

COMPARISON OF NAÏVE BAYES AND K-NEAREST NEIGHBOR METHODS FOR DETECTING DIABETES

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ABSTRACT

A healthy lifestyle is an important aspect in maintaining a healthy body, but unfortunately it is often ignored by today's young generation. This causes the emergence of various diseases related to unhealthy lifestyles, one of which is diabetes. Diabetes is a condition where blood sugar levels become so high that the body is unable to process it properly. The aim of this research is to compare two classification methods, namely Naïve Bayes and K-Nearest Neighbor. The research results show that the K-Nearest Neighbor (K-NN) method without using the SMOTE technique has the highest accuracy of 81.77% in detecting diabetes, even though it has relatively low precision and recall. On the other hand, the Naïve Bayes method has an accuracy of 75.38% with higher recall. However, both methods have precision that still needs to be improved. These results show that the use of both methods can make a valuable contribution in the classification of diabetes patients, but improvements need to be made to increase precision in the management of this disease.

Keywords: *Naïve Bayes, K-Nearest Neighbor, Classification, Diabetes, Comparison.*