
Algorithm 1: Democratic Co-Learning - predict (combine)

Input: $\mathbf{H}_1, \mathbf{H}_2, \dots, \mathbf{H}_n$ and x (instance)

Output: Combined hypothesis (prediction)

1 **for** $i = 1, \dots, n$

2 Use \mathbf{L} to calculate the 95% confidence interval $[l_i, h_i]$ de \mathbf{H}_i

3 $w_i = (l_i + h_i)/2$

4 **endfor**

5 **for** $i = 1, \dots, n$

6 **if** $H_i(x)$ predicts c_j y $w_i > 0.5$

7 Add H_i to the group G_j /* j is a label */

8 **end**

9 **endfor**

10 **for** $j = 1, \dots, r$

11 $\bar{C}_{G_j} = \frac{|G_j|+0.5}{|G_j|+1} * \frac{\sum_{H_i \in G_j} w_i}{|G_j|}$

12 **endfor**

13 H predicts with the group G_k with $k = \arg \max_j (\bar{C}_{G_j})$

14 **return** H
