PEMBANGUNAN MODEL KLASIFIKASI SENTIMEN MASYARAKAT TERHADAP PROGRAM MAKAN BERGIZI GRATIS BERDASARKAN OPINI DI YOUTUBE MENGGUNAKAN METODE PEMBOBOTAN TF-IDF DAN PENGKLASIFIKASIAN SVM

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ABSTRAK

Penelitian ini bertujuan untuk membangun model analisis sentimen terhadap opini masyarakat mengenai program makan bergizi gratis Presiden Republik Indonesia. Sumber data berasal dari kolom komentar pada platform YouTube, yang selanjutnya diproses melalui tahapan *preprocessing* seperti pembersihan teks, normalisasi, tokenisasi, penghapusan *stopword*, dan *stemming*. Setelah proses pembersihan, data dilabeli secara manual ke dalam tiga kelas sentimen: positif, netral, dan negatif. Ekstraksi fitur dilakukan menggunakan metode *Term Frequency–Inverse Document Frequency* (TF-IDF), kemudian hasilnya diklasifikasikan menggunakan algoritma *Support Vector Machine* (SVM). Evaluasi model dilakukan dengan menerapkan teknik *5-Fold Cross Validation* untuk memperoleh parameter model yang optimal. Hasil evaluasi menunjukkan bahwa model dengan *kernel polynomial* memberikan akurasi terbaik sebesar 75,25%, dengan nilai *precision* 75%, *recall* 75%, dan *F1-score* 75% yang seimbang di ketiga kelas sentimen. Penelitian ini menunjukkan bahwa kombinasi metode *TF-IDF* dan *SVM* efektif digunakan untuk menganalisis opini publik. Saran bagi peneliti selanjutnya adalah mempertimbangkan penggunaan algoritma berbasis *deep learning* dan memperluas sumber data dari platform media sosial lainnya guna memperoleh hasil analisis yang lebih komprehensif dan akurat.

Kata kunci: analisis sentimen, TF-IDF, SVM, komentar YouTube, makan bergizi gratis.

DEVELOPMENT OF PUBLIC SENTIMENT MODEL TOWARDS FREE NUTRITIONAL MEAL PROGRAM BASED ON OPINION ON YOUTUBE USING TF-IDF WEIGHTING METHOD AND SVM CLASSIFICATION

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ABSTRACT

The research objective was to construct a sentiment analysis model to assess public responses to the Free Nutritious Meal Program initiated by the President of the Republic of Indonesia. The data were sourced from the comments section on YouTube and underwent a series of preprocessing steps, including text cleansing, normalization, tokenization, stopword elimination, and stemming. Upon completion of the preprocessing phase, the textual data were manually annotated into three sentiment classes: positive, neutral, and negative. Feature representation was carried out using the Term Frequency–Inverse Document Frequency (TF-IDF) technique, followed by classification using the Support Vector Machine (SVM) algorithm. Model evaluation was conducted through the application of 5-Fold Cross Validation to identify optimal parameter settings. The evaluation outcomes revealed that the polynomial kernel yielded the highest classification performance, achieving an accuracy of 75.25%, along with precision, recall, and F1-score values each reaching 75% across all sentiment categories. These results suggested that the integration of TF-IDF and SVM provided an effective approach for analyzing public opinion. For future work, it is recommended to explore the implementation of deep learning-based models and incorporate data from additional social media platforms to enhance the depth and accuracy of sentiment analysis.

Keywords: *sentiment analysis, TF-IDF, SVM, YouTube Comments, free nutritious meals.*