Abstract

Huge amount of video data is being generated every day, with enormous growth of security and surveillance system. It is immensely challengeable for researcher to search and retrieve accurate human face of interest from video with utmost speed. The proposed work is stimulated from the same concern. It would be the future demand for searching, browsing, and retrieving human face of interest from video database for several applications. This paper proposes the
novel methodology for human face retrieval from video database based on holistic approach. The Viola and Jones frontal face detector detect the face region and it is converted into 3-D ellipsoid model as a query to video database. At the same time, all the faces from video are detected and converted into 3-D model. The recognition is performed by using chamfer distance for each frame sequence. 3-D ellipsoid model has an advantage over face angle and facial expression variation. The performance evolution discusses the advantages of part-based approach.

References
[6.] Josef Sivic et al., Finding people in repeated shots of the same scene, proceeding of the British Machine Vision Conference, 2006
[16.] Daidi Zhong and Irek Defee , Face retrieval based on robust local features and statistical structure learning approach , EURASIP Journal on Advances in Signal Processing , Volume 2008, Article ID 631297, 12 pages
[17.] Aamer S.S. Mohamed et al, An efficient face image retrieval through DCT features, In proc. of international conference, 2006
[18.] Chon Fong Wong et al, Face image retrieval in video sequence using lifting wavelets transform feature extraction, Proceedings of the Ninth IEEE International...
Methodology for Human Face retrieval from video sequences based on holistic approach


Index Terms

Computer Science Engineering and Technology

Keywords

Face detection face recognition tracking 3-D ellipsoid