Review Paper on Multi-View Based Face Recognition

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ABSTRACT

In recent years, multi-camera networks have become increasingly common for biometric and surveillance systems. Multi view face recognition has become an active research area in recent years. In this paper, an approach for video-based face recognition in camera networks is proposed. Traditional approaches estimate the pose of the face explicitly. A robust feature for multi-view recognition that is insensitive to pose variations is proposed in this project. The proposed feature is developed using the spherical harmonic representation of the face, texture mapped onto a sphere. The texture map for the whole face constructed by back-projecting the image intensity values from each of the views onto the surface of the spherical model. A particle filter is used to track the 3D location of the head using multi-view information. Videos provide an automatic and efficient way for feature extraction. Data redundancy renders the recognition algorithm more robust. The similarity between feature sets from different videos can be measured using the reproducing Kernel Hilbert space.

Keywords: *multi camera networks, face recognition, spherical harmonic, particle filter, Kernel Hilbert space.*