SENTIMENT ANALYSIS FOR SRI LANKAN NEWSPAPER HEADLINES USING MACHINE LEARNING AND DEEP LEARNING METHODS

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Abstract: Newspaper headlines have emerged as a ubiquitous form of communication in our modern society. These succinct news snippets hold the power to shape public perception and influence opinions on a wide range of topics. However, within this sea of headlines, sentiments vary widely, and the need to decipher their emotional nuances has never been more crucial. Sentiment analysis for newspaper headlines seek to unravel the underlying emotions, opinions, and attitudes conveyed within these concise yet impactful statements. While some headlines exude positivity, others may contain elements of concern or skepticism. This research delves into the realm of sentiment analysis, employing both machine learning and deep learning methods to accurately classify newspaper headlines based on their emotional tones, thereby providing a deeper understanding of the prevailing sentiments in the media landscape. The proposed model was evaluated for good accuracy in Daily Mirror newspaper headlines and found the sentiment predictably. To develop and test the proposed approach on a realistic setup, this study 2234 headlines from Daily Mirror newspaper from January 1, 2022, to July 31, 2022. The findings reveal that the Count Vectorizer feature extraction technique combined with the Random Forest classifier achieved the highest accuracy score of 0.7583 for the dataset. This grate accuracy score shows that the random forest model significantly outperforms machine learning and deep learning models for the considered dataset. Accuracy score shows that the random forest model significantly outperforms machine learning and deep learning models for the considered dataset.

Keywords: Daily Mirror, Deep learning, Machine learning, Newspaper headlines, Sentiment analysis

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