



ROYAL UNIVERSITY OF PHNOM PENH

Master of Science in Information
Technology Engineering

Software Development

ONLINE HANDWRITING RECOGNITION FOR KHMER CHARACTERS USING LIPITK TESTBED

Advisors: Mr. Taing Nguonly

Keywords: Online Handwriting Recognition, LipiTk, Nearest Neighbor, Dynamic Time Warping, Neural Network

Field related: Pattern Recognition, Machine Learning, Neural Network

Abstract

Online handwriting application is well-suited for platform where the number of characters is more than the space limited on the keyboard. Khmer characters consist of many consonants, vowels, independent vowels, sign, etc. These individual characters are far more difficult to fit with mobile keypad. Then online handwriting is a promising technique for those devices. There is limited research area for Khmer characters online handwriting. So this topic presents various methods for Khmer online handwriting using LipiTk testbed. Online handwriting recognition involves with a number of steps. (1) Preprocessing, (2) Feature Extraction, (3) Recognition. LipiTk provides many algorithms for universal handwriting recognition such as Nearest Neighbor, Dynamic Time Warping and Neural Network. The task is to collect training dataset and to compare Khmer character recognition's algorithm mentioned earlier.

Reference:

1. <http://lipitk.sourceforge.net/>, 2011