

ABSTRACT

Sentiment analysis on the Job Creation Law issue is crucial for automatically understanding public opinion. However, language complexity and suboptimal model parameters often hinder accurate classification. This study developed a sentiment classification model using a Support Vector Machine (SVM) optimized with Particle Swarm Optimization (PSO). Experiments were conducted using two preprocessing scenarios: stemming and lemmatization, as well as various combinations of kernels, parameters, and TF-IDF-based feature extraction. The test results showed that the lemmatization scenario performed better, achieving a peak accuracy of 66.9%, or the model successfully predicted 66.9% of the total data in the sigmoid kernel. This study contributes to improving the performance of the SVM model through a parameter optimization approach with PSO for sentiment analysis on social issues.

Keywords: *sentiment analysis, lemmatization, particle swarm optimization, stemming, support vector machine, job creation law.*