**YoloV5 Implementation**

1. You only look once (YOLO) is a state-of-the-art, real-time object detection system.
2. GitHub Repository : <https://github.com/ultralytics/yolov5>
3. For YoloV5 Implementation, Yolo dataset format (Darknet format) has been used as input dataset format
4. Dataset format details :
5. <https://pjreddie.com/darknet/yolo/>
6. <https://github.com/ultralytics/yolov5/wiki/Train-Custom-Data>
7. VinBig Dataset
8. Converted csv files into Yolo format
9. Png images are in vinbig\_yolo folder : <https://drive.google.com/drive/folders/1pPXS-IQdHY_0GOIUaLWjuHhepVqeSAJa?usp=sharing>
10. Yolov5 format labels are in VinBig folder : <https://drive.google.com/drive/folders/1kexlynTtKMMoKnZDcj4aPyj0v48KQKy3?usp=sharing>
11. Rest of all files are in VinBig\_yolov4\_cfg folder : <https://drive.google.com/drive/folders/1eSCF7U-BuHwXm-grikBbemAT8z5qxBgS?usp=sharing>
12. I have downloaded reference yolov5 folder from github and also updated it according to our dataset and requirments.

Updated folder link of yolov5 folder : <https://drive.google.com/drive/folders/1nT_E1KECduCawLMdRyJBenwbt_dPgHVv?usp=sharing>

Following are the changes I have done in yolov5,

1. I have created vinbig.yaml in data folder which contains input values of vinbig dataset
2. In order to load model configuration, I have edited .yaml model files from model folder. Added nc = 14 to each of .yaml file
3. In datasets.py file from utils folder. In order to get lable folder from image folder, I have added folder name according to our folder instead of standard names (code line = 336 )
4. Train model

Use pretrained weight file. (auto download weights accordingly)

!python train.py --img 1024 --batch 16 --epochs 100 --data /content/yolov5/data/vinbig.yaml --cfg /content/yolov5/models/yolov5s.yaml --weights yolov5s.pt –adam

1. Colab notebook :

<https://colab.research.google.com/drive/1WqvWwNvtO8ssjpQGfUitLjXTMBN0RVVp?usp=sharing>