Abstract

This paper presents a real-time method for detecting pedestrians using vertical motion from two consecutive frames. We used association approach to match edge curves between consecutive images. Significant motions can be found using horizontal-vertical projection histogram. Then the pedestrian detection process is achieved in two steps. The first one searches the region of interest by using the intersection of vertical and horizontal projection of significant motion. The second step applies the Adaboost classifier on the region of interest provided by the first step. The proposed approach has been tested on different city traffic image sequences acquired by a camera mounted in a moving car. The results demonstrate the effectiveness of the proposed method.

References

Street crossing pedestrian detection based on edge curves motion

- Bernd Kitt and Andreas Geiger and Henning Lategahn. "Visual Odometry based on Stereo Image Sequences with RANSAC-based Outlier Rejection Scheme." In IEEE Intelligent Vehicles Symposium, 2010 June, San Diego, USA.

Index Terms

Computer Science
Artificial Intelligence

Keywords
Pedestrian Detection Image Motion Analysis Correspondence Edge Curves. Adaboost Classifier