

Title: A Review on Feature Extraction and Feature Selection for Handwritten Character Recognition

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Abstract: The development of handwriting character recognition (HCR) is an interesting area in pattern recognition. HCR system consists of a number of stages which are preprocessing, feature extraction, classification and followed by the actual recognition. It is generally agreed that one of the main factors influencing performance in HCR is the selection of an appropriate set of features for representing input samples. This paper provides a review of these advances. In a HCR, the set of features plays as main issues, as procedure in choosing the relevant feature that yields minimum classification error. To overcome these issues and maximize classification performance, many techniques have been proposed for reducing the dimensionality of the feature space in which data have to be processed. These techniques, generally denoted as feature reduction, may be divided in two main categories, called feature extraction and feature selection. A large number of research papers and reports have already been published on this topic. In this paper we provide an overview of some of the methods and approach of feature extraction and selection. Throughout this paper, we apply the investigation and analyzation of feature extraction and selection approaches in order to obtain the current trend. Throughout this paper also, the review of metaheuristic harmony search algorithm (HSA) has provide.