DEVELOPMENT OF DASHBOARD OF INFORMATION SYSTEM AND PREDICTION OF TUBERCULOSIS CASES WITH WEB-BASED DECISION TREE ALGORITHM

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ABSTRACT

Ngaglik I Health Center provides TB (Tuberculosis) examinations for early detection or screening of TB suspects as well as handling and treating TB patients. Tuberculosis is caused by the acid-fast bacillus Mycobacterium tuberculosis, which spreads when TB sufferers cough or sneeze, releasing bacteria into the air. One of the causes of this case is the lack of information and education from health workers about TB and has not been equipped with a prediction system, resulting in a lack of public knowledge about the dangers of TB. This study aims to develop a web-based TB case information and prediction system dashboard that can improve user understanding of TB information, treatment, and prediction. There are 83 data used in this study derived from TB patient records by lung specialists. The waterfall method is used in the system dashboard development process and the Decision Tree artificial intelligence (AI) algorithm is used to process patient data. The results of the study are in the form of cured and uncured output and achieve an accuracy of 100% on training data and 85.07% on test data. The results of the system trial using the black box method from 35 test scenarios obtained a 100% success rate, so that this system dashboard can contribute to increasing the accuracy of predictions in controlling TB cases.

Keywords*: Information system dashboard, Prediction, Tuberculosis (TB), Decision Tree, Website*