Abstract

This paper proposes the algorithm ProSum to perform the supervised classification of the data. In the proposed algorithm data is fuzzified by using \( \gamma \)-type membership function to give the feature belongingness of each pattern to each class. By using Product aggregation reasoning rule (PARR) and sum aggregation reasoning rule (SARR), the belongingness of each pattern to each class is determined. Finally by using defuzzification operation each pattern is assigned with the predicted class label. In this paper, proposed algorithm is applied to four dataset: IRIS, WINE, BUPA and PIMA. Accuracy of the results is measured by using the performance measures Misclassification (MC), Percentage of overall class Accuracy (PA) and Kappa Index of Agreement (KIA). The performance of ProSum is compared with C4.5 and PARR.

References

A Fuzzy Classifier based on Product and Sum Aggregation Reasoning Rule

21-45.

Index Terms

Computer Science  Fuzzy Systems

Keywords
Classification  Fuzzy logic  Aggregation operator  ?-type membership function