

IMPLEMENTATION OF THE C4.5 ALGORITHM FOR CLASSIFICATION OF NUTRITIONAL STATUS OF TODDLERS

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ABSTRACT

Currently, nutritional status is still determined manually based on the graph on the Kartu Menuju Sehat (KMS). This is very time consuming and carries the risk of being inaccurate. Based on these problems, this research was created with the aim of building a classification system for the nutritional status of toddlers using the C4.5 algorithm. The system in this research was built in the Python programming language using the Streamlit framework. The variables used in this system are based on anthropometric data or human body measurements, namely gender, age at measurement, body weight and height. The results of this system are nutritional status based on BB/TB, namely undernutrition, good nutrition, risk of overnutrition, overnutrition and obesity. The evaluation results of the 3 model scenarios in this research state that scenario 1 using the SMOTE technique produces the best performance among other models with accuracy of 88.46%, precision of 89.05%, recall of 88.70%, and f1-score of 88.60%.

Keywords: Classification, Nutritional Status of Toddlers, C4.5, Anthropometrics, Streamlit