

Input: $B = \{b_1(x_1, y_1, x_2, y_2), \dots, b_N\}$, $S = \{s_1, \dots, s_N\}$, N_t , N_c
 B is the list of initial detection boxes,
 (x_1, y_1) and (x_2, y_2) are the upper-left corner and the lower-right corner
coordinates of each b respectively
 S contains corresponding detection scores
 N_t is the NMS threshold
 N_c is the correlation threshold

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begin
   $D \leftarrow \{\}$ 
   $A \leftarrow \{\}$ 
  while  $B \neq \text{empty}$  do
     $m \leftarrow \text{argmax } S$ 
     $M \leftarrow b_m$ 
     $D \leftarrow D \cup M$ ;  $B \leftarrow B - M$ 
    for  $b_i$  in  $B$  do
      if  $\text{iou}(M, b_i) \geq N_t$  then
        for  $b_j$  in  $B$  do
          if  $\text{iou}(M, b_j) * s_j \geq N_c$  then
             $A \leftarrow A \cup b_j$ 
          end
           $B \leftarrow B - b_j$ ;  $S \leftarrow S - s_j$ 
        end
      end
    end
     $A \leftarrow A \cup b_i$ 
    for  $a_i$  in  $A$  do
       $\text{min\_}x_1 \leftarrow \text{argmin } x_1$ ;  $\text{max\_}y_1 \leftarrow \text{argmax } y_1$ ;
       $\text{max\_}x_2 \leftarrow \text{argmax } x_2$ ;  $\text{min\_}y_2 \leftarrow \text{argmin } y_2$ 
    end
     $b_i.x_1 \leftarrow \text{min\_}x_1$ ;  $b_i.y_1 \leftarrow \text{max\_}y_1$ ;
     $b_i.x_2 \leftarrow \text{max\_}x_2$ ;  $b_i.y_2 \leftarrow \text{min\_}y_2$ 
  end
end
  return  $D, S$ 
end

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