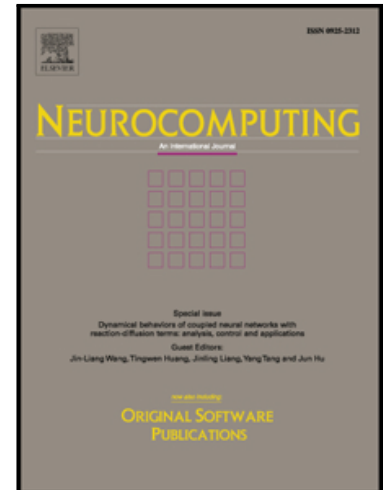


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Multi-label Text Categorization Using L_{21} -norm Minimization Extreme Learning Machine

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Abstract

Extreme learning machine (ELM) is extended from the generalized single hidden layer feedforward networks where the input weights of the hidden layer nodes can be assigned randomly. It has been widely used for its much faster learning speed and less manual works. Considering the field of multi-label text classification, in this paper, we propose an ELM based algorithm combined with L_{21} -norm minimization of the output weights matrix called L_{21} -norm Minimization ELM, which not only fully inherits the merits of ELM but also facilitates group sparsity and reduces complexity of the learning model. Extensive experiments on several benchmark data sets show that our proposed algorithm can obtain superior performances compared with other common multi-label classification algorithms.

Keywords: text categorization, multi-label learning, extreme learning machine, L_{21} -norm minimization

1. Introduction

With the development of the Internet and information technology, large numbers of text data have spawned in various forms. It is a big challenge to organize, manage and analyze such a huge data, and find useful information quickly, accurately and comprehensively. Text automatic classification is an important research point in the field of information mining. Compared to the

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