

Classification of Nutritional Status in Children Aged 6-12 Years in Indonesia Using Ordinal Logistic Regression and Support Vector Machine (SVM)

Name : Flashy Fitria Nurfida
NRP : 1310100093
Department : Statistics FMIPA – ITS
Supervisor : Ir. Sri Pingit Wulandari, M. Si.
Co. Supervisor : Dr. M. Setyo Pramono, M. Si.

ABSTRACT

Nutritional problem is essentially a public health problem, but overcome it can't be done only with the approach of medical and health services. In Indonesia, one of the problems is the unfinished nutritional problems of malnutrition. Meanwhile, nutritional problems that threaten public health (emerging) is more nutritional. Attention to children, including children of primary school age must be improved, especially in matters related to nutritional problems. Nutritional status is influenced by the consumption of food and the use of nutrients in the body. Factor family characteristics also become one of the causes that can affect the nutritional status of children. In this research, the analysis of nutritional status using ordinal logistic regression and Support Vector Machine (SVM). Based on the research results with ordinal logistic regression, indicating that the predictor variables that influence nutritional status is the sum of consumption, age, occupation of household head, region, and carbohydrates, to model the male category, while in the female category of the model is the sum of consumption, work head family, region, and proteins. Based on an influential and significant variables in the ordinal logistic regression model, the results of SVM classification of nutritional status of children aged 6-12 years in Bengkulu was 54.69% for the category of men and 53.01% for women category. While in West Sulawesi

classification accuracy was 53.85% for the category of men and 68.75% for women category.

Keywords: *Nutritional Status, Ordinal Logistic Regression, Support Vector Machines, Classification Accuracy.*

