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Morphological Processing of Punjabi Text for Sentiment Analysis of Farmer Suicides

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Abstract : Morphological evaluation of Indian languages is one of the burgeoning fields in the area of Natural Language Processing (NLP). The evaluation of a language is an eminent task in the era of information retrieval and text mining. The extraction and classification of knowledge from text can be exploited for sentiment analysis and morphological evaluation. This study coalesce morphological evaluation and sentiment analysis for the task of classification of farmer suicide cases reported in Punjab state of India. The pre-processing of Punjabi text involves morphological evaluation and normalization of Punjabi word tokens followed by the training of proposed model using deep learning classification on Punjabi language text extracted from online Punjabi news reports. The class-wise accuracies of sentiment prediction for four negatively oriented classes of farmer suicide cases are 93.85%, 88.53%, 83.3%, and 95.45% respectively. The overall accuracy of sentiment classification obtained using proposed framework on 275 Punjabi text documents is found to be 90.29%.

Keywords : deep neural network, farmer suicides, morphological processing, punjabi text, sentiment analysis
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