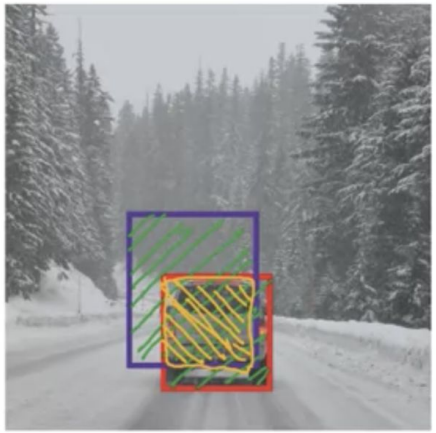
Tema 21: Intersection of Union y Non-max Suppression

Evaluating object localization



Intersection over Union (IoU)

$$= \frac{\text{size of } \square}{\text{size of } \square}$$

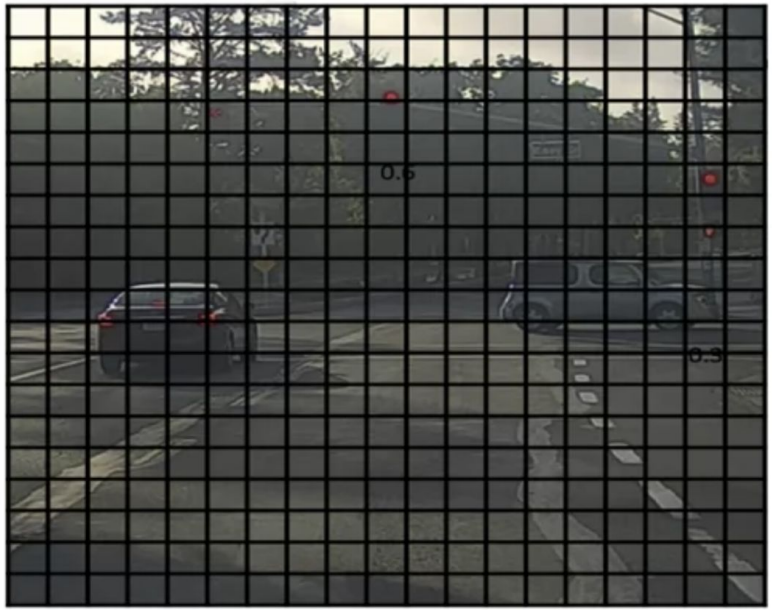
"Correct" if IoU $\geq$ 0.5 ←

0.6 ←

More generally, IoU is a measure of the overlap between two bounding boxes.

