

Assignment 1 : Background Subtraction using GMM

Problem Statement:

To use Gaussian based background subtraction, observe the results and discuss the limitations of this method.

Results:



Observations:

- 1.If we observe the first result, the road signs on the road are considered as foreground.This is due to the varying light reflection on these road marks.
- 2.There is a time delay while updating, so the length of the moving car in the segmented video is longer than the actual.
- 3.The delay in the frames show a discrete structure of the segmented car.
- 4.If we observe the second result, the reflecting patch on the shirt of the boy is considered as foreground due to the reason mentioned above.The part of boy which is not moving is considered as background.
- 5.If we see the actual background of the second result, the constant shadow is observed as background and the varying light reflection in the middle is considered as background.

6. Even in opencv implementation of gmm based background subtraction, the above error observations were seen. The only difference between the opencv implementation and mine is the time delay in adaptation.