



## An Assessment of CCP Approach in Statistical Learning

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In statistical learning, numerous methods use proximity graphs to model the structure of the data. Among proximity graphs, class cover catch digraphs (CCCDs) have been introduced primarily to investigate the class cover problem (CCP) but also were employed in classification and clustering. However, similar to all supervised learning algorithms, CCCDs have their own advantages and drawbacks. In this study, we apply CCCD classifiers on various types of artificial datasets in order to further evaluate their classification performance. We consider various scenarios: (i) one class is embedded inside of the other; (ii) classes have overlapping support where the level of overlap is controlled by a parameter; (iii) classes are from a mixture of uniform distributions with circular support.

**Keywords:** class cover problem; proximity graphs; classification