HYBRID PERFORMANCE MEASURES AND MIXED EVALUATION METHOD FOR DATA CLASSIFICATION PROBLEMS

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This study investigates two different issues of performance measure in data classification problem. First, this study examines the use of accuracy measure as a discriminator for building an optimized Prototype Selection (PS) algorithm. Second, this study evaluates the current evaluation practices for evaluating and comparing the two performance measures.

From the literature, the use of accuracy could lead to the underperforming of the evaluation process due to less distinctive and less discriminable values, and also unable to perform optimally when confronted with imbalanced class problem. Interestingly, the accuracy measure is still widely used in evaluating data classification problem. On the evaluation analysis, many previous studies emphasize on the generalization ability in evaluating and comparing the performance measures. Only few efforts have been dedicated to evaluate and compare the performance measures using different performance characteristics. In fact, no previous studies