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Offline Signature Verification in Punjabi Based On SURF Features and Critical Point Matching Using HMM

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Abstract : Biometrics, which refers to identifying an individual based on his or her physiological or behavioral characteristics, has the capabilities to the reliably distinguish between an authorized person and an imposter. The Signature recognition systems can categorized as offline (static) and online (dynamic). This paper presents Surf Feature based recognition of offline signatures system that is trained with low-resolution scanned signature images. The signature of a person is an important biometric attribute of a human being which can be used to authenticate human identity. However the signatures of human can be handled as an image and recognized using computer vision and HMM techniques. With modern computers, there is need to develop fast algorithms for signature recognition. There are multiple techniques are defined to signature recognition with a lot of scope of research. In this paper, (static signature) off-line signature recognition & verification using surf feature with HMM is proposed, where the signature is captured and presented to the user in an image format. Signatures are verified depended on parameters extracted from the signature using various image processing techniques. The Off-line Signature Verification and Recognition is implemented using Mat lab platform. This work has been analyzed or tested and found suitable for its purpose or result. The proposed method performs better than the other recently proposed methods.

Keywords : offline signature verification, offline signature recognition, signatures, SURF features, HMM
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