

ABSTRACT

Stunting in infants in Indonesia is a serious and widespread problem that has a significant impact on children's physical and cognitive growth. The objective of this study is to develop a predictive model for stunting in infants using machine learning algorithms, specifically Support Vector Machine (SVM) and Gradient Boosting. As a case study, data from the BBLR and PBLR of Bekasi Regency were used. Before training the SVM and Gradient Boosting models, we provided an explanation of the dataset processing process, which includes data preprocessing and data splitting. Using the test data, model performance evaluation was conducted using metrics such as accuracy, precision, recall, F1 score, and ROC curve. Testing scenarios were also used to assess how the model responds to variations in certain parameters and conditions. Additionally, they were used to test how the model can be generalized to unseen datasets. This research is expected to provide a better understanding of the performance of SVM and Gradient Boosting in predicting stunting in infants, as well as the factors influencing stunting.

Keyword: *machine learning; Stunting; Support Vector Machine; Gradient Boosting*