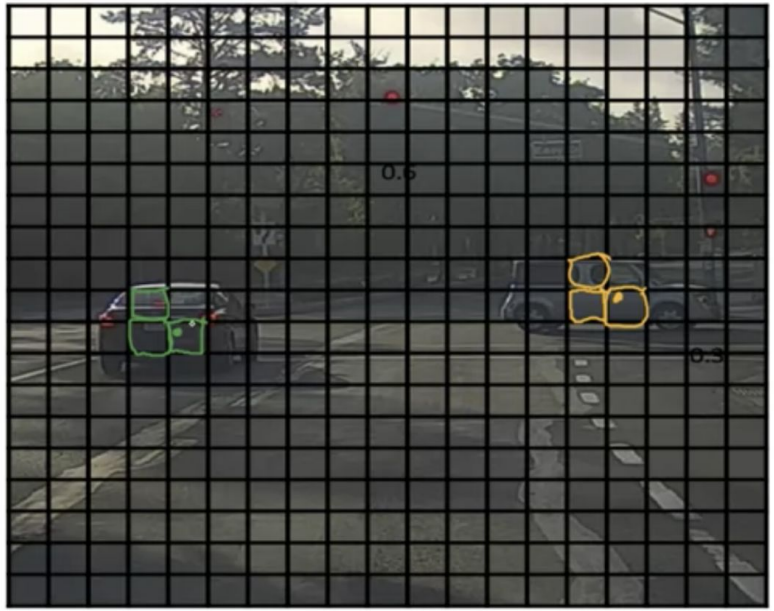
Andrew Ng

Non-max suppression example



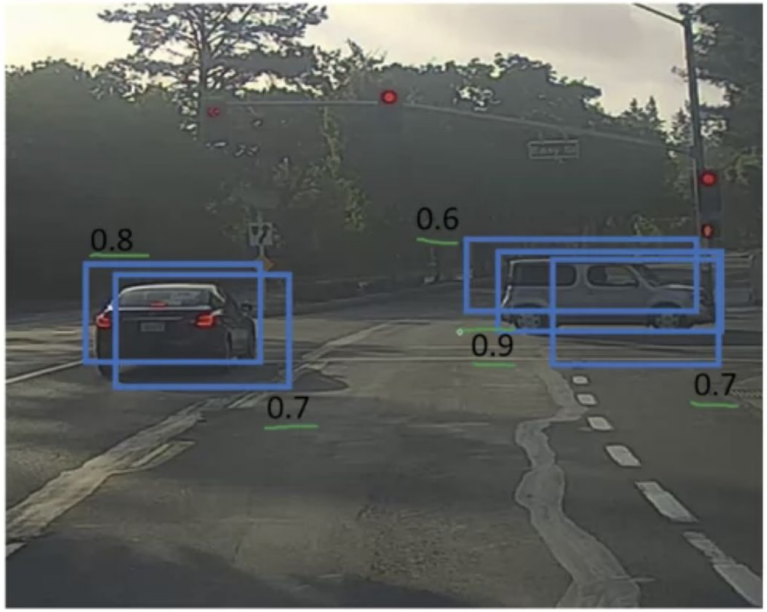
19×19

Non-max suppression example



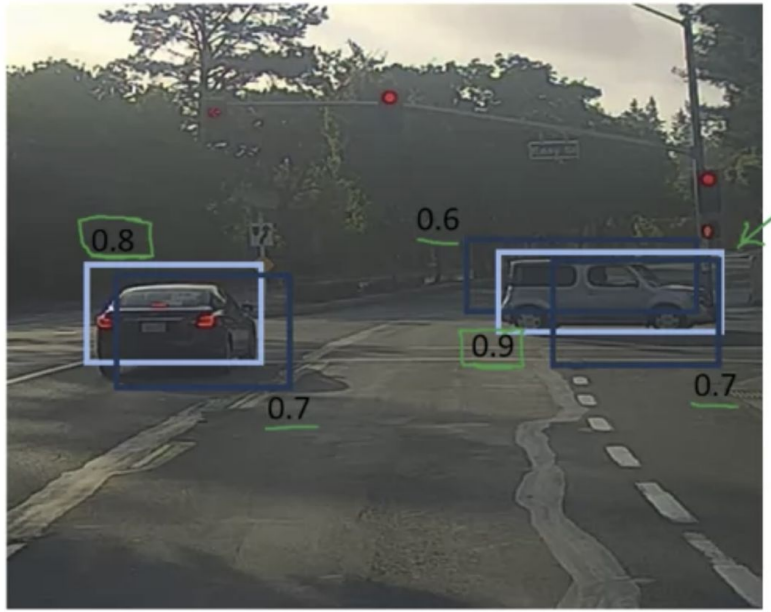
19×19

Non-max suppression example

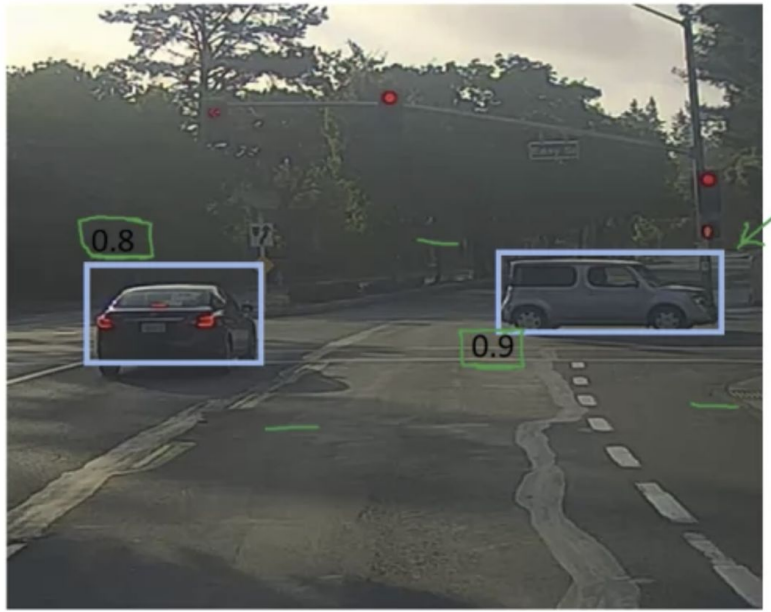


p_c

Non-max suppression example

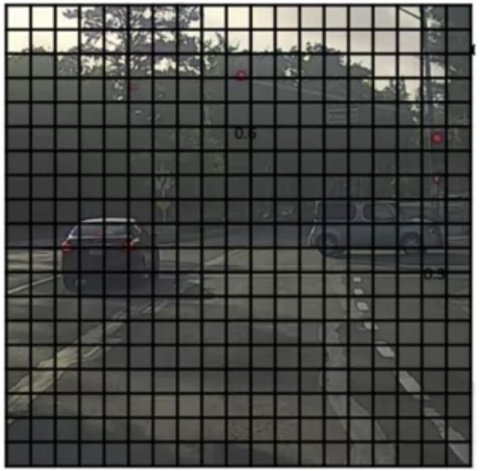


Non-max suppression example



P_c

Non-max suppression algorithm

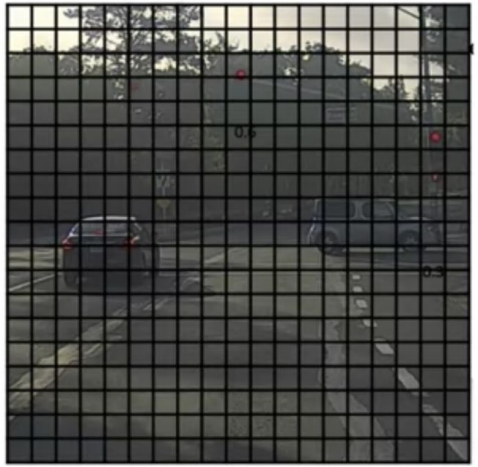


19× 19

Each output prediction is: $\begin{bmatrix} p_c \\ b_x \\ b_y \\ b_h \\ b_w \end{bmatrix}$

Discard all boxes with $p_c \leq 0.6$

Non-max suppression algorithm



19× 19

Each output prediction is:

p_c
b_x
b_y
b_h
b_w

Discard all boxes with $p_c \leq 0.6$

While there are any remaining boxes:

- Pick the box with the largest p_c
  Output that as a prediction.
- Discard any remaining box with
  IoU ≥ 0.5 with the box output
  in the previous step

Andrew Ng