

# Signature Verification using Image Processing & Neural Network

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**Abstract:** *The fact that signatures are widely used as a means of personal verification emphasizes the need for an automated verification system. Verification can be done offline or online depending on the application. The online system uses dynamic signature information collected in at the time the signature is made. Offline systems operate on a digitized image of a signature. We worked on offline verification of the signature using a set of shape-based geometry features. The features used were base tilt angle, aspect ratio, normalized area, center of gravity, number of side points, number of diagonal points and line slope combined with the centroids of the two signature halves image. Before extracting features, it is necessary to pre-process a digitized image to isolate the signature part and remove any existing parasitic noise. The system is initially trained using a database of signatures obtained from signatures that will be verified by the system. For each subject, an average signature is obtained combinations. The above characteristics are taken from his set of authenticator samples signatures. This average signature serves as a sample for verification against the confirmed test signature. In this article, we present how the problem has been addressed in the past decades, analyze recent advances in the field, and potential directions for future research.*

**Keywords:** Signature Verification

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