

Adaptive nearest neighbors for partial labels learning

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Resumen. Partial labels learning (PLL) is a weakly supervised setting in which each instance is associated with a bag of labels rather than the true label, introducing ambiguity during training. Existing PLL methods are tailored to specific assumptions and fail in more general scenarios. While nearest-neighbor approaches do not assume restrictive assumptions, they require careful selection of the number of neighbors—a task that is particularly challenging in PLL. In this work, we propose a nearest-neighbor method for PLL that adaptively determines the optimal number of neighbors for each instance and is effective in general scenarios. We provide theoretical performance guarantees for our method under more general conditions than previous work. Experimental results demonstrate that our method performs comparably to k NN with the best choice of the number of neighbors and consistently outperforms state-of-the-art approaches in general PLL scenarios.

Palabras clave: aprendizaje con etiquetas parciales; garantías de rendimiento; vecinos más cercanos; etiquetas candidatas.

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