**FlySight project – object detection in SAR**

**Relevant parameters used for analysis**

The metrics we used for analysis are : precision (*PREC*), recall (*REC*), F1-score (*F1*) and average precision (*AP*). We will also use the confusion matrix and graphs combining the 4 metrics we presented previously.

**List of the different runs**

* Detector : YOLOv5n ; Ratios : [0.7, 0.2, 0.1] ; Epochs : 600 ; IoU : 0.5 ; Training data : SARD
* Detector : YOLOv5n ; Ratios : [0.7, 0.2, 0.1] ; Epochs : 600 ; IoU : 0.75 ; Training data : SARD
* Detector : YOLOv5n ; Ratios : [0.7, 0.15, 0.15] ; Epochs : 600 ; IoU : 0.5 ; Training data : SARD
* Detector : YOLOv5n ; Ratios : [0.7, 0.2, 0.1] ; Epochs : 600 ; IoU : 0.5 ; Training data : COCO
* Detector : CNN ; Ratios : [0.7, 0.2, 0.1] ; Epochs : 600 ; IoU : 0.5 ; Training data : SARD
* Detector : CNN ; Ratios : [0.7, 0.2, 0.1] ; Epochs : 600 ; IoU : 0.75 ; Training data : SARD
* Detector : CNN ; Ratios : [0.7, 0.2, 0.1] ; Epochs : 600 ; IoU : 0.5 ; Training data : COCO

All the above runs use SARD for validation and test.

**Analysis**

Things we need to compare : influence of IoU for both detectors, difference between transfer learning and fine tuning, influence of ratios. Runtime is also an important parameter.