ABSTRACT

Development of an Intelligent System to Detect Stroke Disease Using Vector Machine Support Algorithm

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Stroke is a dangerous disease that attacks the nerves of the brain due to disruption of blood flow to the brain. There are two main types of stroke, namely ischemic and hemorrhagic. Ischemic is a type of stroke caused by a blockage of blood vessels in the brain. Hemorrhagic is a type of stroke caused by the rupture of blood vessels in the brain due to high blood pressure. The World Stroke Organization (WSO) stated that the number of new cases of stroke was 13.7 million per year. The high mortality rate caused by stroke is a serious problem and must be minimized. Based on this, researchers are interested in developing and raising the topic of stroke diagnosis, by building a system that can predict a person's likelihood of having a stroke using machine learning. The features used as predictive variables are gender, age, hypertension, heart disease, marital status, area of residence, glucose value, body mass index, smoking status. The model built is able to predict stroke based on machine learning. Apart from that, the system is able to make predictions on websites using the SVM algorithm. The accuracy obtained in testing was 87.17%.

Keywords: Machine Learning, Stroke, SVM.

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