An Automated Fraud Detection of Hall Ticket in an Offline Examination System using ANN Classifier

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Abstract

Document image analysis is a major research area in pattern recognition system for identification image objects within a document and their classification. Face recognition is most widely used and efficient system in biometric. Existing methods worked on these areas of document image analysis and face recognition separately. In this paper, an attempt is made to develop a novel system to authenticate a person to appear exam by comparing name, seat number, and photograph images on the hall ticket. An ANN classifier is used to detect fraud in the exam hall tickets. The main aim of the proposed work is to providing security technique for offline conduction of exams using hall ticket. At a coarse scale, hall ticket identification system also comprises of five phases: Preprocessing, Segmentation, Face detection, Feature extraction and ANN classification. For feature extraction 10 shape features and 6 histogram features of object occurrence in a new tessellation of hall ticket images are used and these features are given to the ANN classifier for recognizing the fraud in hall tickets. The proposed algorithm is experimented on a data set of two different institutes, with an average accuracy of 94.12%.
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References


Index Terms

Computer Science Pattern Recognition

Keywords
Preprocessing, Segmentation, Face detection, Feature extraction.