

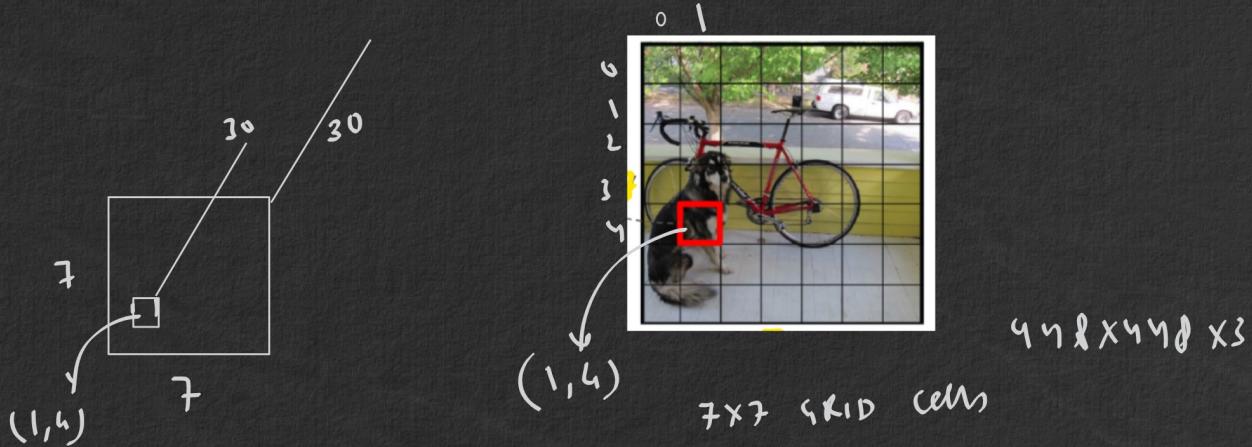
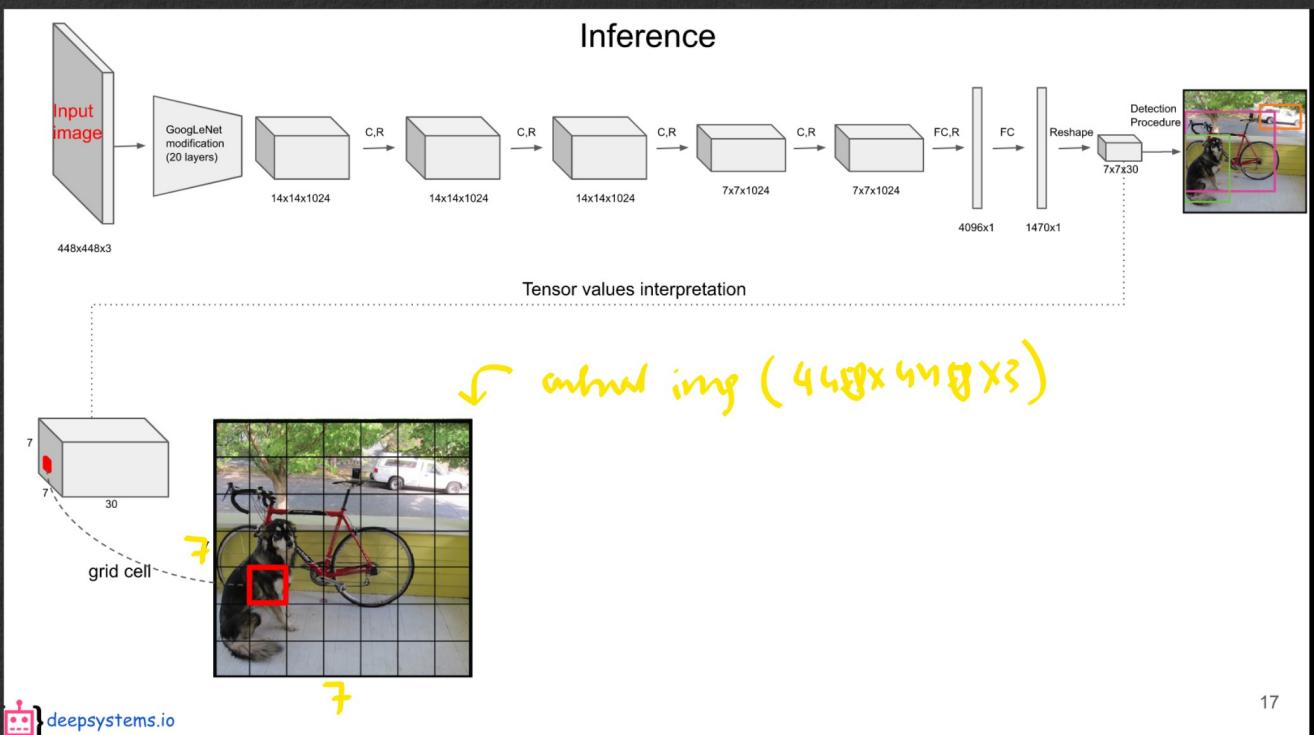
AGENDA

