# Y-Position based Myanmar Touching Character Segmentation and Sub-components based Character Classification

**Kyi Pyar Zaw**
**kyipyarzaw08@gmail.com**
**University of Computer Studies, Mandalay, UCSM**

**Nu War**
**nuwar81@gmail.com**
**University of Computer Studies, Mandalay, UCSM**

This paper publicizes the touching character segmentation and recognition for the Myanmar warning text signboards. In the touching character segmentation step of this system, pixel connected component characters are extracted using connected component (CC) labeling with bounding box process. This system firstly search location zone of bounding box characters using minimum y-position and high features. This system develops a touching character segmentation technique that segment the Myanmar touching characters based on zone location. This segmentation technique uses the existing features such as number of holes, end points, horizontal black stroke count, vertical black stroke count, pixel count and the new features such as upper and lower sub-components in two horizontal zones, left and right sub-components in two vertical zones, end point existed zones. These features are further used in classification of segmented Myanmar characters. The system investigated on three types of datasets. First dataset includes 101 printed warning sign images. Second dataset includes 45 handwritten warning sign images that manually resized with various ranges based on visual font size, font style and number of text. The remaining dataset includes 152 real worlds Warning Sign Images (WSI) that automatically resized into 480x640 from 3120x4160 resolution and 640x480 form 4160x3120 resolution.