Title: Sentiment Analysis from YouTube Video Using Bi-LSTM-GRU Classification.

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Abstract: Sentiment analysis is a critical area of study right now. The evolution of social media, websites, blogs, opinions, ratings, and so on. It has expanded significantly along with the development of Internet usage. Through comments, likes, and other interactions with social media posts, people can share their thoughts and feelings. YouTube sentiment analysis has increased as a result of the sharp increase in the amount of user- or viewer-generated data or material on the platform. This study creates a deep learning classifier to analyze YouTube videos and detect the sentiment automatically. We train and assess two long short-term memory-based models. To ascertain which deep learning model on a labeled dataset performs best in terms of accuracy, recall, precision, *F*1 score, and ROC curve, experiments are conducted. The findings show that a Bi-LSTM-based model, with an accuracy of 71.74%, performs the best overall. The Bi-LSTM not only addresses the issue of long-term reliance, but also takes the text's context into account. Finally, a comparison is made using experimental findings obtained using various models.

Keyword: Deep Learning, GRU, Bi-LSTM, Neural Network, Learning Algorithms.

DOI: https://doi.org/10.1007/978-981-99-8937-9_21