

ABSTRAK

Roblox merupakan platform *game online* yang memiliki ribuan ulasan pengguna di Google Play Store, di mana ulasan tersebut berpotensi menjadi sumber informasi penting bagi pengembang untuk mengevaluasi kualitas aplikasi. Penelitian ini bertujuan untuk melakukan analisis sentimen terhadap ulasan Roblox guna mengukur tingkat kepuasan pengguna. Pengumpulan data dilakukan melalui *crawling* dengan metode *temporal sampling*. Proses pelabelan otomatis menggunakan *Indonesian Sentiment Lexicon* (InSet) menunjukkan adanya ketidakseimbangan kelas, yaitu 2.469 ulasan bersentimen positif dan 404 ulasan bersentimen negatif. Penelitian ini menerapkan metodologi SEMMA (*Sample, Explore, Modify, Model, Assess*) dan menggunakan ekstraksi fitur *Term Frequency-Inverse Document Frequency* (TF-IDF). Guna mengatasi ketimpangan data latih, teknik *Synthetic Minority Over-sampling Technique* (SMOTE) diterapkan sebelum proses klasifikasi. Evaluasi model dilakukan dengan membandingkan performa tiga algoritma, yakni *Naïve Bayes*, *Support Vector Machine* (SVM), dan *Multilayer Perceptron* (MLP) pada empat skenario pembagian data. Hasil pengujian menunjukkan bahwa algoritma SVM dengan skenario data 80:20 menghasilkan performa klasifikasi terbaik, dengan tingkat akurasi sebesar 95,30%, presisi 90,09%, *recall* 87,64%, dan *F1-Score* 88,81%, mengungguli metode MLP dan *Naïve Bayes*. Hasil visualisasi kata turut mengindikasikan bahwa keluhan utama berpusat pada *bug* dan masalah *login*, sedangkan apresiasi didominasi oleh aspek interaksi bermain.

Kata kunci: Analisis Sentimen, Roblox, SMOTE, *Naïve Bayes*, *Support Vector Machine*, *Multilayer Perceptron*, TF-IDF.

ABSTRACT

Roblox is an online gaming platform with thousands of user reviews on the Google Play Store, potentially serving as a valuable source of information for developers evaluating app quality. This study aims to conduct sentiment analysis on Roblox reviews to measure user satisfaction. Data collection was conducted through crawling with a temporal sampling method. The automatic labeling process using the Indonesian Sentiment Lexicon (InSet) revealed a class imbalance, with 2,469 positive reviews and 404 negative reviews. This study applied the SEMMA (Sample, Explore, Modify, Model, Assess) methodology and Term Frequency-Inverse Document Frequency (TF-IDF) feature extraction. To address the imbalance in training data, the Synthetic Minority Oversampling Technique (SMOTE) was applied before the classification process. Model evaluation was conducted by comparing the performance of three algorithms: Naïve Bayes, Support Vector Machine (SVM), and Multilayer Perceptron (MLP) in four data sharing scenarios. Test results showed that the SVM algorithm with an 80:20 data scenario produced the best classification performance, with an accuracy rate of 95.30%, precision of 90.09%, recall of 87.64%, and an F1-Score of 88.81%, outperforming the MLP and Naïve Bayes methods. Word visualization results also indicated that the main complaints centered on bugs and login issues, while appreciation was dominated by aspects of gameplay interaction.

Keywords: Sentiment Analysis, Roblox, SMOTE, Naïve Bayes, Support Vector Machine, Multilayer Perceptron, TF-IDF.