

Task 1:

```
def calculate_IoU(rec1, rec2):
    ...

    @params:
        rec1, rec2: tuples with rectangle information (x_coordinate, y_coordinate, width, height)
    ...

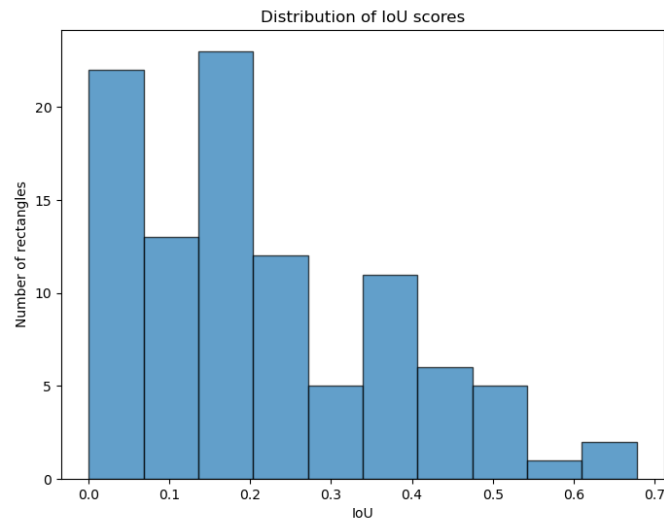
    x1, y1, width1, height1 = rec1
    x2, y2, width2, height2 = rec2

    #coordinates of intersection:
    x_left = max(x1,x2)
    y_bottom = max(y1,y2)
    x_right = min(x1+width1, x2+width2)
    y_top = min(y1+height1, y2+height2)

    if x_left > x_right or y_bottom > y_top:
        return 0

    area_of_overlap = (x_right - x_left) * (y_top - y_bottom)
    area_of_union = width1 * height1 + width2 * height2 - area_of_overlap
    iou = area_of_overlap / area_of_union

    return iou
```



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Task 2:

I used my matriculation number as seed: it gave me image file 7 where the mask is completely black... I used it nevertheless as we supposed to

