

Vision Based People Tracking System

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Abstract : In this paper we present the design and the implementation of a target tracking system where the target is set to be a moving person in a video sequence. The system can be applied easily as a vision system for mobile robot. The system is composed of two major parts the first is the detection of the person in the video frame using the SVM learning machine based on the "HOG" descriptors. The second part is the tracking of a moving person it's done by using a combination of the Kalman filter and a modified version of the Camshift tracking algorithm by adding the target motion feature to the color feature, the experimental results had shown that the new algorithm had overcome the traditional Camshift algorithm in robustness and in case of occlusion.

Keywords : camshift algorithm, computer vision, Kalman filter, object tracking

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