

ABSTRACT

In the midst of digital transformation, public interaction with government institutions is increasingly conducted through online platforms, one of which is via official websites. The Website Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu Kabupaten Sidoarjo provides a comment feature that enables users to submit feedback, suggestions, and inquiries. However, the high volume of incoming comments is often accompanied by the presence of spam, such as irrelevant promotions or advertising links, which can disrupt the process of identifying important comments. Therefore, this study aims to classify spam and non-spam comments using the Support Vector Machine (SVM) algorithm, which is known for its strong performance in text classification tasks.

To address the imbalance in the number of data between the spam and non-spam classes, the Synthetic Minority Oversampling Technique (SMOTE) is applied as a data balancing method. The experimental results show that the combination of the RBF kernel with parameters $C = 1$ and $\gamma = 1$, along with the use of SMOTE, achieves an accuracy of 98.62%, which is higher than the 98.27% obtained without SMOTE. In addition, the model also shows improvement in recall and F1-score, especially in the non-spam class. This research demonstrates that the integration of SVM and SMOTE can effectively improve the quality of comment classification and has the potential to be applied in text-based comment filtering systems for other public service platforms.

Keywords: *Clasification, DPMPTSP, SVM, SMOTE*