
Algorithm 1: Belief-based Prediction Aggregation

```
1 function prediction_aggregator ( $P, D$ );  
   Input : Probability distribution over target categories of all images for  
           one product  $P$ , product  $D$   
   Output: Category prediction of the product  
2 for  $candidate \in candidates\_pool$  do  
3   for  $image \in images_D$  do  
4     calculate exclusive average and standard deviation of probability  
       predictions of candidate category among all images except for  
       current image;  
5     if  $P(candidate|image)$  outside 95% confidence interval then  
6       | exclude the image;  
7     else  
8       end  
9     update candidate score;  
10 end  
11 find winner with highest score;  
12
```
