Analisis Sentimen Kenaikan Bahan Bakar Menggunakan Support Vector Machine dengan Particle Swarm Optimization dan Genetic Algorithm sebagai Seleksi Fitur

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Abstract

BBM, or fuel oil, is one of the essential needs of the Indonesian people. The government's policy regarding the increase in fuel prices raises many opinions from the public. Twitter is one of the social media that Indonesian people often use to express opinions on a topic. In this study, sentiment analysis will be carried out on public opinion regarding the fuel price increase policy from Twitter social media. This research is expected to help determine public opinion regarding the fuel price increase policy with positive, neutral and negatif sentiments. The sentiment analysis method used is the Support Vector Machine (SVM) classification algorithm. The results of the accuracy of SVM are compared with accuracy by adding a feature selection process. The Particle Swarm Optimization (PSO) and Genetic Algorithm (GA) algorithms are used for the feature selection method. After several experiments using the three methods, the SVM method with the Radial Basis Function (RBF) kernel produced the best accuracy of 71.2%. The combination of the SVM method with the RBF and PSO kernels obtained an accuracy of 68.84%, and the combination of the RBF and GA kernel SVM methods obtained an accuracy of 69.52%.

Keywords: : fuel increase, sentiment analysis, SVM, PSO, GA