GEBZE TECHNICAL UNIVERSITY

CSE 463/565

Introduction to Computer Vision

HW4 REPORT

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Algorithm

As told in the homework pdf, I estimated the background using OpenCV routines. After estimated background I estimated foreground using knn background substractor. I put a line in given road line and count colusion count for car count. I find center of the objects so not all points are counted.

After taking foreground i tried couple of methods to take better frame.

I come up with 3 solution for that.

- Use blur on frame
- Make frame grayscale
- After substraction use close morph on foreground

I tried different combination of these methods and noted the results

RESULTS

I tested it in 1000 frame and 2000 frame. Expected count for 1000 is 19 and 2000 frame is 35. After my inspectations most efective process was morph. And combaning all technique is less efficent and effective than good combination of techniques
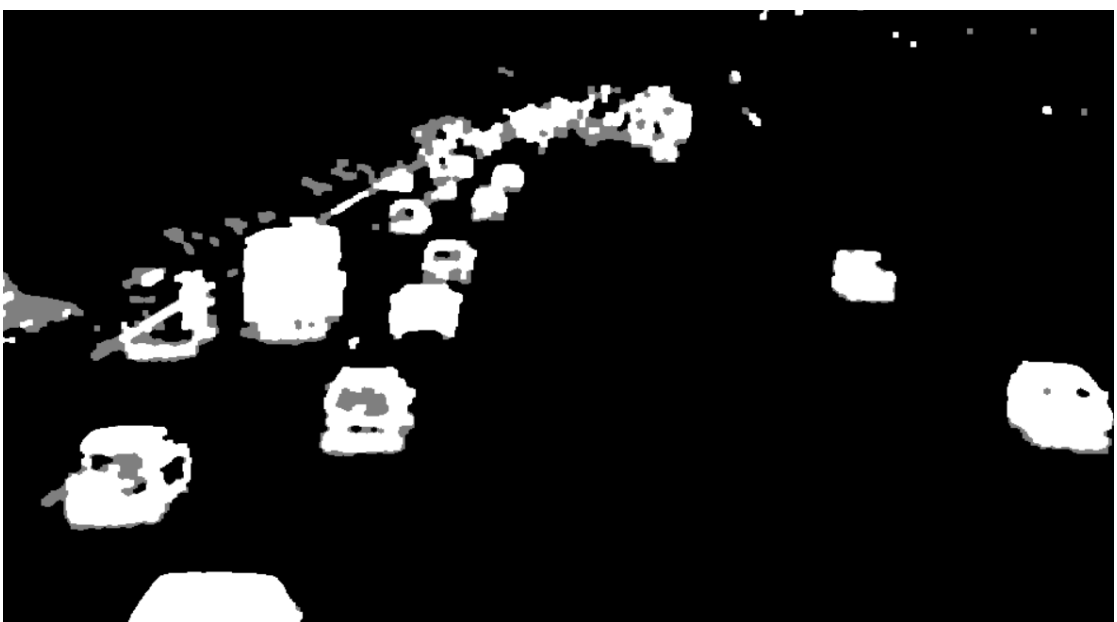
1-) Blur with grayscale

