and 2D+3D Human Face Recognition”, Department of Electrical and Computer Engineering, The University of Texas at Austin, TX 78712, USA.
- X. Fu, Y. Li, R. Harrison, S. Belkasim, “Content-based Image Retrieval Using Gabor-Zernike Features”, Department of Computer Science and 2Department of Biology, Georgia State University, Atlanta, USA.
- Shafin Rahman, Sheikh Motahar Naim, Abdullah Al Farooq and Md. Monirul Islam, “Curvelet Texture Based Face Recognition Using Principal Component Analysis”, Department of Computer Science and Engineering, Bangladesh University of Engineering and Technology (BUET), Bangladesh.
- Remco C. Veltkamp, Mirela Tanase, “Content-based image retrieval systems:a survey”, Department of Computing Science, Utrecht university
- Weilong Yang, Dong Yi, Zhen Lei, Jitao Sang, Stan Z. Li, “2D-3D Face Matching using CCA”, Center for Biometrics Security Research & National Laboratory of Pattern Recognition
Keywords
3D Facial Model  Automated Attendance System  Fuzzy Logic  Content Based Image Retrieval