# Certain improvement in preprocessing fingerprint image using artificial neural network

## ABSTRACT

Biometrics is the science of measuring an individual's physical properties. Biometric systems are being used as high level security technologies that provide identification and verification of human characteristics for security proposes. Biometric is characterized based on the feature that is analyzed. Presently, fingerprint biometric is the most widely adopted biometric technologies in the industry. A number of methods are already available in the literature to identify the fingerprints. The general steps in preprocessing the fingerprint image recognition system consists of image capturing, enhancement, binarization, filtering, and image thinning process. In order to obtain the minutiae features from the image, the image must be thinned properly. The recognition rate of fingerprints minutiae depend on the method of thinning the images. In this paper, a simple algorithm is proposed to thin the fingerprint image and the results are compared with the existing methods. Simple neural network models are also developed to thin the fingerprint images.