Human detection and tracking is one of the tasks in computer vision which needs a lot of understanding and appreciable effort. It has a lot of use in visual surveillance, human machine interaction, robotics and many more. A lot of algorithms have been proposed by various researchers but the problem of detection and tracking has not yet been solved efficiently. There are a lot of problems for which there exists no generic solution using a single algorithm. Hence a combination of contrastive algorithms yields a comparatively good result. This paper mainly focuses on developing an algorithm using various image processing techniques without increasing the complexity and achieving comparatively better accuracy. In this paper a new method has been proposed using combination of algorithms. The algorithms used here are Histogram of Oriented Gradients (HOG), Covariance based method and Kalman Filter. The combined algorithms yield a reasonably good result.

References

- Daimeng Wei, Yong Zhao, Ruzhong Cheng and Guoliang Li, &quot;An Enhanced Histogram of Oriented Gradient for Pedestrian Detection&quot;, Fourth International Conference on Intelligent Control and Information Processing (ICICIP), Beijing, China, June 2013.
- Yaping Liu, Jian Yao, Renping Xie, and Sa Zhu, &quot;Pedestrian Detection from Still Images Based on Multi-Feature Covariances&quot;, Proceeding of the IEEE International Conference on Information and Automation, Yinchuan, China, August 2013.
- Cargill P. C, Rius C. U, Domingo Mery and Alvaro Soto, &quot;Performance Evaluation


- Jong-Min Jeong, Tae-Sung Yoon, and Jin-Bae Park, “Kalman Filter Based Multiple Objects Detection-Tracking Algorithm Robust to Occlusion,” SICE Annual Conference, Hokkaido University, Sapporo, Japan, September 9-12, 2014.


**Index Terms**

Computer Science  
Algorithms

**Keywords**

Object Detection  
Object Tracking  
Video Processing  
Visual Surveillance.