Pattern Recognition System for Textile's Textural Features by Using an Artificial Neural Networks System

Sar Sardy, author

Deskripsi Lengkap: https://lib.ui.ac.id/detail?id=76466&lokasi=lokal

----

Abstrak

In this research it is applied a pattern recognition system by using an artificial neural networks to recognize several samples on weaving products, such as plain weave, twill weave, and sateen weave. In order to extract textural characteristics or features from sample images, it is used the Neighboring Grey Level Dependence Matrix (NGLDM)-method as proposed by Sun, which is invariant under rotation and linear grey level transformation. Five textural features i.e. Small Number Emphasis, Large Number Emphasis, Number Non uniformity, Second Moment, and Entropy will be used as the representative features of sample images. Those features are used as input to the neural networks, which have learned by the back propagation method. Baths methods (continuous and periodic) for changing the interconnection weights, and the performances of the two types of neuron transfer functions are also observed and investigated, in order to obtain an optimal network configurations. The results of experiment will be very useful for the next stage of research in designing an integrated vision system for the recognition of weaving product's quality in textile industry.