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Face Recognition Using HOG and Different Classification Techniques

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Abstract

Face recognition based unimodal biometric system is developed in this work. The face features are extracted by Histograms of Oriented Gradients (HOG). For person identification of KVKRG face database several techniques were used. In this experiment total, 500 images were used. KVKRG Face database is developed under UGC-SAP Phase I (which is the researchers own major contribution) having 10 poses of each subject. Six and four samples were utilized for training and testing, respectively. Classifiers such as Ensemble Subspace Discriminate, SVM, Linear Discriminate, k-NN, were used for person classification. The Ensemble (Subspace Discriminate) and Linear Discriminant given highest recognition rate as compare to other classifiers. From the obtained results, it is found that the biometrics system generates results quickly and accurately and improves the overall system performance

Author Keywords

Face Detection, Face Recognition, HOG, Identification, Unimodal Biometric System

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