ABSTRAK

Aplikasi myBCA merupakan aplikasi perbankan resmi milik Bank Central Asia (BCA) dengan tujuan mempermudah nasabah melakukan berbagai transaksi perbankan melalui *smartphone*. Jumlah pengguna aplikasi myBCA yang meningkat berpengaruh pada jumlah ulasan yang diberikan pengguna di Google Play Store. Sehingga semakin sulit untuk dianalisis secara manual. Penelitian ini bertujuan untuk mengembangkan *website* analisis sentimen ulasan aplikasi myBCA menggunakan metode *Suppot Vector Machine* (SVM) dengan kernel linear yang diklasifikasikan dalam dua kelas sentimen yaitu Positif dan Negatif. Data ulasan dikumpulkan dari Google Play Store sebanyak 10.000 ulasan menggunakan *library google-play-scrapper*. Selanjutnya melalui tahap *preparation* dan *preprocessing* diperoleh 8.237 ulasan bersih. Pelabelan data menggunakan metode *lexicon-based* yang menghasilkan pembagian kelas Negatif sebesar 69.5% dan Positif sebesar 30.5%. Pembobotan kata TF-IDF dengan 5.000 fitur teratas. Pengujian model dilakukan menggunakan *K-Fold Cross Validation* dengan variasi nilai K={3,5,7,10} dan nilai C={0.01,0.1,1,10,100}. Hasil pengujian menunjukkan kombinasi terbaik diperoleh pada K=7 dan C=10 dengan akurasi sebesar 95.74%, *precision* 95.73%, *recall* 95.74%, dan F1-*Score* 95.72%. *Website* dikembangkan menggunakan *framework* Flask dapat mengimplementasikan fitur-fitur yang dinyatakan valid berdasarkan pengujian *black box*. Hasil pengujian *System Usability Scale* (SUS) memperoleh nilai rata-rata sebesar 88.5% yang masuk ke kategori *Excellent*, membuktikan bahwa *website* dinilai mudah digunakan oleh pengguna.

Kata kunci: *Support Vector Machine*, Analisis Sentimen, myBCA, *Website*, Flask.

ABSTRACT

The myBCA application is the official banking application of Bank Central Asia (BCA) with the aim of making it easier for customers to carry out various banking transactions via smartphone. The increasing number of myBCA application users has an impact on the number of reviews given by users on the Google Play Store. So it becomes increasingly difficult to analyze manually. This research aims to develop a sentiment analysis website for myBCA application reviews using the Suppot Vector Machine (SVM) method with a linear kernel which will be classified into three sentiment classes, namely Positive and Negative. Review data was collected from the Google Play Store as many as 10,000 reviews using the google-play-scrapper library. Next, through the preparation and preprocessing stages, 8,237 clean reviews were obtained. Data labeling uses a lexicon-based method which produces a division into the Negative class of 69.5% and Positive of 30.5%. TF-IDF word weighting with top 5,000 features. Model testing was carried out using K-Fold Cross Validation with varying K values={3,5,7,10} and C values={0.01,0.1,1,10,100}. The test results show that the best combination is obtained at K=7 and C=10 with an accuracy of 95.74%, precision 95.73%, recall 95.74%, and F1-Score 95.72%. Websites developed using the Flask framework can implement features that are declared valid based on black box testing. The System Usability Scale (SUS) test results obtained an average value of 88.5% which falls into the excellent category, proving that the website is considered easy to use by users.

Keywords: *Support Vector Machine, Sentiment Analysis, myBCA, Website, Flask.*