

## INPUT FEATURES SELECTION TO IMPROVE THE PERFORMANCE OF A FUZZY CLASSIFIER

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**Abstract.** This paper presents a proposal for the selection of input features for an automatic classification system. This selection must identify the most representative features, called *golden set*, of the problem to be studied and contribute to the improvement of the classifier's performance, increasing its success rate. Then, an automatic classification system is constructed using fuzzy Logic, since it is possible to consider uncertainties and the fuzziness among sets to be classified. In order to apply the presented proposal, a database from [8] is considered, which is constituted by 16 input features to classify 10 Latin Musical genres. The proposal of this paper was able to select the 4 of 16 most representative input features and to improve the classifier's performance, increasing the success rate from 90.7% (result obtained by [3], using the 16 input features) to 97% (using the *golden set*).

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