

## Task01: Facial expression recognition based on Local Binary Patterns: A comprehensive study

Automatic facial expression analysis is an interesting and challenging problem, and impacts important applications in many areas such as human-computer interaction and data-driven animation. Deriving an effective facial representation from original face images is a vital step for successful facial expression recognition. Evaluate LBP features for person-independent facial expression recognition. They Are investigated LBP features for low-resolution facial expression recognition formulate Boosted-LBP by learning the most discriminative LBP histograms with AdaBoost for each expression, and the recognition performance of different classifiers are improved by using the Boosted-LBP features and evaluated the generalization ability of LBP features cross different databases. Using Local Binary Pattern (LBP) features for person-independent facial expression recognition. LBP features were proposed originally for texture analysis, and recently have been introduced to represent faces in facial images analysis .Examine different machine learning methods, including template matching, Support Vector Machine (SVM), Linear Discriminant Analysis (LDA) and the linear programming technique, to perform facial expression recognition using LBP featuresFace recognition by boosting LBP-based classifiers, where the distance between LBP histograms of two face images is used as a discriminative feature .AdaBoost is actually used to find the sub-regions that contain more discriminative information for facial expression classification in term of the LBP histogram .16,640 LBP histograms, in total were extracted from each face image 50 LBP histograms selected by AdaBoost for each expression The generalization performance of the boosted classifiers is 84.6% for 7-class recognition and 89.8% for 6-class recognitionEvaluated databases: the MMI database and the JAFFE database. The MMI database includes more than 20 students and research staff members (44% female), ranging in age from 19 to 62. 96 image sequences were selected from the MMI database .There are six basic emotions .The sequences come from 20 subjects, with 1–6 emotions per subject. The neutral face and three peak frames of each sequence (hence, 384 images in total) were used for 7-class expression recognition. In this paper, they present a comprehensive empirical study of facial expression recognition based on Local Binary Patterns features. Different classification techniques are examined on several databases. One limitation of this work is that the recognition is performed by using static images without exploiting temporal behaviors of facial expressions. Face recognized from a dynamic image than from a single static image.They will explore temporal information in their future work.From face recognition we can easily recognize any kind if behaviour of a human ,so this paper have strongly useful for future work.