*Abstract*

*Information in the form of unstructured texts is increasing and becoming commonplace for its existence on the internet. This information is easily found and utilized by business people or companies through social media. One of them is Twitter. The use of Twitter has the disadvantage of an unstructured and large amount of text data, which reaches 2400 tweets per day. Consequently,, it is difficult for business people or companies to know public opinion towards service with limited resources. Public opinion on Twitter need to be classified into positive, negative, and neutral sentiments in order to know the response of customers for better service in the future. The Support Vector Machine (SVM) method is more optimal than the Naïve Bayes method. The weakness of the Support Vector Machine (SVM) method is that it uses a separator function that separates data into two classes. If the class wants to be separated more than two, modification is needed and affects the training time and memory size required. There are two approaches to implementing the multiclass Support Vector Machine method by combining several binary SVMs, namely One Against All (OAA) and One Against One (OAO). In this paper, this research contains the results of classifying multi-class Support Vector Machine (SVM) methods with five different weighting features for classifying tweet data and finding the best accuracy value when processed with large amounts of data. The results show that the TF-IDF feature extraction approach with unigram feature outperforms other methods allowing the classifier to achieve highest accuracy when work with larger datasets. The unigram TF-IDF combined with multi-class SVM has the highest average accuracy value of 80.59 compared to the other four models namely 52.53 bigrams, 53.54 trigrams, Unigrams + bigrams 76.13, and word cloud 70.33. The highest f-measure value gets from SVM multi-class method with the unigram feature and gamma parameter value of 0.7 which is 80.59. Multiclass SVM can classify neutral classes well. Multiclass SVM can classify 365 sentences out of 402 neutral sentences. Therefore, if using binary class classification, neutral is difficult to be classified.*

***Keyword : Text Classification, Multi-class Support Vector Machine, Term Frequency-Inverse Document Frequency.***