Classification of Texts with Neural Networks

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Classification of texts (sentiment analysis by applying neural networks) is differentiated from classification of other type of information by that every word has different meaning in different context, which complicates the problem. The article reviews two types of neural networks, convolutional and recurrent neural networks. Base of comments on films is used in the article for model construction. Via the given model, we are able to highly accurately (-97% accuracy) assess whether the film review is positive or negative. Recurrent neural networks were applied for processing the texts (analyze, categorize, classification) mostly, in contrast with the convolutional neural networks that were primarily used for classifying the multimedia information. However, research showed that convolutions can successfully be applied in classification of texts as well. Convolutions enable us to consider words' context in learning process, which solves the main problem of classifying the text – loss of context and improves the result at the same time.

The goal of the article is to create a system through which the costumer will be able to construct preferred model and will determine sentiment of the introduced textual information by its application (whether it is positive or negative).