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| Title | A thresholded Gabor-CNN based writer identification system for Indic scripts | | |
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| Abstract |  |
| Writer identification is the procedure of identifying individuals from handwriting. Writer identification is a common interest in biometric authentication and verification systems, and numerous studies are available for English, Chinese, Arabic, and Persian specific handwriting. This paper introduces a supervised offline Indic script writer identification system that can identify individuals using less than a single page of handwriting. A lightweight Convolutional Neural Network (CNN) architecture fused with non-trainable Gabor filters is used as an identification model that can recognize writers from scarce data. For the experiment, we used BanglaWriting dataset, which is openly available for Bengali writing and writer recognition. Further, we added Devanagari and Telugu datasets for evaluation. The overall evaluation shows that the proposed thresholded Gabor-based CNN architecture performs superior to numerous deep CNN architectures for Indic writer recognition. | |