

# Combining classifiers with multi-representation of context in word sense disambiguation

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**Abstract:** In this paper, we first argue that various ways of using context in WSD can be considered as distinct representations of a polysemous word under consideration, then all these representations are used jointly to identify the meaning of the target word. Under such a consideration, we can then straightforwardly apply the general framework for combining classifiers developed in Kittler et al. [5] to WSD problem. This results in many commonly used decision rules for WSD. The experimental result shows that the multi-representation based combination strategy of classifiers outperform individual ones as well as known techniques of classifier combination in WSD. © Springer-Verlag Berlin Heidelberg 2005.

**Index Keywords:** Classifiers; Data processing; Decision theory; Problem solving; Word processing; Combination strategy; Kittler; Polysemous word; Word sense disambiguation (WSD); Data mining

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