

ABSTRACT

COMPARATIVE ANALYSIS OF PERFORMANCE OF SUPPORT VECTOR MACHINE WITH RANDOM FOREST ALGORITHM IN CLASSIFICATION OF CERVIC CANCER RISK

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Classification of cervical cancer is done so that delays in the diagnosis process can be avoided and the public, especially women, can find out the disease early. Classification can be done in various ways, one of which is using computerization. Classification process with computerization can be done with several algorithms. One example of an algorithm for the classification process is the Support Vector Machine and Random Forest. Comparative analysis of this algorithm focuses on observation or observation by making comparisons of two classification algorithms, namely Support Vector Machine and Random Forest. The method used in this research is to process data taken from the UCI Machine Learning website which is then classified using the Support Vector Machine and Random Forest algorithms. The results of the classification process will produce accuracy values and computational processing time which will be analyzed to find out which algorithm has the best performance. In the training process, the two algorithms have the same accuracy of 96.1% (Excellent Classification) with computation time superior to the Support Vector Machine algorithm by a difference of 0.003 seconds. In the testing process, the Random Forest is higher in terms of accuracy, which is 92.7% compared to the Support Vector Machine of 88.1%. Support Vector Machine is still superior in computing time by a margin of 0.002 seconds.

Keywords: Cervical Cancer, Classification, Random Forest, Support Vector Machine