

Abstrak (Indonesia)

Penelitian ini bertujuan untuk menganalisis sentimen pengguna aplikasi Ruangguru berdasarkan ulasan pada Google Play Store dengan klasifikasi sentimen positif, negatif, dan netral. Data penelitian terdiri dari 5.000 ulasan yang setelah proses filtering dan preprocessing menghasilkan 4.958 data akhir. Penelitian menggunakan metode Gaussian Naïve Bayes dengan pembobotan TF-IDF dan reduksi dimensi menggunakan Principal Component Analysis (PCA), serta penanganan ketidakseimbangan data menggunakan SMOTE. Evaluasi model dilakukan menggunakan 10-fold cross validation. Hasil penelitian menunjukkan bahwa kombinasi TF-IDF dan PCA mampu memberikan performa klasifikasi yang cukup baik dengan accuracy sebesar 78,05%, precision 84,01%, recall 78,05%, dan F1-score 80,13%. Penelitian ini diharapkan dapat memberikan gambaran mengenai persepsi pengguna terhadap aplikasi Ruangguru serta menjadi referensi dalam pengembangan penelitian analisis sentimen.

Kata Kunci: Analisis Sentimen, Ruangguru, Gaussian Naïve Bayes, TF-IDF, Principal Component Analysis (PCA), SMOTE.

Abstract (English)

This study aims to analyze the sentiment of Ruangguru application users based on reviews on the Google Play Store with sentiment classifications of positive, negative, and neutral. The research data consists of 5,000 reviews which, after the filtering and preprocessing process, resulted in 4,958 final data points. The study uses the Gaussian Naïve Bayes method with TF-IDF weighting and dimensionality reduction using Principal Component Analysis (PCA), as well as handling data imbalance using SMOTE. The model evaluation was conducted using 10-fold cross-validation. The results of the study show that the combination of TF-IDF and PCA is able to provide fairly good classification performance with an accuracy of 78.05%, precision of 84.01%, recall of 78.05%, and F1-score of 80.13%. This study is expected to provide an overview of users' perceptions of the Ruangguru application as well as serve as a reference for the development of sentiment analysis research.

.Keywords: *Sentiment Analysis, Ruangguru, Gaussian Naïve Bayes, TF-IDF, Principal Component Analysis (PCA), SMOTE.*