ABSTRACT

The General Election of the President and Vice President of Indonesia is one of the realizations of democracy in Indonesia that will elect the president and vice president of Indonesia every 5 years. With the voter list exceeding 200 million people, utilizing the internet is essential for candidates to gain support. One of the most visited websites in Indonesia is YouTube. The presidential debate broadcast on YouTube sparked a public discussion in the video's comment section. In the comments column, there are positive and negative opinions from the public towards specific candidates.

This study conducted sentiment analysis on each candidate pair contesting the 2024 Indonesian Presidential and Vice Presidential Elections to determine public sentiment from the presidential debate video. The algorithm used for the classification of positive and negative sentiments is carried out using the Support Vector Machine (SVM) algorithm by implementing manual and lexicon labeling methods into the sentiment labeling. The model is evaluated using confusion matrix, classification report, and ROC/AUC curve to determine the best performance. After comparing the data-splitting ratio and sentiment labeling method, the SVM model with a 90:10 ratio using lexicon labeling is the best-performing model. On the Anies - Muhaimin dataset, the model produces an accuracy value of 0.93, precision value of 0.95, recall value of 0.95, F1-score value of 0.95, and AUC value of 0.98. On the Prabowo - Gibran dataset, the model produces an accuracy value of 0.91, precision value of 0.93, recall value of 0.91, F1-score value of 0.92, and AUC value of 0.97. Meanwhile, the Ganjar - Mahfud dataset produced an accuracy value of 0.91, precision value of 0.92, recall value of 0.97, F1-score value of 0.94, and AUC value of 0.96. The lexicon method increases the evaluation score by 1-7% higher than manual labeling across a wide range of data-splitting ratios.

Keywords— Lexicon, Presidential Debate, Sentiment Analysis, Support Vector Machine (SVM), YouTube