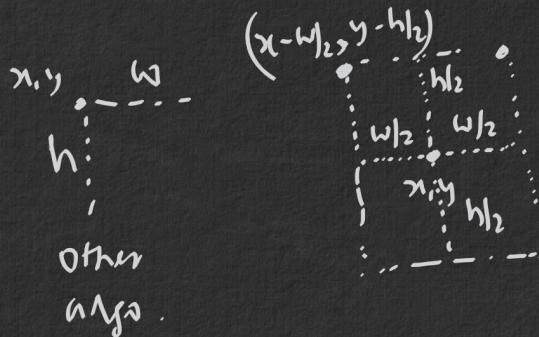
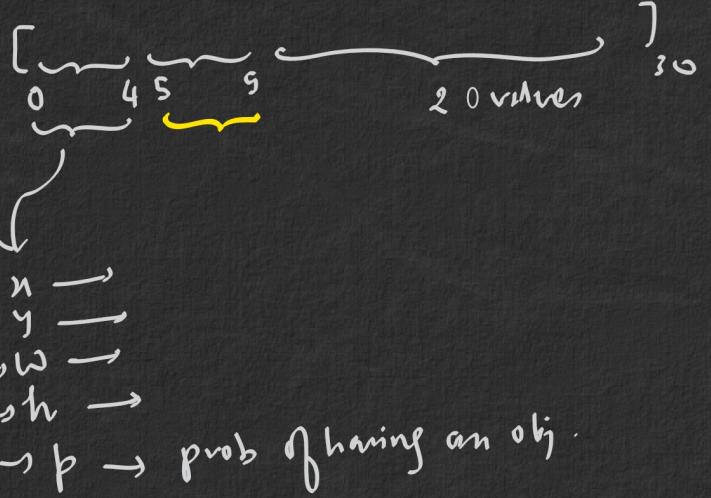
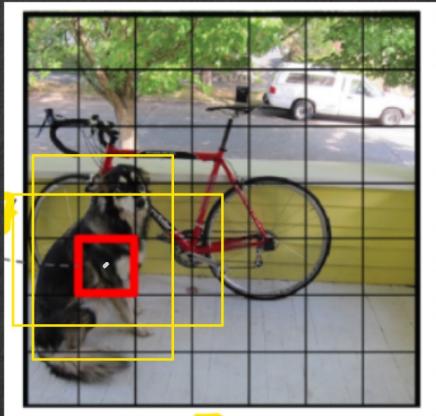
- 1> YOLO *
- 2> SSD

CNN
NMS
FPS
MAP quality

OD ↗ classification
Bbox regression
object localization → finding obj.
but no classifn

YOLO → You only look Once





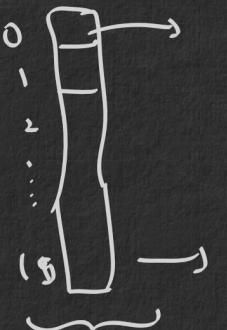
$$5 \rightarrow n$$
 $1 \rightarrow y$
 $2 \rightarrow w$
 $8 \rightarrow h$
 $9 = p$

0 4 5 9 20 values] 30

$10 \rightarrow p(\text{object of class } i \mid \text{object in box})$

total classes = 20

bbox planes



$p(\text{object in box}) \times p(\text{object of class } i \mid \text{object in box})$

bbox planes for vertical

After NMS

$$A = \begin{bmatrix} 0.5, 0, 0.2 & \dots & 0 & \dots & 0 \end{bmatrix}_{20}$$

$\text{np.argmax}(A) \rightarrow 0 \xrightarrow{\text{class index}}$

$\text{max}(A) \rightarrow 0.5 \rightarrow \text{Answers}$

if Answers > 0

 ↳ draw box

else

 skip.

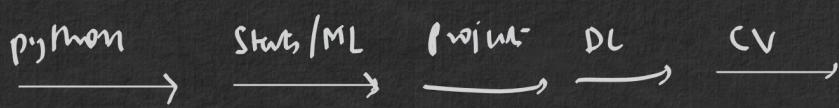
$$\begin{bmatrix} 0 & - & 0 \end{bmatrix}$$

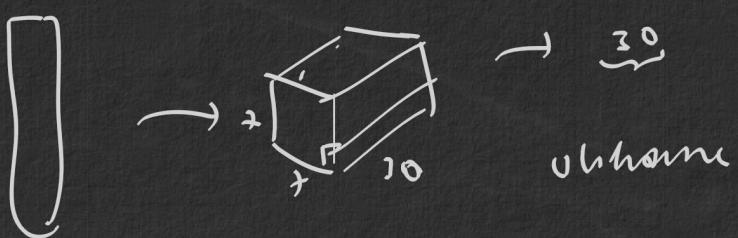
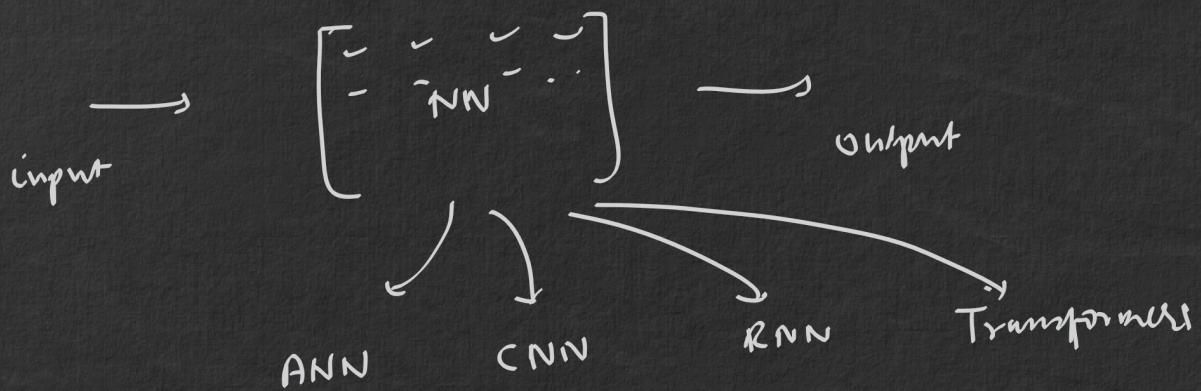
sum = 0
class = 0

if sum > 0:

 X

else





Train data:

$\underbrace{u, y, w_h, \dots}$