

Comparison of Bidirectional Associative Memory, Counterpropagation and Evolutionary Neural Network for Java Characters Recognition

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Abstract— Javanese language is the language used by the people on the island of Java and it has its own form of letters called Java characters. Recognition of Java characters is quite difficult because it consist of basic characters, numbers, complementary characters, and so on. In this research we developed a system to recognize Java characters and compared three methods of neural network namely bidirectional associative memory, counterpropagation and evolutionary neural network. Input for the system is a digital image containing several Java characters. Digital image processing and segmentation are performed on the input image to get each Java character. For each Java character, feature extraction is done using ICZ-ZCZ method. Output from feature extraction will become input for neural network. From experimental result, evolutionary neural network can perform better recognition accuracy than the other two methods.

Keywords—Java characters recognition, bidirectional associative memory, counterpropagation, evolutionary neural network