

The multi-box concept



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At start we will get this box as a “ground truth” and then we will see how SSD algorithm works with its own boxes.

Ground truth separates the observed evidence or empirical evidence from inferred evidence. For example, when you see something and actually understand it it's ground truth, like there is no gray color or anything. On the other hand, when the data goes inside a CNN, it's an inferred box.

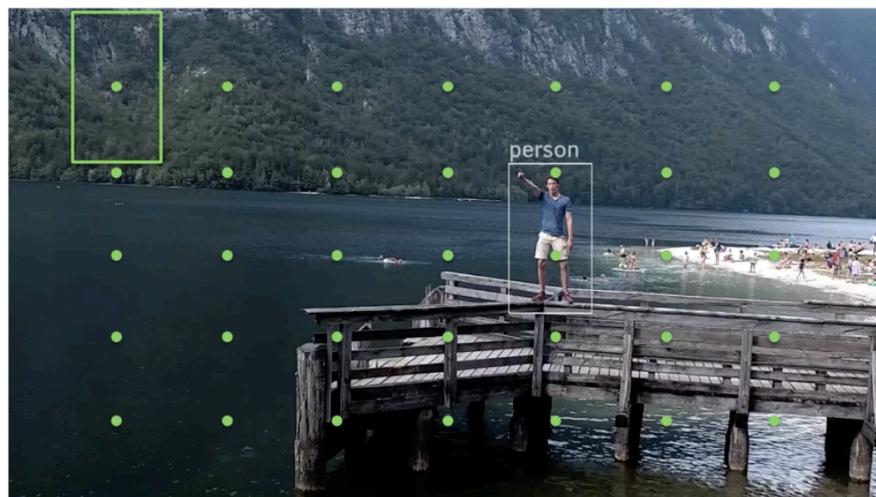
Note that when we are using the SSD algorithm, we need the ground truth to be identified which is the white box. otherwise we cannot train.

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Now the algorithm breaks down the picture into several segments.

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For every image, it will build several box for that.

