**Detection of Pedestrian-Vehicle interaction based on feature extraction using parallel algorithm in video surveillance**  
This is a video surveillance system for automatic monitoring of accidents on highways. It detects the moving objects automatically and classifies it as a vehicle or pedestrian. It estimates the distance and speed between them based on a virtual line, which is used to monitor abnormal activities and alert pedestrian to avoid collision.  
  
 Installation  
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1. Download MATLAB R2014 a from <http://in.mathworks.com/downloads/>.  
2. Extract the zip file of MATLAB R2014a in some path , for example “E:\MATLAB\”  
3. Install MATLAB R2014a using Setup.exe file.

4. Give the path of the license file to activate MATLAB.

5. Set the current path to bin. For example “E:\MATLAB\R2014a\bin\”

Executing the code

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1. Extract the project ‘code’ folder into bin

2. The training images of car and human are present in the folders ‘car’ and ‘human’ respectively. Test images are present in ‘Test’ folder.

3. Open hogextract.m , set the path to “E:\MATLAB\R2014a\bin\code” in MATLAB and run the code. It takes the images from car and human and gets their HOG values.

4.Similarly Open glcmhumancar.m , set the path to “E:\MATLAB\R2014a\bin\code” in MATLAB and run the code. It takes the images from car and human and gets their GLCM values.

5. The output values from the above codes get saved in an excel sheet – hogglcm.xlsx.

6. Testvalues.xlsx contains hog and glcm values of test images.

7. These two excel sheets are given as an input to the svm classifier code- multi.m. It classifies and outputs either 1 or 2 based on the group it belongs using hog and glcm values.

8. Multisvm.m is a function which is called inbuilt by multi.m.

9. Now, run the finalvideo.m code. It takes as input the ground.mov video file.

10.The resulting video and the processed output will be displayed as frames.