



A new framework for optimal classifier design

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The use of alternative measures to evaluate classifier performance is gaining attention, specially for imbalanced problems. However, the use of these measures in the classifier design process is still unsolved. In this work we propose a classifier designed specifically to optimize one of these alternative measures, namely, the so-called F-measure. Nevertheless, the technique is general, and it can be used to optimize other evaluation measures. An algorithm to train the novel classifier is proposed, and the numerical scheme is tested with several databases, showing the optimality and robustness of the presented classifier.

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