From this image i count 8 cars in 1000 frame and 16 cars in 2000 frame
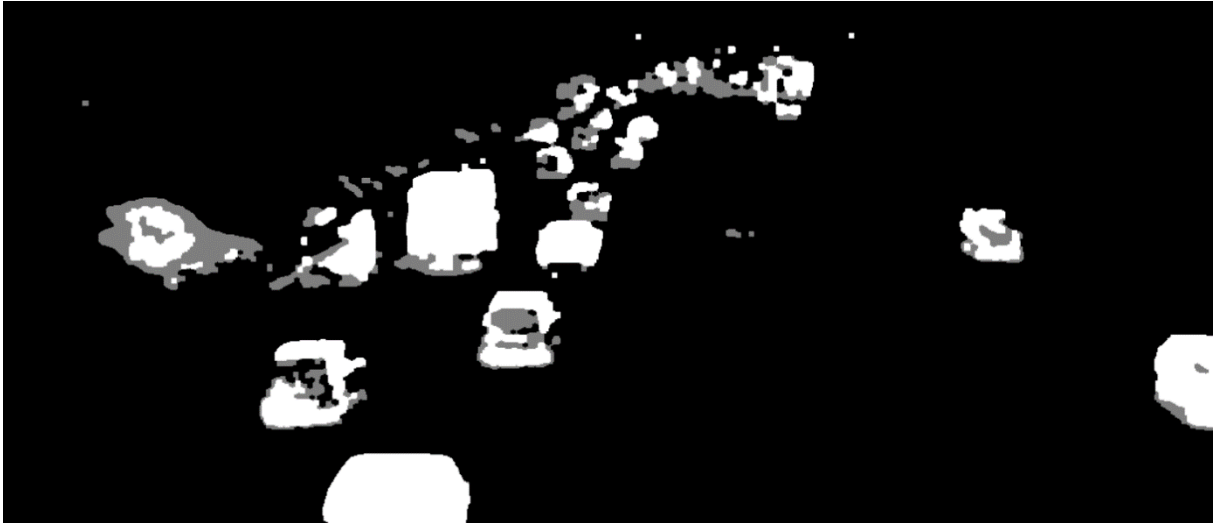
2-) Blur with Closed Morph
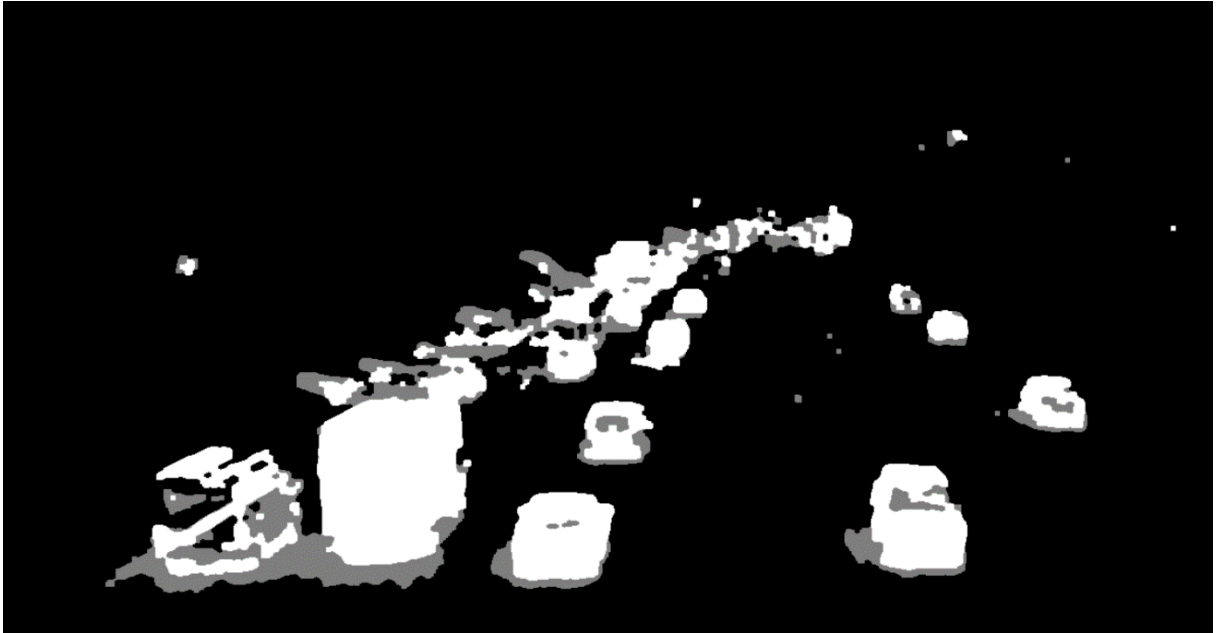
From this image i count 16 cars in 1000 frame and 31 cars in 2000 frame
This succes rate was highest one with grayscale with morph

3-) Grayscale with Closed Morph

From this image i count 16 cars in 1000 frame and 31 cars in 2000 frame
This succes rate was highest one with grayscale with morph
4-) Grayscale and Blur with Closed Morph

From this image i count 13 cars in 1000 frame and 26 cars in 2000 frame