

## ABSTRACT

Indonesia as a democratic country, is set to hold the general election to choose the next President and Vice President every five years. The National Survey Institutions have a contribution on the measurement of the electability of the candidate by doing the survey. However, to do the survey there are shortcomings to it such as the costs for conducting the survey, the limited number of respondents that can be reached and the time to conduct a survey. In this era, Artificial Intelligence plays a big role in various fields such as survey. The method of the survey can be handled by artificial intelligence by doing a sentiment analysis on public opinion in social media.

There are many studies about sentiment analysis for candidate of Indonesian president that have been done before. In the last research about sentiment analysis for candidate of Indonesian president, Naïve Bayes algorithm is used as the method and the value of accuracy to 42.75%. However, there are shortcomings such as the data used, the method to labeling the data, and the performance of algorithm model used in the research. Therefore, the purpose of the research is to make the suggestion to do the survey by doing the sentiment analysis on public opinion in social media about 2024 president candidacy in Indonesian using Artificial Intelligence and optimization algorithm. Another purpose of doing the research is to search for the best model of algorithm to implemented on sentiment analysis in Indonesian.

The sentiment analysis does in the research is take the data from Twitter using several keywords and Valence Aware Dictionary for Sentiment Reasoning (VADER) method used to labeling the dataset. The VADER method will be combined with three algorithms such as Naïve Bayes, K – Nearest Neighbor (KNN) and Support Vector Machine (SVM). The result shows if the VADER method combined with SVM algorithm gets the best result among three algorithms where the value of accuracy is 94.48%. Furthermore, compared with conventional surveys, this research method can provide the first understanding of preference patterns based on data and also can be an additional tool for analyzing the preferences of presidential candidates.

**Keywords: Artificial Intelligence, Sentiment Analysis, Survey Method, Text Processing, VADER.**