

BIM472 IMAGE PROCESSING PROJECT

- 1) Develop a traffic sign detection program which detects location of the traffic sign(s) on a given true color image.
- 2) Your program should highlight the detected traffic sign(s) using bounding boxes as shown below:



- 3) You should evaluate the performance (F1-score) of your program using all the images provided with the project assignment

$$\text{F1-score} = 2 \times (\text{precision} \times \text{recall}) / (\text{precision} + \text{recall})$$

precision: the number of correct results divided by the number of all returned results.
recall: the number of correct results divided by the number of results that should have been returned.

- 4) The use of deep learning models is NOT allowed. Instead, you should use appropriate image processing methods taught in the course.
- 5) Write your report using the template provided in "BIM472_Template.docx".
- 6) Prepare a presentation for your project and present it to the class.

Notes:

- Make sure that appropriate comments are added in your code.
- Matlab or OpenCV can be used.
- Each group (consisting of max. 2 students) should make single submission. You cannot change your group during the semester.
- Indicate the IDs and names of the group members in the submission.
- Archive your files (code, report, and presentation) and submit them via MERGEN by the deadline.