

Seamless Integration of Multi-Face Detection and Tracking Meth

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Abstract

This paper presents a face detection process and integration of face tracking technology. Face region to get started after a random sampling will be randomly generated and used to calculate the characteristic features of the value of Haar, and then use with multi-instance learning and Online-AdaBoost concepts such as Online-MILBoost face tracking algorithm to train the model, then use of trained tracking model for face tracking. In order to avoid the continued accumulation of tracking error, we track the face region in the vicinity, the face detection processing, when the detected face, then use the results of face detection and face the size of the position to replace tracking, in order to achieve better tracking results. The paper also covered when people face tracking to improve the status of processing, first of all, will determine the use of masking process to determine whether the face was obscured, if the occlusion to happen, it will produce in the shelter near the candidate's area, and the use of temporal difference image with skin color detection the results from the preliminary screening of candidate regions, recovery of occluded faces were occluded before the color and face tracking model to determine whether reappear, if they are covered by the reappear, appear in the position to continue its track. Database used in the experiments of this laboratory established themselves, the database, the database contains a single face, and people face database. The method proposed in this paper, a single face tracking in a restricted angle() tracking the case, can be as high as 94.1% accuracy rate, but there is still unlimited angle of track 87.9 % accuracy; for more than face tracking, in the case of the front shield, a total of 33 overlapping, when they separated, there 26 can restore the right track, in the sheltered side of the case, in 30 overlap, there are still 20 tracks can be restored. These experiments showed that more than proposed in this paper face tracking technology,

excellent execution with considerable effect.

Keyword : Face Tracking, Multi-Instance Learning, Occlusion Detection,
Occlusion Recovery