

## Using Self Organizing Feature Maps for Classification in RGB Images

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**Abstract :** Artificial neural networks have gained a lot of interest as empirical models for their powerful representational capacity, multi input and output mapping characteristics. In fact, most feed-forward networks with nonlinear nodal functions have been proved to be universal approximates. In this paper, we propose a new supervised method for color image classification based on self organizing feature maps (SOFM). This algorithm is based on competitive learning. The method partitions the input space using self-organizing feature maps to introduce the concept of local neighborhoods. Our image classification system entered into RGB image. Experiments with simulated data showed that separability of classes increased when increasing training time. In additional, the result shows proposed algorithms are effective for color image classification.

**Keywords :** classification, SOFM algorithm, neural network, neighborhood, RGB image

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