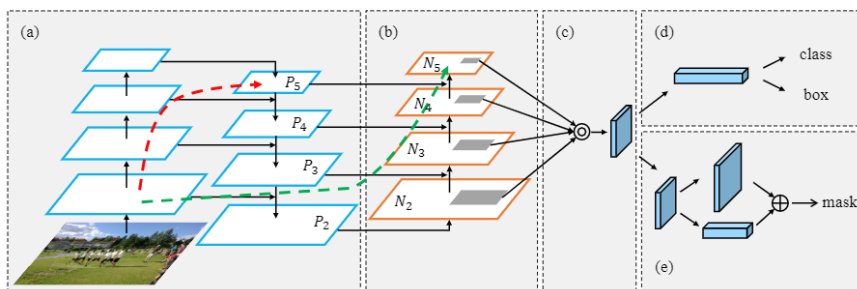


YELLO (YOLO + TELLO)

- The drone will be able to identify different objects in the captured footage in real time and then perform actions based on the detected object
- For object detection YOLOv4 which is an evolution of the YOLOv3 model is implemented.
- It is based on a single Convolutional Neural Network (CNN) which divides the image into regions, and then it predicts the boundary boxes and probabilities of an object for each region.



In this project we would be working with yolov4 as well as make tello detect objects as it flies.

1) There are a lot of yolov4 implementations available on GitHub. You can use either of them or refer to the implementation I used.

https://github.com/crazysuryaa/Autonomous_Tello_Drone/tree/master/Yello

2) Running these models requires a good amount of CPU or GPU power. Download yolov4 or yolov4-tiny weights depending on your specs and put them in ckpts folder.

Yolov4:

<https://drive.google.com/file/d/1puTLH7xmWTUPsgmuLw2SyTyFZqYNMh3/view?usp=sharing>

Yolov4-tiny:

<https://drive.google.com/file/d/1eYnZzbIRsHXq7fmjRoir4FQ56oZh0NQP/view?usp=sharing>

3) In detectornew.py (line 10-20) comment/uncomment header imports based on the version you are using. Default is yolov4

You should be able to do object detection using your webcam.

4) You can refer to detector_tello.py to take input from drone camera and perform object detection.

5) Modify the code to perform some actions based on object detected.
(eg: spin if human is detected)