

ABSTRACT

APPLICATION OF ALGORITMA SUPPORT VECTOR MACHINE FOR SENTIMENT ANALYSIS PROCESS REGARDING COMMUNITY RESPONSE TO COVID-19 VACCINE ADMINISTRATION

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The Indonesian government's efforts to reduce the level of transmission of the COVID-19 virus so that the negative effects released can be controlled, as well as by fulfilling the COVID-19 vaccination measures. This vaccination process was also carried out for the first time in Indonesia on January 13, 2021 by President Joko Widodo who received the Sinovac vaccine because it had gone through a phase III clinical trial process and received an EUA (Emergency use Authorization) from the Food and Drug Supervisory Agency (BPOM). Based on research in 2005, there are 16 million registered people in Indonesia who use the internet and in recent years it increased by 20 million in 2006. Twitter, where this platform is a place for people to be able to use the freedom of expression of most people. To overcome this problem, this study will analyze sentiment by classifying public responses into negative, neutral, and positive classes using the SVM algorithm to help the government to find out responses or issues that are circulating in the community about this COVID-19 vaccination program. So that it can be used as an evaluation material so that further vaccination activities can be handled. The first step is collecting datasets from Twitter social media, manual labeling, preprocessing, TF-IDF weighting, SVM classification model, evaluation and vtanggapanalization. The results of *preprocessing* 8071 tweet data related to COVID-19 vaccination activities, with a ratio of 70:30 with 5649 training data and 2422 testing data after performing Hyperparameter using GridSearchCV obtained 81.37% accuracy and showed that the best kernel used was the *Polynomial* kernel. With *confusion matrix* the results of the SVM algorithm are 75% Precision, 78% Recall, and 72% F1-score.

Keywords: COVID-19 Vaccination, Classification, Sentiment Analys