



CONVOLUTIONAL NEURAL NETWORK WITH LOCAL CLASSIFICATION PER NODE APPROACH FOR HIERARCHICAL TEXT CLASSIFICATION

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ABSTRACT

The focus of this paper is to explore the possibilities of using convolutional neural networks for hierarchical local text classification. One of the most researched models for hierarchical text classification is h-LR and h-SVM models, usually, using one of the hierarchical approaches. Moreover, recent research has demonstrated the ability to using CNN baseline model not only for image classification but for text classification, as well. Based on these observations, the authors proposed a novel solution to tackle the hierarchical text classification problem by hierarchical CNN model that reuses features maps to create additional fully-connected layers incorporating hierarchical local classification per node approach. Furthermore, multiple experiments are conducted in order to demonstrate the feasibility of proposed solutions and evaluate achieved performance by empirical comparison with the previously reported performance of h-LR and h-SVM using local per node approach trained with 20Newsgroup training datasets.

KEYWORDS: *Convolutional Neural Networks, Hierarchical Text Classification, Local Classification per Node Approach*

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