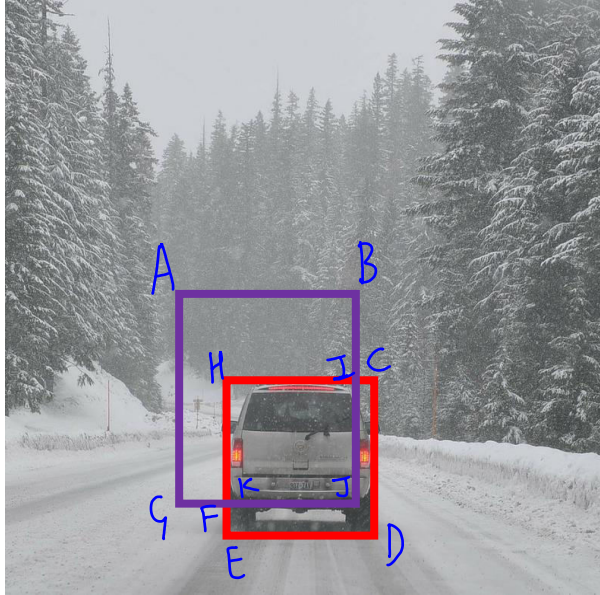deeplearning.ai

Object Detection

Intersection over union

Evaluating object localization

- The correct output bounding box is the one in Red
- Suppose we output the purple one

Q - How good is our bounding box? Could we have done better?
We use "Intersection over Union" method to find this out

$$IOU \rightarrow \frac{Area\ of\ HIJK}{Area\ of\ ABICDEFG}$$

If the Intersection of our prediction w/ Ground truth =
Union of our prediction w/ Ground truth
$\Rightarrow IOU = 1 \Rightarrow$ Higher the better
$IOU \in [0,1]$

"Correct" if IoU ≥ 0.5

∴ the metric could be the Count of the number of times
that $IOU \geq$ threshold for an Image

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