REAL TIME CURSIVE SCRIPT HANDWRITING RECOGNITION USING LEARNING VECTOR QUANTIZATION ALGORITHM

Name : Ulir Rohwana
NRP : 1209 100 702
Department : Mathematics FMIPA - ITS
Supervisor : Prof. Dr. H. M. Isa Irawan, M.T.

Abstract

Learning Vector Quantization (LVQ) Algorithm on research by Asworo (2010) has been proven able to do the handwriting single character recognition with an accuracy of 86%. Therefore, with the purpose of testing the LVQ algorithm on the cursive script handwriting recognition, this research develop models and applications of real time cursive script handwriting recognition using LVQ algorithm. The system was read the user's handwriting in real time. The writing was on the canvas that provided by using the mouse. Handwriting that obtained on the canvas was acquired by the system so as to get the coordinates of the pixels that traversed by the mouse scratches. The coordinates are be reference by the system to perform segmentation process. Then the system was normalized the image so that the image’s size is 10x10. The system got input vector that required by LVQ from the normalization. Based on the results of the testing that have been done, the system is able to recognize handwriting each letter with an accuracy of 75.13% for the capitals and 35.38% for non-capital letters. For character recognition in cursive script, the system recognize with an accuracy of 25.85%.

Keywords: Cursive Script, Learning Vector Quantization, Optical Character Recognition, Real Time.