ABSTRACT

Pedestrian detection is an important issue to improve traffic safety. pedestrian object detection more difficult than detecting other objects because people can show motion, shape, pose, and the distribution of a variety of colors.

This study implemented a pedestrian detection system input from a real-time acquired video using a single camera in. System using motion analysis and texture analysis as a method for selecting candidates and Riemannian manifolds as a method for classification, the selected candidates are classified into two classes; not pedestrian or pedestrian. There are two methods used for selecting candidates: motion analysis and texture analysis. Motion analysis is the main extraction method for selecting candidate moves, then performed the separation of objects using texture analysis. The next stage is feature extraction for detected candidates by using Principal Component Analysis before classified for faster computing.

The last step in processing the detected object as a pedestrian then be marked on the display screen.

Keywords : Pedestrian detection, Riemannian Manifolds, Geodesic, Principal Component Analysis