Abstract

Target object detection in aerial surveillance using image processing techniques is growing more and more important. Aerial surveillance is more suitable for monitoring fast moving targets and covers a much larger spatial area. These technologies have a variety of applications, such as traffic management, police and military. Aerial view has the advantage of providing a better perspective of the area being covered and this make use of the aerial videos taken from aerial vehicles. In an automatic vehicle detection system for aerial surveillance background colors are eliminated and then features are extracted. This system extracts features including color feature and local feature points. For vehicle color extraction, system utilizes color transform to separate vehicle colors and non-vehicle colors effectively. For edges detection, system applies moment-preserving method to adjust the thresholds for canny edge detector automatically, which improves the adaptability and accuracy of the system. A support Vector Machine is constructed for classification purpose.


Alan J. Lipton, H. Fujiyoshi, Raju S. Patil; Moving Target Classification and...
Automatic Vehicle Detection and Tracking in Aerial Surveillances using SVM


Index Terms

Computer Science

Image Processing

Keywords

Aerial Surveillances Training Detection Classification SVM GMM.