



Practical mini-project Deep learning for object detection

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Lab assignment

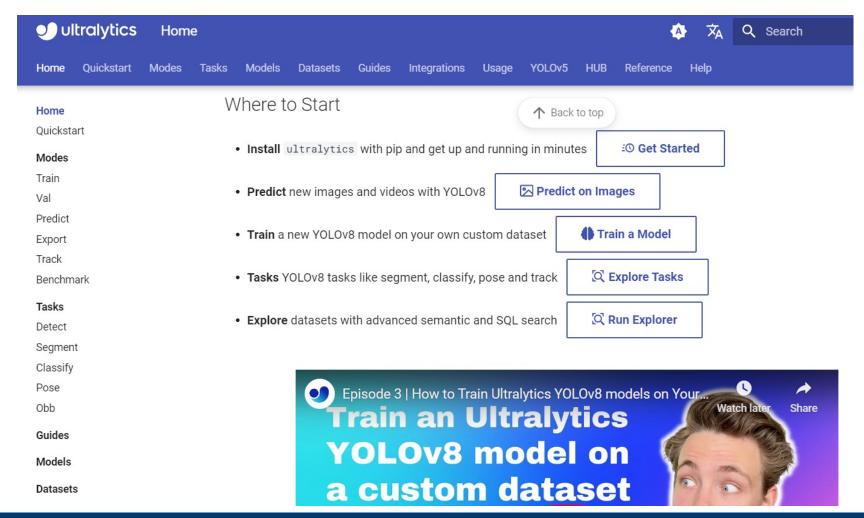
<u>Practical mini-project R6.A.07:</u> Deep learning for object detection

- Work in group of 4.
- 2 weeks of class/work + 1 week of presentation (oral)
- You have to choose one of the following tasks and search for public datasets that you would like to demonstrate (from Kaggle other public datasets available, <u>not too big !!!!</u>)
 - Ship detection
 - Vehicle detection
 - Animal detection
 - Fish detection
 - Other object detection tasks
- Use <u>YOLOv8</u> or/and <u>Detectron2</u> to perform training/test of your object detection task! (One is minimum, two for comparison is perfect!)
- Your submission (in a zip file named R6A07_YourGroupName.zip) should include:
 - A PDF presentation (max 15 slides)
 - A Jupyter notebook file that includes your implementation + compiled outputs
- Evaluation: presentation 60% + submission (slides+notebook) 40% + bonus (participation during presentations)

YOLOv8 Ultralytics

Site web: https://docs.ultralytics.com/

Github: https://github.com/ultralytics/ultralytics



Detectron2

Site web: https://ai.meta.com/tools/detectron2/

Github: https://github.com/facebookresearch/Detectron2



Detectron2

Detectron2 is FAIR's next-generation platform for object detection and segmentation.

Rapid, flexible research

Detectron 2 was built by Facebook AI Research (FAIR) to support rapid implementation and evaluation of novel computer vision research. It includes implementations for the following object detection algorithms:

- Mask R-CNN
- RetinaNet
- Faster R-CNN
- RPN
- Fast R-CNN
- TensorMask