

Title: Local Feature Based Offline Handwritten Thai Character Recognition
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Abstract

Handwritten character recognition is a process of converting handwritings into machine-encoded text. Nowadays, there are many techniques and methods proposed to enhance accuracy of handwritten character recognition for many languages spoken across the globe. In this project a local feature based approach is proposed to enhance the accuracy of handwritten offline character recognition for individual Thai alphabets. A gradient invariant feature set consisting of texture and shape features is extracted from a noiseless 2 dimensional median filtered image and normalized. This feature extracted is trained and tested with Support Vector Machine (SVM) using Radial Basis Function (RBF) kernel. The performance of all the experiments carried out is aimed at improving the classification accuracy after n-fold cross validations. Implementation is by MATLAB powered with LIBSVM toolbox.

Graphical Abstract

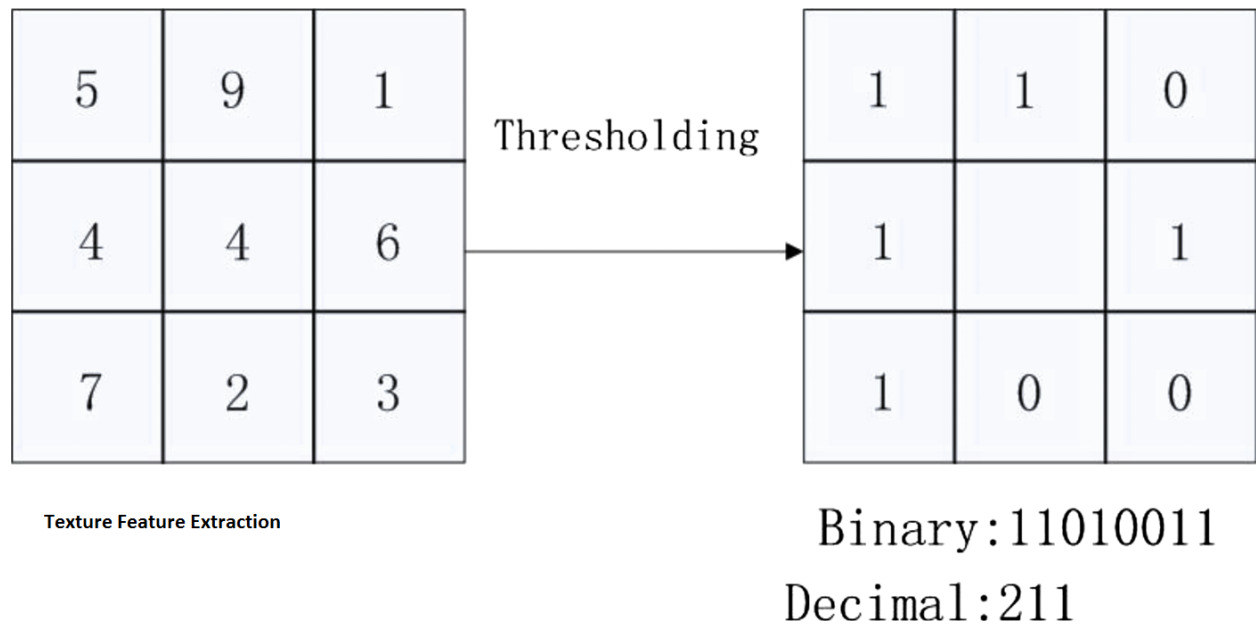


Fig 1: Texture Feature Extraction using Local Binary Pattern

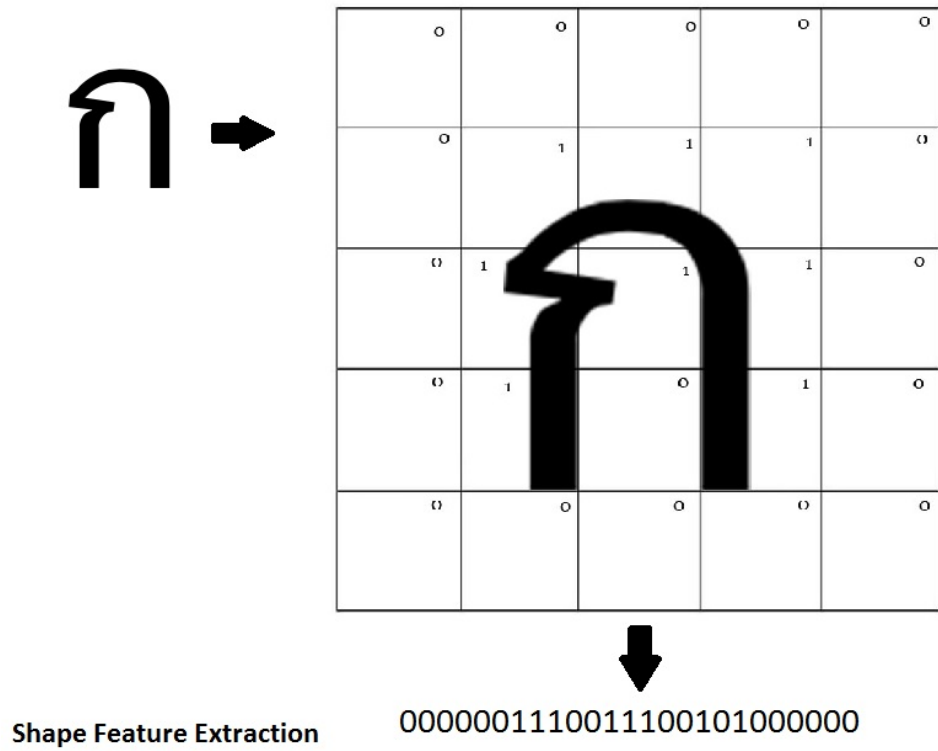


Fig 2: Shape Feature Extraction

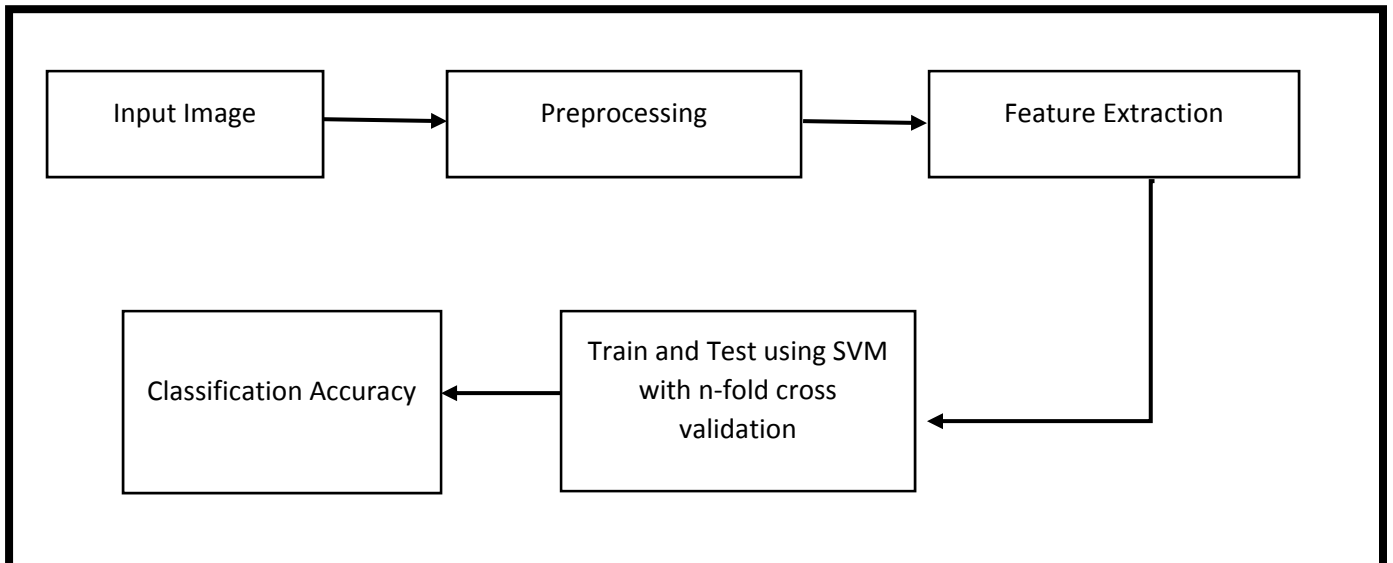


Fig 3: Proposed Framework for Offline Handwritten Character Recognition