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Multy-Classifer Fusion Method Based on the Reliability of the Individual Classifiers

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Multi-classifier fusion is a technique used to combine individual decisions of several classifiers in order to improve the final classification performance. Fusion methodologies are necessary to realize multi-classifiers-based monitoring systems. It leads to more accurate decisions. In this paper two fusion approaches are presented. First approach is based on the reliability analysis and Dempster-Shafer theory (DST) for fault analysis. The first approach is appropriate to combine two independent classifiers. The second approach is developed to combine any number of independent classifiers. It is based on an Artificial Neural Network (ANN). The realized ANN includes two hidden layers. First layer will be tuned using the weighting factors w to make an acceptable decision about the current state of the system. The second layer includes the activation functions to define the decision boundary between different system states.

Ключевые слова:

Содержание.

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