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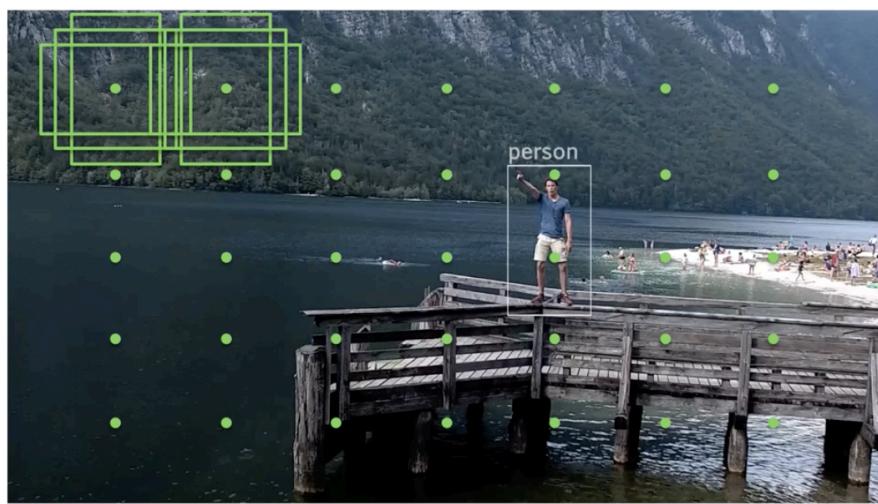
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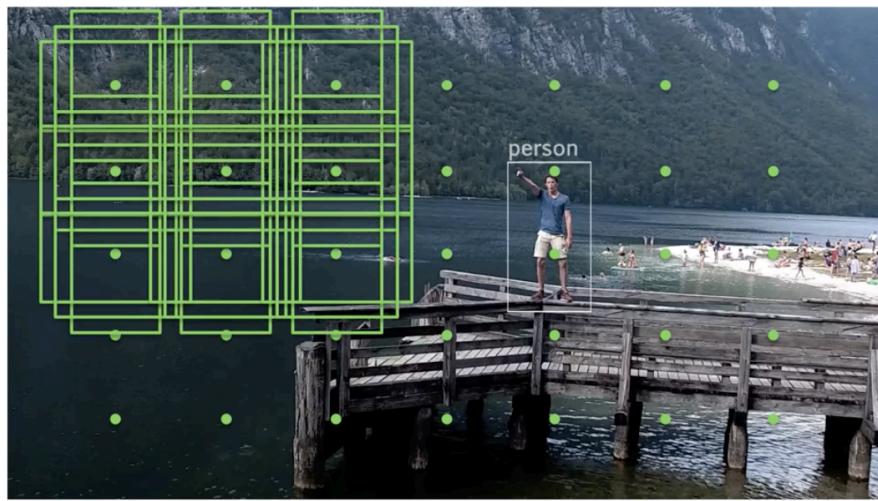
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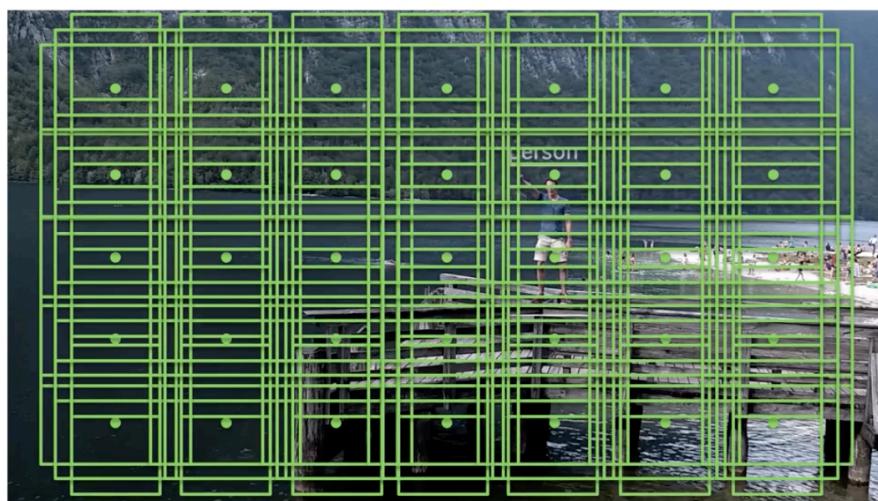
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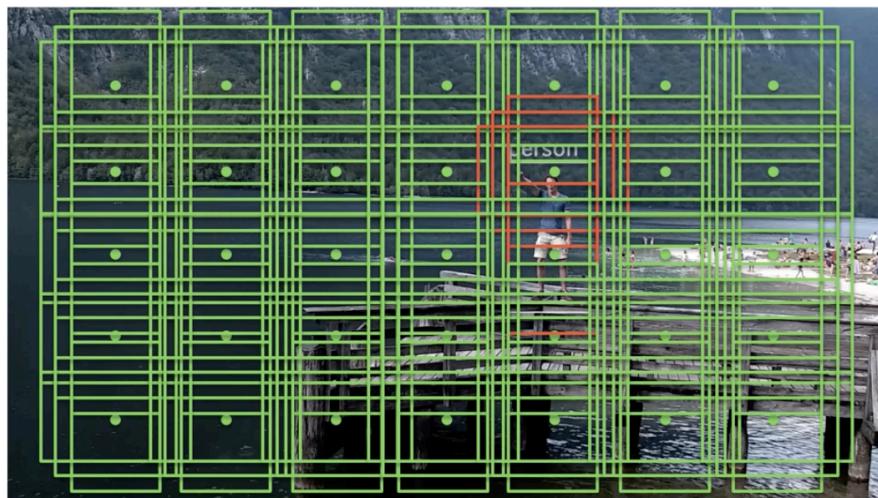


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Now the algorithm will check if there are objects inside these boxes. So...

