

Abstract

Health plays an important role in responding to changes in lifestyle and public health challenges, especially in dealing with high blood sugar levels which are often triggered by unhealthy eating patterns. One of these conditions is Diabetes Mellitus type II. This research aims to classify Type II Diabetes Mellitus using the Gaussian Naive Bayes method and SVM with an RBF kernel and variations in parameter C. The research results show that SVM with an RBF kernel with parameter $C = 1$ provides better performance than other methods. The accuracy value obtained was around 94.87% using the 1st feature, SVM with the RBF kernel and parameter $C = 1$ showed significant results, while Gaussian Naive Bayes achieved an accuracy of around 92.95% with the 2nd feature. Confusion matrix analysis with SVM provides better accuracy than Gaussian Naive Bayes. Thus, these findings provide a deeper understanding of the classification of type II diabetes mellitus, which can contribute to efforts to prevent and treat type II diabetes mellitus.

Keywords: Classification, Diabetes Mellitus Type II, Support Vector Machine, Naive Bayes, Cross Validation, Confusion Matrix.