

Gebze Technical University
Department of Computer Engineering
BIL 665 / BIL 463
(Introduction to) Computer Vision
Fall 2015
HW4
Jan 11th 2016 at 14:00
No late submissions
You will demo your system on that day

In this homework, you will recognize and count vehicle on a road using a surveillance camera. The videos that you will use for this HW can be seen at <https://www.youtube.com/watch?v=PNCJQkvALVc>

Download the video in HD 1080p format.

You will count the number of vehicles, identify their types (trucks, cars, buses, minivans) and print this information at the top of the screen in real time for each of the three lanes. Do this for the outgoing traffic only. Here are the steps that you may follow

- Estimate the background using OpenCV routines.
- Find the foreground.
- Handmark vehicles for at least 10 minutes of video for machine learning training.
- Use HOG + SVM classification for vehicle recognition and classification.

Write a 3 page report that discusses your algorithm and your performance results.