CHARACTER PATTERN RECOGNITION AND TRANSLATION AKSARA KATAKANA USING IMPLEMENTATION OF ALGORITHM ASSOCIATIVE MEMORY HETERO-ASSOCIATIVE TYPE

ABSTRACT

Studying Japanese Katakana characters relatively difficult, especially the characters are used different from the Latin alphabet that we usually use. The unique shape of character requires special attention and a lot more time in studying writing. Neural networks and pattern recognition can help ease learning character. In this research, artificial neural network algorithm used is Associative Memory Hetero-Associative type. There are two processes in this research that is process of training and testing. The training process begins from Katakana characters handwriting is converted into digital image then processed to obtain the value of the binary image. The value of each pixel of the image is associated and used as input to the neural network. The end of this process produces the weight matrix values that will serve as the basis for testing Katakana character patterns. In the testing process tested characters will be processed with the value obtained in the training process. Results from the research showed that the method of associative memory hetero-associative type can recognize patterns of 74.7826% from the pattern that has been trained and 63.0435% of the samples testing patterns (not trained).

Keywords: Neural Network, Associative Memory Hetero-association type, Pattern Recognition, Aksara Katakana.