

Work details

# Boats tracking

- In linux install the openCV, since the interface will on this operating system and will need opneCV libraries
- Also install cmake
- Go to <http://users.isr.ist.utl.pt/~jan/> and download Labeling Boats
- To see the videos go to link  
[<http://soma.isr.ist.utl.pt/vislab\\_data/seagull/cvi2017/>](http://soma.isr.ist.utl.pt/vislab_data/seagull/cvi2017/)  
user: cvi2017  
pass: visual
- For any doubt contact [ribeiro@isr.tecnico.ulisboa.pt](mailto:ribeiro@isr.tecnico.ulisboa.pt) (Ricardo Ribeiro)

# Sequences details

MOVIE 1 - 2015-04-22-16-35-38\_jai\_eo.avi - 5273 frames, 1672 with boat

MOVIE 2 - 2015-04-23-13-35-05\_jai\_eo.avi - 9263 frames, 3763 with boat

MOVIE 3 - 2015-04-23-14-04-25\_jai\_eo.avi - 3599 frames, 2167 with boat

MOVIE 4 - 2015-04-23-14-09-25\_jai\_eo.avi - 8256 frames, 4097 with boat

MOVIE 5 - 2015-06-02-13-18-10\_jai\_eo.avi - 15376 frames, 2984 with boat

MOVIE 6 - 2015-06-02-14-04-54\_jai\_eo.avi - 5156 frames, 5084 with boat

**About 19766 frames to be annotated !**

# Student annotations

- About 60 students, i.e., 20 groups of three students
- Each group annotated 100 frames, that is, 300 frames per student

## Schedule:

Group 1: use MOVIE1 to annotate 1000 frames

Group 2: use MOVIE1 to annotate the following 672 frames and  
use MOVIE2 to annotate 328 frames

Group 3: use MOVIE2 to annotate 1000 frames

Group 4: use MOVIE2 to annotate the following 1000 frames

Group 5: use MOVIE2 to annotate the following 1000 frames

Group 6: use MOVIE2 to annotate the following 434 frames  
use MOVIE3 to annotate 566 frames

Group 7: use MOVIE3 to annotate the following 1000 frames

Group 8: use MOVIE3 to annotate the following 601 frames  
use MOVIE4 to annotate 400 frames

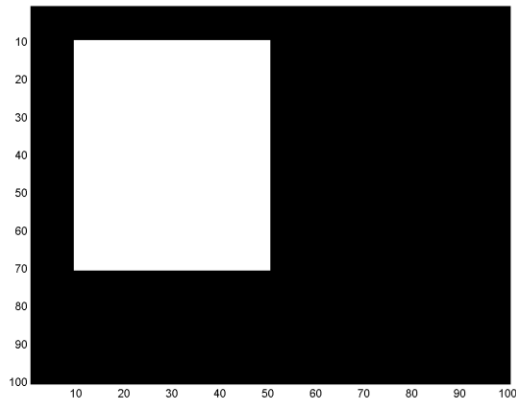
Group 9: use MOVIE4 to annotate the following 1000 frames

Group 10: use MOVIE4 to annotate the following 1000 frames

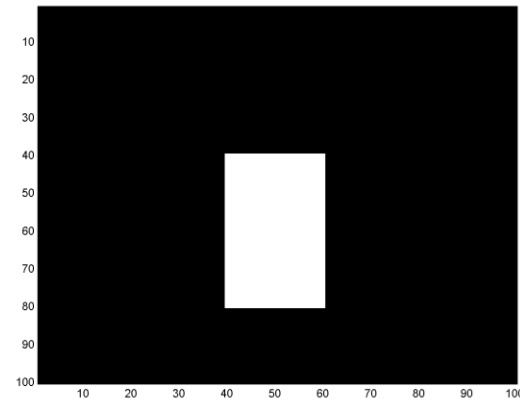
# Student annotations

- Group 11: use MOVIE4 to annotate the following 1000 frames
- Group 12: use MOVIE4 to annotate the following 697 frames  
use MOVIE5 to annotate 303 frames
- Group 13: use MOVIE5 to annotate the following 1000 frames
- Group 14: use MOVIE5 to annotate the following 1000 frames
- Group 15: use MOVIE5 to annotate the following 681 frames  
use MOVIE6 to annotate 319 frames
- Group 16: use MOVIE6 to annotate the following 1000 frames
- Group 17: use MOVIE6 to annotate the following 1000 frames
- Group 18: use MOVIE6 to annotate the following 1000 frames
- Group 19: use MOVIE6 to annotate the following 1000 frames
- Group 20: use MOVIE6 to annotate the following 765 frames

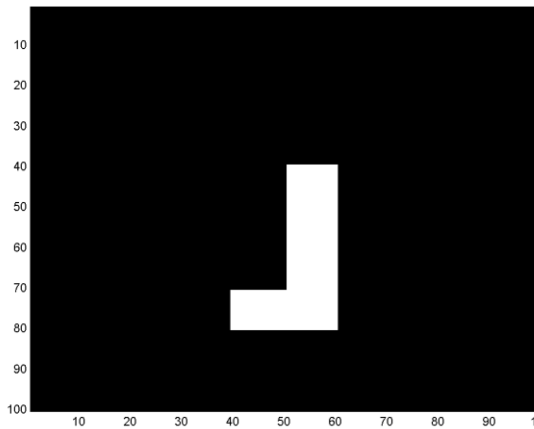
Ground truth



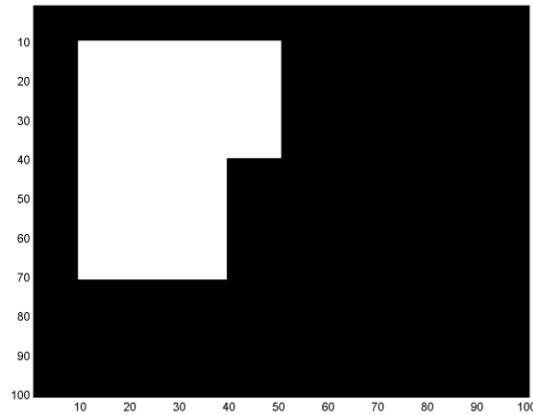
Detection



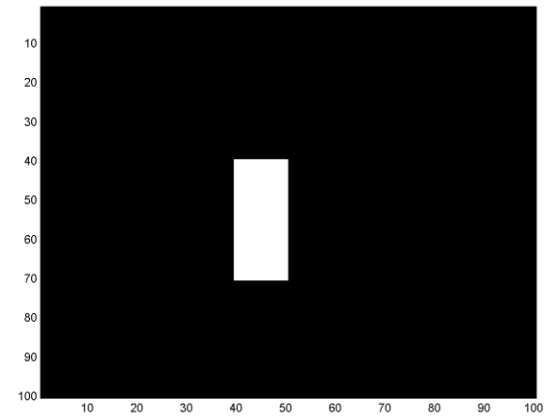
False positive



False negative



True positive



$$\text{precision} = \frac{\text{true positives}}{\text{true positives} + \text{false positives}}$$

$$\text{recall} = \frac{\text{true positives}}{\text{true positives} + \text{false negatives}}$$

$$\text{F measure} = \frac{2 * \text{precision} * \text{recall}}{\text{precision} + \text{recall}}$$

Fracção das instâncias recuperadas que são relevantes

Fracção das instâncias relevantes que são recuperadas