**ABSTRACT**

This research is driven by creating a unique system that can provide short-term sentiment tracking through those interfaces linked to keyboards through the utilisation of deep learning strategies. These advances should be able to assist in delivering individualised user experiences, evaluation of customer opinions and proper communication, allowing for a huge step towards grasping awareness of and response to user reactions and inclinations in many applications. The proposed system leverages deep learning algorithms, specifically Transformers, to capture the contextual information and sequential dependencies present in user input. A large-scale dataset of labelled textual data containing sentiment annotations is utilised for training the sentiment detection model. The deep learning model is designed to learn the complex relationships between word embeddings and sentiment labels, enabling accurate sentiment classification. Real-time sentiment detection is enabled by integrating the model into a keyboard interface, which allows users to express their sentiments while typing. Continuously analysing input text, the system generates sentiment predictions, providing immediate feedback on the sentiment conveyed. Users can modify their expressions in real-time, ensuring better alignment with their intended emotions and communication goals. The proposed system is evaluated by assessing accuracy, efficiency, and utilisation. The sentiment detection model is opposed to already existing sentiment questions methods for which criteria such as faultlessness, retrieval, and F1 Score are considered. Besides that, user activities are analysed to evaluate the application usability as well as user fulfilment. This research demonstrates the effectiveness of a real-time sentiment detection keyboard system. With deep learning techniques integrated, users are able to classify sentiments accurately and express their emotions more effectively with real-time feedback. There are various applications for the system, such as personalised user experiences, sentiment-aware chat interfaces, customer feedback analysis, and sentiment-driven marketing.

Keywords: sentiment analysis, real-time, keyboard interface, deep learning, recurrent neural networks, user experience, customer feedback, sentiment classification.

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