

ABSTRACT

X social media is one of the platforms commonly used by Indonesians to express opinions on various matters, such the Free Nutritious Meal (MBG) program. The MBG program is a program designed to provide healthy and nutritious food at no cost to children in Indonesia, this program aims to improve nutritional adequacy, help children's intelligence development, and prevent stunting problems. This study aims to classify tweets related to the MBG program using Support Vector Machine (SVM) by applying a Lexicon-Based approach and Chi-Square feature selection, so to obtain information about public sentiment towards the program. Data totaling 2876 tweets were obtained from crawling results on X social media. The data was labeled using InSet Lexicon and the data was divided into a ratio of 80:20 for the classification process. The classification results using SVM method are then evaluated using confusion matrix and k-fold cross validation. From the research results, the SVM method produces an average accuracy value of 83.42%, precision 84.21%, recall 83.42%, and f1-score 81.43%. While the SVM method with the additional application of SMOTE and Chi-Square feature selection produces the highest accuracy value of 95.83%, precision 95.85%, recall 95.83%, and f1-score 95.83%. The addition of SMOTE and Chi-Square feature selection is proven to improve the performance of the SVM model. From the classification results, it is found that public sentiment tends to be positive towards the MBG program.

Keywords : *Sentiment Analysis, Support Vector Machine, Chi-Square, Free Nutritious Meal, Lexicon-based*

ABSTRAK

Media sosial X merupakan salah satu platform yang umum digunakan oleh masyarakat Indonesia untuk menyampaikan opini mengenai berbagai hal, seperti program Makan Bergizi Gratis (MBG). Program MBG merupakan program yang dirancang untuk menyediakan makanan sehat dan bergizi tanpa biaya kepada anak-anak di Indonesia, program ini bertujuan meningkatkan kecukupan gizi, membantu perkembangan kecerdasan anak, dan mencegah masalah *stunting*. Penelitian ini bertujuan untuk mengklasifikasikan *tweet* terkait program MBG menggunakan *Support Vector Machine* (SVM) dengan menerapkan pendekatan *Lexicon-Based* dan seleksi fitur *Chi-Square*, sehingga didapatkan informasi mengenai sentimen masyarakat terhadap program tersebut. Data sejumlah 2876 *tweet* didapatkan dari hasil *crawling* di media sosial X. Data tersebut diberikan label menggunakan *InSet Lexicon* dan dilakukan pembagian data ke dalam rasio 80:20 untuk proses klasifikasi. Hasil klasifikasi menggunakan metode SVM kemudian dievaluasi menggunakan *confusion matrix* dan *k-fold cross validation*. Dari hasil penelitian, metode SVM menghasilkan nilai akurasi rata-rata sebesar 83.42%, presisi 84.21%, *recall* 83.42%, dan *f1-score* 81.43%. Sedangkan metode SVM dengan tambahan penerapan SMOTE dan seleksi fitur *Chi-Square* menghasilkan nilai akurasi tertinggi sebesar 95.83%, presisi 95.85%, *recall* 95.83%, dan *f1-score* 95.83%. Penambahan SMOTE dan seleksi fitur *Chi-Square* terbukti dapat meningkatkan performa model SVM. Dari hasil klasifikasi didapatkan bahwa sentimen masyarakat cenderung kearah positif terhadap program MBG.

Kata Kunci : Analisis Sentimen, *Support Vector Machine*, *Chi-Square*, Makan Bergizi Gratis, *Lexicon-Based*