

***Nutrigrowth Mobile Application Development For Toddler Growth And
Development Monitoring Using Flutter***

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ABSTRACT

Stunting is a health problem that impacts children's physical and cognitive growth, necessitating effective and sustainable growth and development monitoring. This research aims to develop the Flutter-based NutriGrowth mobile application as a digital solution for real-time toddler growth monitoring. This application is integrated with an Internet of Things (IoT)-based height and weight measuring device, enabling automatic data recording without manual input. The application's main features include growth chart visualization, information on height and weight standards for age, notifications of integrated health service posts (Posyandu) and immunization schedules, and consultation services with health workers. The development methods used included system design, application implementation using Flutter, and integration with a database and the MQTT communication protocol. The test results show that the application is able to increase the efficiency of data recording, simplify monitoring of toddler growth, and support early detection of stunting risks, as proven through Black Box Testing with a 100% functional success rate, as well as a satisfaction questionnaire for 95 respondents where none of them gave a negative response. Therefore, the NutriGrowth application is expected to be an innovative solution to support digital-based health services in the community.

Keywords: *Flutter, Internet of Things (IoT), Toddler Monitoring, Stunting.*