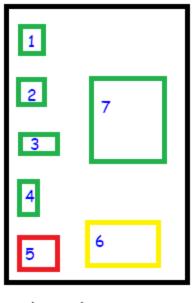
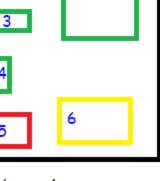
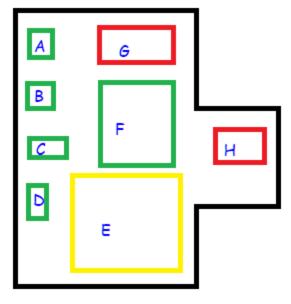
## Hello Sir,

This is a very interesting task. I tried to explain the solution with the following image and tables.

Following figure drawn from the ref. Image provided in the task. These layers contain many entities (Buildings, Fences, Etc.). This image is for illustration.







Layer 2

Layer 1

Green = Those features that is overlapping with other layer feature with IOU 95% and more

Yellow = Overlapping partially and less then 95% and

Red = These features are not overlapping.

Step1: Will visualize this data in table

Table_Layer_1		
ld	Geometry Data	Area (Calculated)
1	Geo 1	Area 1
2	Geo 2	Area 2
3	Geo 3	Area 3
4	Geo 4	Area 4
5	Geo 5	Area 5
6	Geo 6	Area 6
7	Geo 7	Area 7

Step2:

I will take help of spatial function (PostGIS or other) to find out the objects which are intersects and calculate the area of intersection. Table will look like this.

Intersection_Table_1_2							
Layer1_ld	Layer2_ld	Intersect (Calculated)	Intersect Area (Calculated)				
1	Α	TRUE	1A				
2	В	TRUE	2B				
3	С	TRUE	3C				
4	D	TRUE	4D				
5		FALSE	0				
6	E	TRUE	6E				
7	F	TRUE	7F				
	G	FALSE	0				
	Н	FALSE	0				

From **step 2** I got one set of answer to set change marker

- 3) => a. => i => "Those feature that has no overlapping with with layer (2)" that is Layer1\_ld (5)
- 3) => b. => i => "Those feature that has no overlapping with with layer (1)" that is Layer2\_Id (G, H)

## Step3:

Calculation of IOU from the feature/entity area. (Percentage shown in the table is arbitrary based on the Layer 1 and Layer 2 image).

IOU_Table_1_2									
Layer1_ld	Layer2_ld	Intersect Area (Calculated in Step2)	Combined Area (Step1)	Union Area (Combined - Intersect) Area	IOC (Combined / Union) * 100				
1	Α	1A	Area 1 + Area A	Area 1 + Area A - 1A	97%				
2	В	2B	Area 2 + Area B	Area 2 + Area B - 2B	96%				
3	С	3C	Area 3 + Area C	Area 3 + Area C - 3C	96%				
4	D	4D	Area 4 + Area D	Area 4 + Area D - 4D	96%				
6	E	6 <b>E</b>	Area 6 + Area E	Area 6 + Area E - 6E	40%				
7	F	7F	Area 7 + Area F	Area 7 + Area F - 7F	98%				

From **Step3** we have the IOC values and also got the answer to place change marker 4) => "Those feature that has IOC score less then 95%"

**6** and **E** these two feature has IOC value less then 95 %

So, Following are the features/entities which need attention From Layer 1 => 5 and 6 From Layer 2 => E, G and H

## Note:

This is one possible way, there might be other ways to achieve this goal. Thank You Sir for your valuable time.