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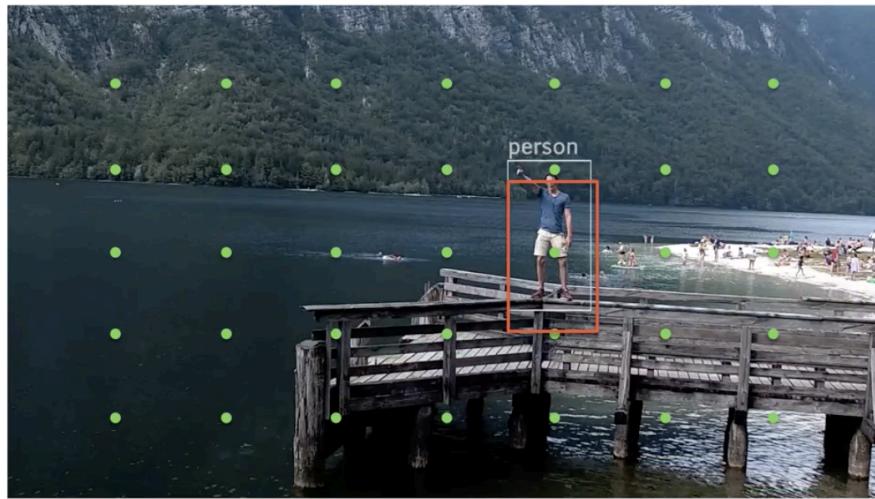


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There are some people behind the picture in the beach. The reason the algorithm does not detect them is because they are too small. You can detect them as well but you need to make some small changes to the ~~algorithm~~ scale.

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Sometimes the object we are detecting is not the full human. That is because in here inside the box we have enough feature so the algorithms find it as a high likelihood of human in there. even for the green rectangle in the next picture.

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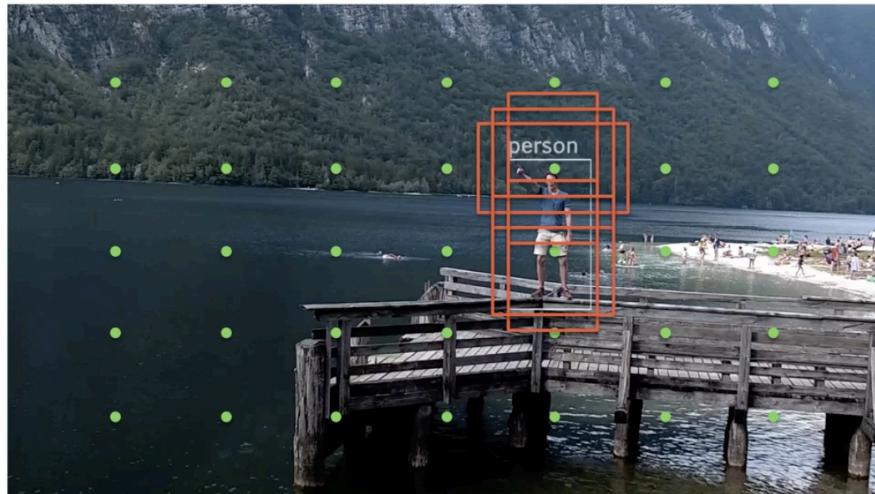


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we drop the green box just for tutorial point of view. Practically the green box is correct.

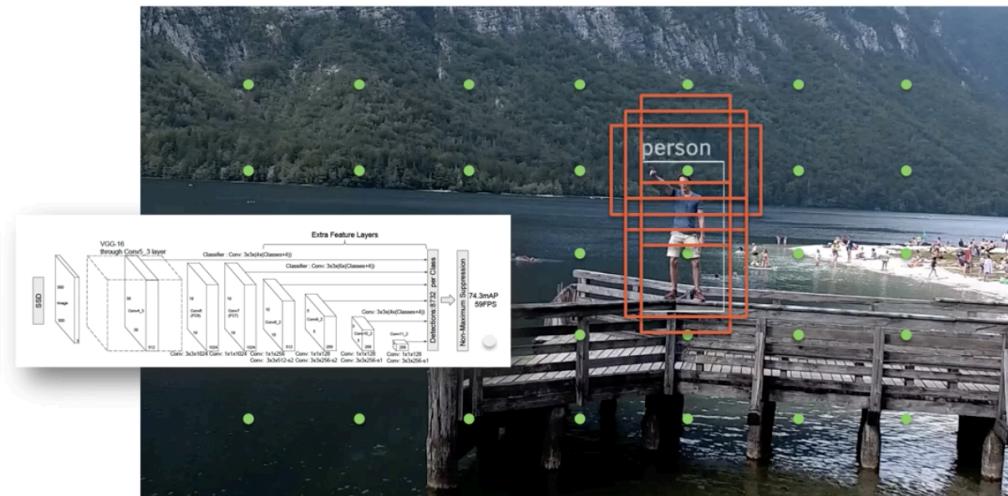
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