

Android-Based Nutritional Status Detection System for Toddlers Using the Fuzzy Mamdani Method

Moh. Munih Dian Widianta, S.Kom., M.T. *as chief counselor*

Moh. Bahrul ‘Ulum
Study Program of Informatics Engineering
Majoring of Information Technology

ABSTRACT

This research develops an Android-based nutritional status detection system for toddlers using the Fuzzy Mamdani method, responding to the high rates of malnutrition in Mangaran District, Situbondo Regency. The system integrates anthropometric parameters according to WHO and Indonesian Ministry of Health standards, utilizing a dataset from Posyandu Anggrek. Research results show a system accuracy rate of 88.24% in assessing toddlers' nutritional status based on 34 sample data, with blackbox testing verifying system functionality and User Acceptance Testing yielding an 88% acceptance rate. While demonstrating significant potential in improving toddler nutrition monitoring, this research also identifies needs for further development, including analysis of inaccurate cases and dataset expansion. This system offers an innovative solution to enhance early detection of toddler malnutrition, potentially contributing to improved nutritional status and child health in the region, with recommendations for broader implementation and further studies to maximize its impact in the context of public health.

Keywords: *Fuzzy Mamdani, Nutritional Status, Toddlers*