

OPTIMIZATION OF THE K-NEAREST NEIGHBORS ALGORITHM USING THE ELBOW METHOD ON STROKE PREDICTION

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Abstract	Stroke is the second most deadly disease in the world according to WHO. The sufferer has an injury to the nervous system. Because of this, health experts, especially in the field of nursing, need special attention. Technological advances continue to change over time so that information needs are needed in life. Currently the data on stroke sufferers is extensive enough so that adequate information presentation techniques are needed so that the information received is very accurate and in accordance with user needs. Therefore, it is necessary to process data mining on stroke patient data to obtain useful information for users. This study aims to prove the performance of the Elbow Method to produce the optimum k value in the stroke prediction data using the K-Nearest Neighbors (KNN) algorithm. The optimum k value is generated from the Elbow Method which is executed with the Google Collaboratory using the Python programming language. The test results show that the Elbow Method produces the optimum k value at k = 7. The KNN model that uses the optimum k value from the Elbow Method can increase the accuracy and precision values $\hat{A}c\hat{A}c\hat{A}c$ reaching 6% and 0.12, respectively.
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Author	Ir. YOGIEK INDRA KURNIAWAN, S.T, M.T