

ABSTRACT

IDENTIFICATION SYSTEM AND PATTERN RECOGNITION OF SIGNATURE USING NEURAL NETWORK SYSTEM WITH BACKPROPAGATION METHOD

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Image pattern recognition system of human signature is one in the application of computer science, which can help data processing signatures. Data processing with using image processing as assistance system to improve the performance of the control system and information, a specialty on the banking and notary sector or other institutions. There are some steps in the image pattern recognition system of human signature, first image signature resulting from the scanning process then will be cut manually the image of digital signature, the next process performed threshold, the detection of a boundary, subdivision of image and representation of the value inputs. The training process using two treatment, first with different value of learning rate and the second training process with different value unit of hidden layer, The best training obtained at value of learning rate 0.3 and value unit of hidden layer 10 with resulting the time training brief and error minor relatively. Pattern recognition of signatures is performed with two experiment, that is with the one number of training pattern and five number of training pattern. From the research data, the capability of a system to recognize external pattern is improved if the number of training pattern is increasing, with the number of training pattern one system is able to recognize the external pattern 50% while the system with five number of training patterns is able to recognize of patterns external 70%.

Keywords: Image Processing, Learning rate, Unit Hidden Layer, Training Patterns, Signature.