

## ABSTRACT

Since the introduction of Web 2.0, which has resulted in the creation of blogs, forums, and online social networks, users have been able to establish a conversation and express their ideas on a variety of topics. Sentiment analysis, also known as opinion mining, is the study of people's feelings, sentiments, evaluations, appraisals, attitudes, and emotions toward various objects, such as products, services, organizations, people, situations, events, and subjects, as well as their features. Furthermore, emotion analysis is also a technique for recognizing distinct types of human emotions, such as fury, happiness, and depression.

As stated above, in this research, a sentiment and emotion analysis will be conducted. Long Short-Term Memory, a subset of RNNs, and NRC Word-emotion Association will be used respectively to train the model for this research. Merchants (in this example, writers) may utilize reviews on books to identify the quality of the books and improve the quality of their stores, while customers can analyze the contents of the books based on the reviews, thanks to the use of sentiment analysis and emotion analysis. Additionally, platform owners, such as Amazon, gain from reviews since they enhance traffic to their sites.

This research resulted in LSTM performing well in terms of macro- or weighted-average. Although the dataset contains very little on the negative review, the model can result 81.66%, 96.92%, 97.12%, and 9.63% in macro average F1-Score, weighted average F1-Score, accuracy, and loss respectively. Further analysis was performed to detect the emotion that the reviewers felt. The three books inside the dataset have the same dominant emotion which is trust. This indicates that the three books are worth recommending to other readers since the reviewer felt trust in those books. The Hobbit and Divergent has anticipation as the second most dominant emotion in the distribution which can be concluded that the review has some similarity in the fiction genre. While The All The Light We Cannot See has joy as the second most dominant emotion. This gave an indication that the reviewers like fictional war stories as the genre.

Keywords: sentiment analysis, emotion analysis, RNNs, word-emotion lexicon, word embedding.