

# Signature identification and verification systems: a comparative study on the online and offline techniques

HEBA MOHSEN MOHAMED MOSAAD HUSSIEN, NEVEEN IBRAHIM  
MOHAMED GHALI ,nehal hamdy al-banhawy

## Abstract

Handwritten signature identification and verification has become an active area of research in recent years. Handwritten signature identification systems are used for identifying the user among all users enrolled in the system while handwritten signature verification systems are used for authenticating a user by comparing a specific signature with his signature that is stored in the system. This paper presents a review for commonly used methods for pre-processing, feature extraction and classification techniques in signature identification and verification systems, in addition to a comparison between the systems implemented in the literature for identification techniques and verification techniques in online and offline systems with taking into consideration the datasets used and results for each system.

*Future Computing and Informatics Journal 2020, December*